

Internship
Report on
“Study on Product Development & Cost Analysis of
Apparel Buying House in Bangladesh”
A Case study of
“CHORI CO., LTD. Dhaka Liaison Office”

Submitted By

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LETTER OF TRANSMITTAL

Date: 5th August, 2023

Engr. Asit Ghosh

Assistant Professor,

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Subject: Internship Report Submission.

Dear Sir,

With all due respect and humility, allow me to report that I have successfully finished my internship on the topic of "**Study on Product Development & Cost Analysis of Apparel Buying House in Bangladesh**" at the Dhaka Liaison Office of CHORI CO., LTD. I made every effort to properly prepare and finish this internship report with your advice.

In my internship report, I emphasized the lessons I gained from my in-person internship at Apparel Buying House based on my observations and learning. I made every attempt to research survey requirements, different kinds of documentation, and useful techniques that would aid in the preparation of my internship report.

As a result, I kindly ask that you take my application into consideration and approve my internship report.

Yours Faithful,



.....

Nabil Chowdhury

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STUDENT'S DECLARATION

I now certify that the paper from my internship, "**Product Development & Cost Analysis of Apparel Buying House in Bangladesh,**" is accurate. I have prepared a case study on "**CHORI CO., LTD Dhaka Liaison Office.**" Engineer Asit Ghosh, an assistant professor in the Daffodil International University Department of Business Administration, is my supervisor. Completing the report is a prerequisite for earning a master's degree from Daffodil International University's Faculty of Business & Entrepreneurship. The study on "**Product Development & Cost Analysis of Apparel Buying House in Bangladesh**" is being submitted for academic purposes only; it is not intended for any other use.



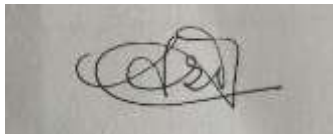
.....

Nabil Chowdhury
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Letter of Approval

The report is equipped by Nabil Chowdhury, ID: 193-14-3074. It is permitted for the contentment of the obligation for the Degree of Masters in Business Administration.

Nabil Chowdhury has accomplished his three months internship program on “**Product Development & Cost Analysis of Apparel Buying House in Bangladesh**” in my direction. At this time of internship, I seen him in good manner, diligent, earnest & cooperative.



.....
Eng. Asit Ghosh
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ABSTRACT

Bangladesh stands among the world's leading producers of clothing. Additionally, leads in denim exports. There are a lot of apparel buying houses in Bangladesh that focus on developing clothes and apparel-related products. This buying firm develops its own products for better price and innovation, or develops the sample that the customer provides. Purchasing a home here is crucial to satisfying the buyer's need for a high-quality product, preserving the issue of confidence, and enabling future orders. Every time they require ongoing research and development, they come here. The next step is to choose the ideal and necessary cloth. Prior to treating the fabric further, any form of flaw needs to be examined. After creating the pattern, cutting, and sewing, we will hold the finished item. All the facts are monitored by a group of experts in this field. We also need to perform cost analysis in addition to these procedures. If we discover that the new product is becoming more expensive, we must maintain it within a reasonable range. If not, the consumer will not be drawn to this goods. To determine the true cost of clothing per piece, we use several calculations. They determine final price in accordance with it, keeping the profit. One thing to keep in mind in this situation is that there is no set price; both parties are free to haggle until a mutually agreeable agreement is reached. All transactions and procedures must be completed quickly and consistently, nevertheless, in order to satisfy customer demand.

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Chapter 1

Introduction

Bangladesh stands among the world's leading producers of clothing. In addition, they lead the world in denim exports. Bangladesh set off on her voyage in the early 1800s. We learned how to export clothing from Riaz Garments. We currently export RMG, which has a market worth of around 45 billion dollars. 86% of foreign exchange earnings originate from just one industry, which drives the economy of our nation. The contribution to our GDP is close to 25%. There are over 4,000 apparel industries in our country. This industry employs around 4 million workers who also support their families. During the COVID-19 epidemic, the economies of all nations were severely impacted, but thankfully, Bangladesh's economy was doing well. In essence, Bangladesh does not generate a lot of value-added goods. We have manufacturing houses for knit, woven, non-woven, and braided materials. We typically create woven fabrics for items like t-shirts, polo shirts, jerseys, trousers, children's items, etc., and seldom have 50% backward linkage in our woven fabric manufacturing; however, 95% of our knit products have backward linkage. Bangladesh faces formidable rivals in the form of Vietnam, India, and Pakistan. Bangladesh has many textile fairs each year to draw in international customers. Nearly 188 Leadcertified green industries are located in Bangladesh. Bangladesh's current export value target is \$100 billion by 2030.

Background of the Study

In order to remain competitive and draw in customers, product development is crucial. In any other case, I won't buy the goods. In addition, the product's pricing need to be competitive. The textile industry is quite competitive these days. Therefore, conducting study on it is crucial. I am employed in the Dhaka Liaison Office of Chori CO., LTD. It's a sourcing firm from Japan.

Objective of the Study

1. To know the consumer taste on new products.
2. To get an idea about recent pricing.
3. To get known about new product types.
4. To know about my organization's costing & product development.
5. To enrich my knowledge to work on it further.

Methodology of the Study

I've been employed by my firm for a long time, therefore I know a lot about it. In addition, I gathered data from my workplace database. In addition, based on my experience, I added a lot of items. I then compile all of the data into one list. I then incorporated price after that. I gathered data from many production houses in order to conduct an exact comparison. For a better understanding, I conducted a generic costing as prices differ amongst factories. All of the information is clarified with examples to aid with comprehension. Here, I provided all the details, along with a list of sources for additional reading.

Scope of the Study

Given that it is currently the most crucial topic. Merchandisers will thus be assisted in making the best choice possible by this study. It will assist us in selecting the best product for manufacturing at a reasonable cost. It will also help my company's newbie to obtain this task for future endeavors.

Limitations of the Study

It might be challenging to produce a product that would satisfy every customer's desire because people have different interests. So, I followed my company's instructions and provided the information. In addition, prices are never static. The price may thus vary at any time. I have said here that the prices are subject to change, so anyone who wish to utilise my work should be mindful of that. In general, the data I provided in my work may vary from factory to factory.

Chapter 2

Company Details

In essence, CHORI CO., LTD. is a sourcing firm. It is a liaison firm with headquarters in Japan. It's located in Uttara's Sonargaon Janapath. It specializes in exporting woven and knitted top and bottom items. This firm has a positive reputation in Bangladesh because it has been operating there for a long time. This business is expanding quickly because they have a talented staff that works well together. They remain steadfast in their dedication to providing high-quality products.

Company's Mission

The constant goal of this business is to satisfy the customer. Because of this, they never miss a delivery date and ensure quality. To satisfy their needs, they also uphold the tastes of the customers. Since they are receiving more and more orders, they would want to collaborate more with the production firms in Bangladesh.

Companies Strength

This firm enjoys a positive reputation and strong market confidence due to its Japanese foundation. In addition, they have been in business for a while. They are adept at seizing market share. This is a very intelligent and committed crew. They are dedicated to improving their business. They responsibly handle all the facts.

Chapter 3

Product Development

Introduction

As soon as the conceptual garment design is acquired, the cycle of creating apparel goods will start. It's the initial step towards launching a completely new look. Quick fashion is always prioritised here. We are working hard to comprehend these trends and provide them a visually appealing appearance. We won't compromise on comfort or quality because these features add value to our products. A sketch or design is turned into 3D clothes throughout the clothing product creation process, taking into account all practical and aesthetically acceptable factors. After estimating the market, each distinctive style in the collection is developed. Two-dimensional (2D) patterns are initially created in order to carry out the design; these patterns are then cut out and put together to create a three-dimensional (3D) prototype. The prototype is examined and updated until a sample is approved. Grading is done, which can be done by the product development team, prior to the pattern pieces being placed in a lay plan or marker that will be cut out in bulk cloth and the garment components being sent to be made. Many of these facts need to be considered. We will meet the demands of our customers. Thus, a big reality is the tastes of the customers. Furthermore, we attest to the overall quality requirements while ensuring the manufactured items' comfort. When the final product passes through many processes, a group of informed people must continuously monitor all the developments.

Stages of Garment Product Development Process

● Research & Visualization

This is the initial stage of product development for the clothing industry. Using information from research on trends, colours, materials, past successes or failures, sales records, experience from previous lines, markdown reports, etc., the production development team creates a plan for the new line. Design sketching is made easier for designers with this understanding. In this case, the customer's preference is paramount. The fast fashion movement is essential for drawing in customers. The next step for the R&D team is to determine which exact season customers would wear these new outfits. The garments' GSM, yarn count, EPI, TPI, and stitch length will change according on this. R&D staff sets up two to three samples for testing for every concept. Which design best satisfies customer wants and is more practical? After that, the buyer sees it or it is exhibited at the studio. The majority of the time, we create goods using samples that clients provide.



● Pattern Design:

Initially, a specific product or clothing design is obtained. The creation of a 2D pattern comes next. This is a laborious interactive process that involves examining the prototype repeatedly until the appropriate shape, style, and fit are determined. This allows a garment to be cut out of fabric and assembled into a three-dimensional prototype, symbolizing the design picture. In the apparel industry, the two commonly used



methods for generating patterns are flat pattern cutting and draping. Furthermore, there are two ways to cut flat patterns: the first uses a basic design called a block or block pattern. It acts as the basis for the finished item. To make sure the prototype garment will fit the body properly and permit mobility within it, measurements are taken from the right places on the body and allowances of different sizes are given to various dimensions. The second most popular patterning technique that may be used to design a garment prototype or an item of apparel is pleating or patterning. If the silhouette of an item of clothing is similar to the required form, it can be possible to make a replica of it by either disassembling it and tracing the individual pieces, or by adjusting the trousers, shirt and duplicate sections as the item is being printed. Until an authorized sample is established, the steps of evaluating the prototype, changing the pattern, and producing further prototypes are carried out.

● **Seams and Openings**

Make-up and adhesion techniques are included into the authorised pattern during pattern creation in order to streamline the production process and provide a well-designed finished product. End-use of the garment, market share, and fabric qualities are taken into account comprehensively. It takes into consideration the appropriate seam allowances based on the kind of connection chosen. Using a lockstitch sewing machine is one of the conventional joining techniques. lockers with 3, 4, and 5 threads, for example, or non-sewing methods like ultrasonic welding and glue guns. Additionally, the plan takes into account apertures like zippers and button openings. Binding, trimming, and trimming are examples of edge finishing. Here are the corresponding seam allowances as well.

● **Fabric Development:**

Clothes is an incredibly appealing topic. There are several common kinds of garment fabrics, ranging from polyester to linen, but there are also more. Even though both a coat and a jumper are made of wool, they have quite distinct looks and feels. It may be divided into many categories based on a number of factors, including use, production type, origin, and structure.

- **Fabric Classes**

Three Types of Fabric Classes according to production type:

1. Woven fabric
2. Knit Fabric
3. Non-Woven Fabric

Three grades can be applied to textile textiles. The two major materials that compete are woven and knitted textiles formed of yarns. In addition, non-woven fabric is occasionally seen. Since the fibre is utilised directly in nonwovens, they offer a novel and environmentally friendly substitute for recycled materials. These textiles vary from one another in terms of structure, washing performance, and fabric care needs. We're examining the key distinctions between knitted and woven materials. Although there are many varieties of textiles, he may categorize the various weaves into three primary categories.

Words like "warp" and "weft," which we shall employ, actually mean what? All of those phrases are used in the textile industry to describe the behaviour of threads in various fabric kinds. Whereas "wale" and "course" are used for knitting, warp and weft in the weaving process determine the direction in which a fabric's threads travel.

➤ Woven Fabric

There are some basic types of weaving construction , from which all other weaves come from:

1. Plain Weave
2. Twill Weave
3. Satin Weave

The yarn is woven into each of them to differing degrees, which influences how the item feels and looks as well as how it wears and cleans:

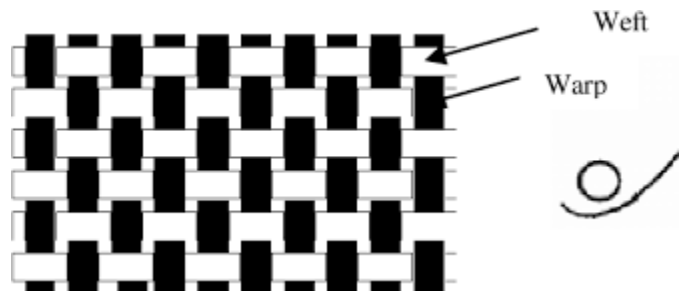
→ Plain Weave Fabric

As its name implies, plain weaving is the simplest and most straightforward technique for creating textiles. Between the warp and weft, there are alternating threads. Weft threads often go underneath the subsequent warp thread after passing through each one. a robust and useful warp that imparts the same texture to the fabric's two sides. It looks good with both professional and informal attire.

Even though the word "uni" suggests otherwise, simple weave textiles are anything from dull. The fabrics listed below are all simple weaves, but they may all be produced from different fibre types and combinations to create different final items. Look at these simple weaves and the regular clothing produced from them. If we don't have really specific tastes, we have enough of simple weaves in our wardrobe:

- Canvas: Heavy Work wear
- Flannel: shirts, sweaters, cardigans, jackets, blankets, and PJs
- Lawn: light-weight shirts, blouses and linings for dresses and skirts
- Organza: its formal wear but also found in fashionwear
- Poplin: used in shirts, dresses, pyjamas, and sportswear and raincoats
- Taffeta: evening dresses, prom dresses, jackets and other kinds of party wear.

Even while they are usually simple to manage, it doesn't guarantee they'll take care of themselves. Woven textiles, particularly those composed of cotton, are more likely to wrinkle than knitted fabrics, as seen by the table above that compares



the two types of cloth. Wrinkles can be lessened using a small amount of Fresh Sky fabric softener, or Fuchsia Passion if you want a flowery aroma.

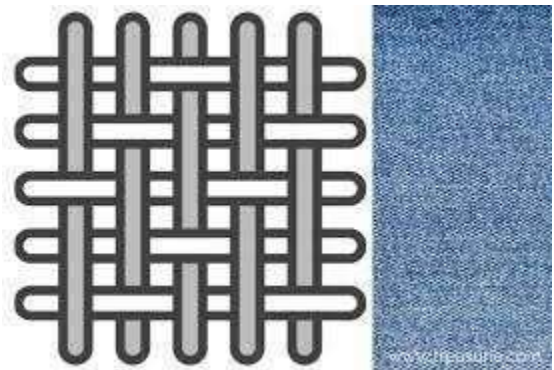
→ Twill Weave Fabric

Because of its diagonal ridges, this is simple to identify. It is well-liked for jackets and a variety of pants, including wide-leg pants, chinos, jeans, and others. It is textured and long-lasting.

A number of recurring patterns, like the herringbone and houndstooth patterns, are linked to twill. Nevertheless, as houndstooth designs may be printed on clothing made of plain weave, these patterns do not ensure a twill weave. See if the way the threads are weaved produces the pattern.

Denim is arguably the most well-known moniker for a twill fabric. If you examine denim jeans attentively, you will see the twill's striking diagonal lines. Additionally, twill fabrics are available in chino and surge.

Not every weave style is appropriate for every type of apparel. For instance, flannel and tweed can be woven in a twill or plain weave. With a fabric handle like Comfort Pure, which has undergone dermatological testing, flannel is a well-known material for baby items in particular and may remain soft and delicate.



→ Satin Weave Fabric

A satin weave is one in which a weft emerges once per four or more warps and then vanishes behind the subsequent warp.

Usually, satin has a gorgeous glossy side and a matte side. Ideal for enhancing style and opulence. Gently place your hand on the glossy surface. When no one is around, roll around in it. Silk and polyester are the most frequent materials used to make satin textiles. The only

continuous natural fibre is silk, and charmeuse is a smooth, light-weight, soft fabric with a satin weave. Charmeuse shares many of the same characteristics as satin, but it is softer and more lustrous.

The finished cloth is referred to as satin when it is made from short fibres, like cotton or linen, that must be twisted into yarn.

➤ **Knit Fabric**

In addition to weaving, knitting may be used to transform basic materials into beautiful textiles. Additionally, it is derived from knitted materials including jersey, interlock, rib, and pique knits. Weft knits and warp knits are the two fundamental knits from which all other knitted materials used in apparel are produced.

→ **Weft Knitting**

Predominantly, and the one we would be acquainted with if we were to ever grasp a set of knitting needles. Typically, you'll start with a single continuous strand of yarn and work horizontally, row by row, to create a garment. Weft knit clothing includes items like joggers, athleisure, sweatshirts, and T-shirts.

2 major weft knitted fabrics are found in garments. These are;

- 1. Single jersey.**
- 2. Double jersey.**

1. Single Jersey

A pair of needles is used to create the weft knit fabric known as single jersey. The majority of textile T-shirts are made from single tops. The front and back of a shirt have distinct aspects. This fabric is becoming more and more popular since it is stretchy, flexible, warm, and easy to wear.

2. Double Jersey

Two sets of needles are used to create the weft knit fabric known as a double top. Although the front and back of the double shirt have the same look, the double shirt's fabric is nearly identical to that of the single shirt.

Here we find two types in double jersey knitted fabric. These are;

1. Rib
2. Interlock

❖ Rib Knitted Fabric

A cloth with ribbed knit has front and rear perpendicular veins that are easily apparent. Put differently, rib knit fabric is a double-sided, reversible fabric. Ribbing is typically used to band t-shirt collars, turtlenecks, cuffs, hemlines, and other items.

❖ Interlock Knitted:

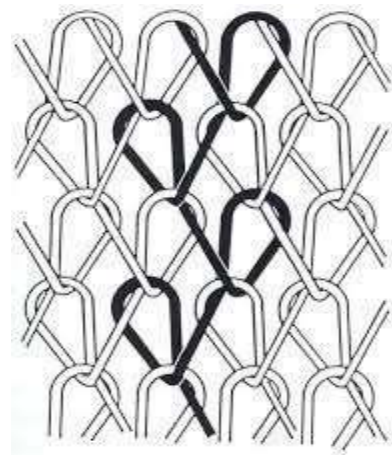
Double jersey knit fabric is another name for interlock fabric. This is an additional weft-knit fabric. However, it's not the same as single jersey fabric because it's constructed using two rows of needles. Think of it as two single jersey fabric layers that have been stitched back together.



→ Warp Knitting

At the same time, several skeins are knitted in columns. Warp knitting is done by machine since it is just not feasible to accomplish this by hand.

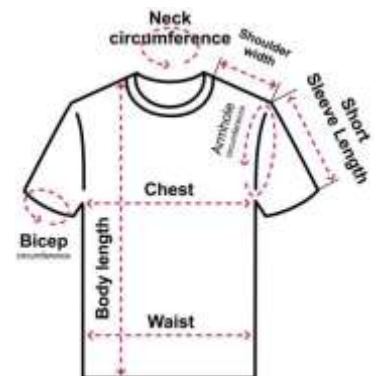
Knitting using weft is often loose. It fits snugly, is warm, and is elastic, however if you cut it, the continuous rope may unravel. This is a typical technique for items of apparel that are often knit, such socks, scarves, and sweaters. Because warp knits are less elastic than weft knits, they often maintain their form better. It is frequently employed in the production of lingerie and lace.



Today, typical warp-knitted fabric varieties used for lingerie, figurewear, and swimwear include tricot, mirror satin, powernet, satinnet, weft, tri-skin, jacquard, and simplex. The most often used warp knit fabric is tricot. The floating paper has a very nice feel to it and includes technical stuff on technical topic. The technical back has an extremely shiny and smooth surface thanks to the extended underlap of the front guide rail in the mirror satin fabric. Mirror satin is a soft fabric that stretches in a single direction. Nonetheless, the likelihood of the cloth being trapped increases with thickness. Underwear's breathability is increased and its visual appeal is enhanced by the use of mesh fabrics and stains.

● Measurements

To run a baseline or sample size of the intended size range, approved samples are prepared. Every business has a unique fit and size range for the bodies they operate on. As a result, precise body dimensions are crucial for building the initial blocks and authorised prototypes. Body size was traditionally measured with a tape measure. But body scanners have also been utilised recently. Body measurements are extra and cost money. You may make a size chart for different garment sizes based on your body measurements. The sizing chart's dimensions apply to each completed product. The garment's dimensions will be lowered, though, if it is made of stretchy material and must fit tightly around the body. This will rely on the fabric's stretchability as well as the final product's intended look and use.



● Grading:

Grading is the skill of adjusting a sample part's size to guarantee that it fits, looks well, and has the form that the prototype sample size specifies. preserved throughout a range of sizes. A pattern designer or a team member can

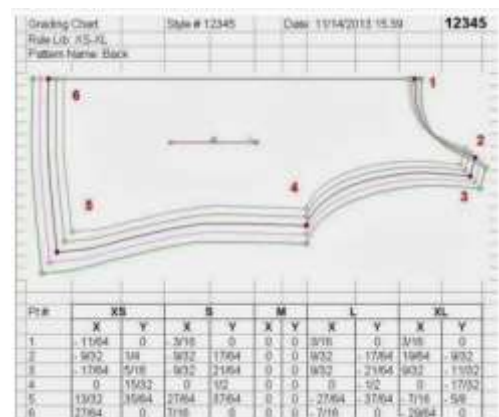


Fig: Computer pattern grading

complete this assignment. Every swatch in the swatch set has a unique grade assigned to it based on where it is in the garment.

There are two widely used methods for scoring.

In two and three dimensions respectively. Patterns are only measured in diameter and height on the 2D scale—not in darts. In addition to altering the pattern size, 3D grading also modifies the compression ratio. However, proficient pattern cutting abilities are needed to use this approach.

● **Sample Development:**

➤ **Fit Sample**

Fit samples are manufactured in line with the size specified by the manufacturer in order to retain the ideal fit and fall of the clothing. To pass the fit test, measurements and construction must be precise and flawless. The fabric used for the fit sample can be the same as the fabric used in the final design, and several alterations may be required until the right fit is obtained. Our primary focus in fit sampling is measurement and pattern.



SIZE		BUST	WAIST	HIP
XS	0	32.5	25	35
XS	2	33.5	26	36
S	4	34.5	27	37
S	6	35.5	28	38
M	8	36.5	29	39
M	10	37.5	30	40
L	12	39	31.5	41.5
L	14	40.5	33	43
XL	16	42	34.5	44.5
XL	18	44	36.5	46.5

➤ **Measurement**

Measurements are made in accordance with the buyer's specifications. It varies based on the varieties of cloth as well. Generally, knit and woven goods are manufactured here, we have a range of sizes, from ES to 3XL. Additionally, this measurement varies by location. Similar to Asian and European measurements.

→ Top-Wear

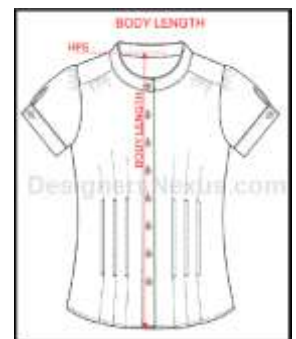
Measurement:

These are the garments or articles of clothing that cover the most of the upper body of a person, often from the neck to the waist. They also cover the least amount of the chest. Tops can have bottoms that are as long as the mid-thigh or as short as the mid-torso.

DESIGNERS NEXUS SPEC SHEET						
FACTORY:	BUYER:	DATE:	FABRICATION	STRETCH POPLIN		
P.O. #	REF#	Q:	FABRIC DESIGN	SOLID		
STYLE #	BODY#	T-2070	APP. BY:	TRIM		
DATE/INITIALS						
JUNIOR TOP/DRESS/JACKET	M	1ST FIT	RVSD SPEC	2ND FIT	APPRVD SPEC	SKETCH
BODY LENGTH FROM HPS	24 1/2					
ACROSS SHOULDERS	14 1/2					
CHEST 1" BELOW ARMHOLE	18 1/2					
WAIST 15 1/2" BLW HPS	15 1/2					
WAIST AT SEAM						
BOTTOM SWEEP	19					
SHIRT TAIL	2 1/4					
SLEEVE LENGTH FROM CB						
SLEEVE LENGTH FROM SHOULDER	10 1/2					
ARMHOLE CURVED	9 1/2					
BICEP (1" BELOW ARMHOLE)						
SLEEVE OPENING	5 1/2					
TOP CUFF OPENING	5 3/4					
CUFF HEIGHT	3					
NECK OPENING	6 1/2					
FRONT NECK DROP FROM HPS TO SEAM	2 1/2					
FRONT NECK DROP FROM HPS RUFFLE SM	12 1/2					
BACK NECK DROP	1/2					
COLLAR POINTS	2 1/2					
COLLAR LENGTH PT TO PT	15					
COLLAR WIDTH AT CB	2					
COLLAR STAND HEIGHT	1 1/8					
FRONT PLACKET (OVERLAP) WIDTH	1					
BUTTONS:						8PCS 16L 2HOLE PEARLIZED W/IRM DTM
TOP STITCHING:						DTM BODY
COMMENTS:						APPROVALS:

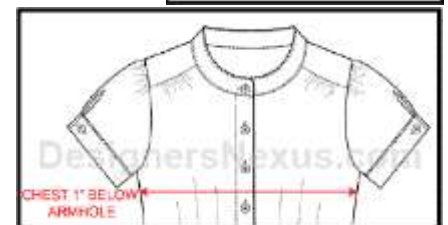
Body length:

Here, we're measuring the length of the clothing from top to bottom.



Chest length:

Here, the length of the chest is measured. Typically, it was one inch below the armhole.



Sleeve length:

Here, the distance is measured between the sleeve opening and the top of the sleeve at the shoulder seam. Typically, we come across short sleeves, $\frac{3}{4}$ sleeves, and long sleeves.



Shoulder measurement:

Measured from the top of the shoulder to the armhole's shoulder seam.



→ Bottom Wear Measurement

Usually, this clothing covers the lower torso. It begins at the waist and descends indefinitely. There are many different styles of bottoms available, including sweatpants, three-quarter length, jeans, shorts, trouser, and strait.

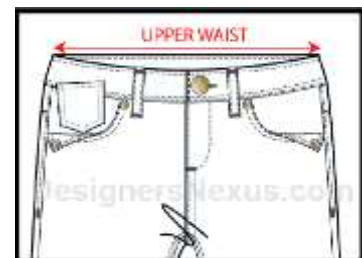
Size Chart - Women's Wear (in Inches)



SIZE	WAIST	HIP
XS	24	33
S	25	34
M	26	35
L	28	37
XL	30	39
XXL	32	41
3XL	34	43
4XL	36	45
5XL	38	47
6XL	40	49
7XL	42	51
8XL	44	53
9XL	46	55

Upper Waist:

Here, we measured by lining up the front and rear waistbands and then taking a straight measurement from edge to edge over the top of the waistband.



Thigh:

Typically, we take a measurement 1" below the crotch seam, measuring from side to side perpendicular to the pant leg.



Leg opening:

In essence, it is measured horizontally to the leg opening side's bottom border.



● **Development Sample**

➤ **Fabric development**

Before creating any textile apparel, we need to focus on the fabric. It could happen as requested by the client. Fashion designers can also come up with original concepts or styles depending on what customers want to see. The fabric is often the most technologically advanced and practical part of an article of clothing. Textile employees may develop their own creativity via research and development by coming up with fresh seasonal trends and enhancing client glamour with creative fabric structures and designs.

The basic fabric, cotton, is now more comfortable and familiar to Bangladeshi fabric makers. They are not, however, concentrating on creating opulent fabrics like fleece materials. Nevertheless, this is the time to focus on products with additional value.

Single jersey t-shirts usually fill the majority of orders. About 160–180 GSM are under control at this point. Here, we use raw materials such as PC, cotton, viscose, polyester, and CVC.

Denim jeans are the main item we sell for bottom wear. Here, we are employing denim as our material of choice. The fabric is twill patterned. Either S or Z twill will do. Its GSM is greater. The range is 250–300. Here, cotton and Lycra are combined. 95/5

➤ **Styling Development**

Here, we choose the hues and styles for our products.

When discussing professional versus informal dress, there are several collar possibilities. We have the option to select based on current fashions or tastes. That is also a major consideration, in addition to the kind of clothing we are making. In the end, it provides a better look. Additionally, customers find it more appealing.

Typically, we find round collar, cutaway, and straight point.

Dress shirt collar styles



There are a tonne of varieties in the realm of buttons. We select buttons based on the kind, colour, strength, and design of the cloth. When choosing buttons for a formal shirt, aesthetics is the first consideration. In addition, we employ glittering and light-reflecting buttons when producing formal or party wear.

In formal shirts, plackets are always present. It makes the formal shirt more noticeable. Here are several kinds of plackets that are available. Based on our product design or current fashion trends, we have a choice.



➤ **Photo Shoot Sample**

These product samples are essentially meant to draw in customers before they buy a product. Here, we utilise real models to don the clothes for the picture session. Customers will be informed about the true aesthetic appearance and drapability.



➤ **Test Sample**

Test samples are very important for the creation of new products. Since the durability and sustainability of products are issues that affect us all. The phrase "textile testing" refers to a broad range of quality tests that may be applied to a textile product prior to its release onto the market. We always want them to feel fantastic when we wear them, to be devoid of any chemicals that might not be appropriate for human contact, to retain their true colour brilliance, and to resist fraying and disintegrating. We also really want to know that the product will work as intended when it comes to textiles, such as industrial use materials or flame-resistant safety gear. Textile testing guarantees that our goods won't damage us and will maintain their intended chemical and physical capabilities. Thus, in order to guarantee the quality of the finished product, we must do many tests. Listed below are a few of them.

→ Testing Condition & Equipment

For test findings to be accurate, equipment is essential. The test procedure itself determines how equipment is used in textile testing. We have specialised tools for nearly every kind of textile testing. The standard test settings for textiles are 22°C and 65% relative humidity in order to comply with ASTM and ISO test requirements. This standard is used by top quality experts to prepare fibre samples, check for colour uniformity, and calculate the loss of tensile strength. This need can be satisfied by using precise moisture control equipment such as suspended sample chambers and fast fibre test chambers.

→ Rubbing fastness Test:

when we regularly wear dresses or other clothing. It is rubbed in several circumstances. Friction causes hairiness, pill development, fibre loss, and other issues.

We conduct rubbing tests to guarantee or verify the quality of the rubbing. We carried it out in two different settings: a dry procedure and a wet one.

Here, we utilise a crock m/c to rub the product with a crock cloth and assess its quality.

→ Washing fastness Test:

when we regularly wear dresses or other clothing. It is rubbed in several circumstances. Friction causes hairiness, pill development, fibre loss, and other issues.

We conduct rubbing tests to guarantee or verify the quality of the rubbing. We carried it out in two different settings: a dry procedure and a wet one.

Here, we utilise a crock m/c to rub the product with a crock cloth and assess its quality.



→ Tensile Strength Test:

Our products operate in a variety of harsh environments. It experiences pressure and friction. Therefore, we must test the maximum force or pressure that our items can withstand.

→ Perspiration Test:

Sweating occurs during activity or during the sweltering summer months. We occasionally observe colour fading or deterioration due to sweat. If our merchandise fades easily. Both acidic and alkaline conditions are examined.



→ Bursting test:

Sweating occurs during activity or during the sweltering summer months. We occasionally observe colour fading or deterioration due to sweat. If our merchandise fades easily. Both acidic and alkaline conditions are examined.

➤ Salesman Sample

For display purposes, these examples are stored in studio spaces or fashion stores. Buyers or consumers view these goods and either order or consume them. Usually, hangers or dummies are used to showcase these.



➤ Pre-Production Sample

Here, we will create each sample using the necessary colours in accordance with tecpec. Following that, we must examine and assess it from every angle before moving on with mass manufacturing. If we encounter any issues here, we build the faulty product once again.

➤ Size Set Sample

We must make things in a variety of sizes to accommodate diverse sizes. The sizes provided by Pectec shall be followed. Here, we are limited to one colour, but we must produce two items for each size. We must validate the measurement at this point. If not, it is challenging to begin cutting



➤ **Shipment Sample**

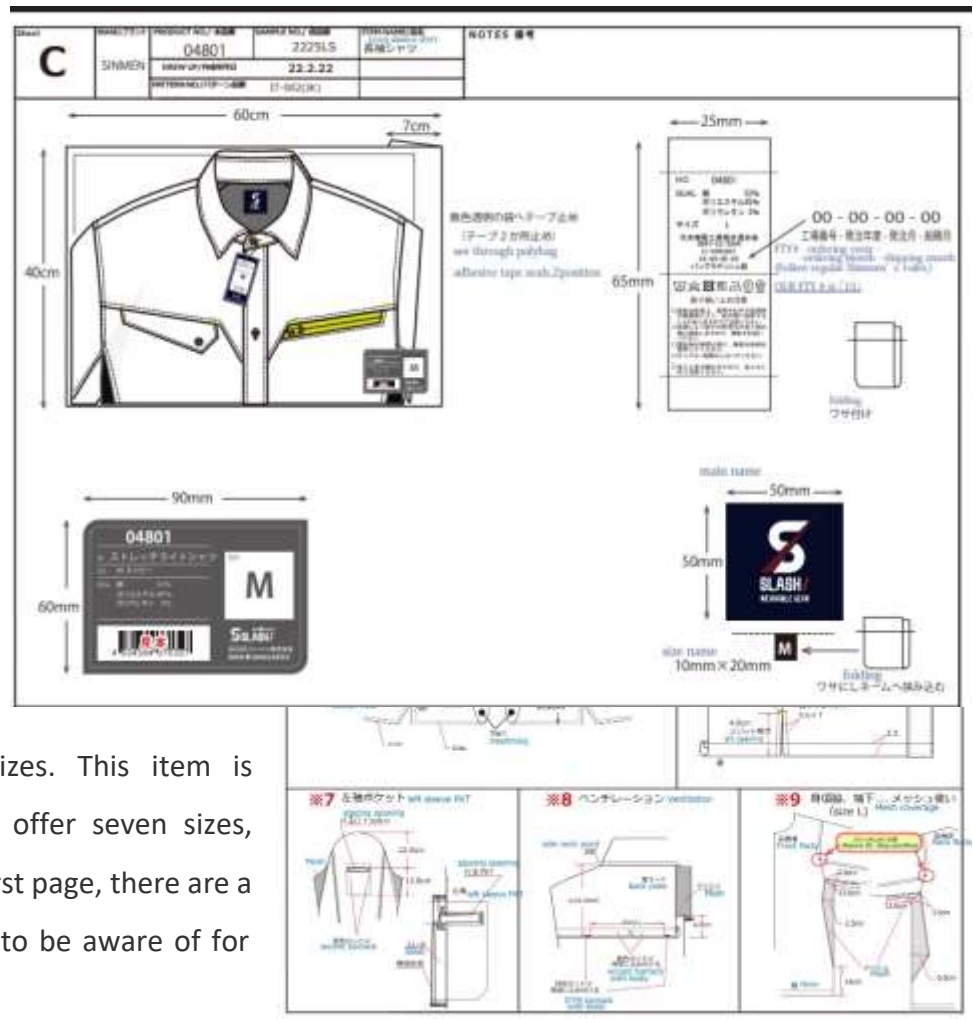
The customers receive these samples primarily after the items are completed and packaged for shipping. We'll be using one or two cartoon goods here. We will verify every need before shipping the goods. Everything needs to be verified, including gum, cartoon weight, and cartoon height.



Once the inspection is completed, the product will be prepared for bulk shipment.

Тестер

It is similar to a little book or slide that contains all the information on a certain product. Here, on the right side, are the buyer's information and order number from the first page. This is also where you can find the parts location and product view. We may also see the total quantity and the provider. We also provide the product's hues here. There is also a description of this



particular product in other sizes. This item is available in 7 sizes. In all, we offer seven sizes, spanning from S to 5L. On this first page, there are a few more things that we need to be aware of for

sample or bulk manufacture. This article also covers the size and kind of cuffs in addition to button size and type.

Whether interlining is required or not is also mentioned in cuff. The length of the cuff opening is also available here. We can see the details of both waist side slits on the right shirt. The measurement is provided here as well. We discover the piping Opening and its measurement on the left bottom.

We include trimmings and accessories into our clothing goods. Here, the amount of care is crucial. We learn how to wash our clothes as carefully as possible here.

such as the kind of wash, time, detergent amount, and water temperature. In addition to the ironing temperature that is also specified here.

Product information are occasionally provided for monitoring as well. Here, brand level is also obtained. It can have embroidery or printing on it.

Cartoon & Packing

Accessories' packaging is an essential component. It enhances the final product's worth. The size of the cartoon must be kept in line with the items taken in. Using a little cartoon or box might cause a lasting wrinkle on clothing. In addition, the cartoon should be quite sturdy to shield the goods within.



Chapter 4

Product Costing

"The economic value placed upon the resources consumed to make a product" is the standard definition of cost. The process of costing involves estimating and then calculating the whole cost of making a garment, taking into account the price of labour, materials, and transportation in addition to basic operational costs. A merchandiser has to be well-versed in costs. There are several reasons why cost is important.

A merchandiser who does not properly price their work will cause a firm to lose output over time. Thus, while undertaking costing, responsible parties must use extreme caution. Furthermore, we cannot charge exorbitant prices for the goods, or else customers would cancel their purchases. The corporation will thus discover a deficiency of work inside. The merchandiser primarily does the costs for two reasons.

Pricing of the Garment

It's crucial to precisely estimate the cost if the maker sells the clothing to final customers directly. The clothing may be priced by adding the projected markup or profit percentage to the production cost.

Order Acceptance

The foundation of a clothing manufacturer's export business is costs. Retailers choose their price per item of clothing depending on production expenses such as labour, overhead, freight, and profit margins. In order to determine whether to accept the order, the store haggles with the consumer about this price.

You must be fully aware of all the expenses, processes, advantages, and risk factors associated with each activity, such as purchasing fabric, sewing, packing, transportation, and overhead, in order to accurately

assess the cost of each item of clothing. Retailers need to understand that costs for consumables and raw materials, knitting, converting, finishing, sewing, packing, and shipping are all subject to change. The style determines the technique of computation because apparel comes in a wide variety of styles.

Components of Cost of Garment

In addition to their other duties, factory merchandisers are in charge of product costs. The computation considers the price of different raw materials, running expenses of the business, rivalry, and the anticipated profit of the enterprise. The buyer's cost expectations should also be taken into consideration.

The components on which cost of garment depends is as follows

- ✓ Fabric
- ✓ Trims
- ✓ Cut Make & Trim charges
- ✓ Value added services: printing, embroidery, washing, applique
- ✓ Testing of the garment
- ✓ Quality
- ✓ Transportation and logistics cost
- ✓ Profit of the manufacturing organization

Each of these garment cost components is dependent on a set of characteristics that have a significant impact on the cost parameters mentioned above. These factors are extremely dynamic and always changing, thus they are crucial when manufacturing merchandisers are estimating the cost of clothing.

The elements that have the most impact on garment costs include order quantity, unit of measurement, MOQ, Incoterm agreed upon between the raw material seller and the garment maker, etc.

Fabric

Cost departments also require vital information in order to establish final selling prices and guarantee successful clothing manufacture. We are aware that the price of the fabric usually makes up around half of the total cost of an item of clothing. As a result, estimating the quantity of fabric needed for clothes is crucial. To get at the ultimate selling price, the quoting department factors in labour expenses, overheads, profit margins, sales data, etc. in the quotations. 60–70% of the entire cost of his basic style clothes is made up of fabric. When evaluating the amount and quality of textiles used in a garment, it is frequently possible to determine production costs more precisely than any other element. The sort of fabric that will be used for the garment will determine the cost of the cloth.

Types of fabrics are

- ✓ Woven/knitted fabric
- ✓ Power loom/automatic loom fabric
- ✓ Fiber/yarn/fabric dyed fabric
- ✓ Fiber content of fabric i.e. cotton, wool, polyester, silk, blended fabric etc.
- ✓ Type of dyeing and finish used
- ✓ GSM/Weight of fabric.
- ✓ Type of yarn used i.e. ring spun, open ended, or carded/combed etc.
- ✓ The parameters that affect the fabric cost

However, there are a number of reasons why fabric costs are found to be high, such as the yarn used in the fabric.

First, we have two choices for cotton here. These are combed and carded. Combed yarns are essentially less hairy

Yarn Prices in Bangladesh last 4 week				
In USD \$ Per KG				
Yarn Types	Cotton Carded	Carded Organic	Melange	Carded Slub
Composition	100%	100%	-	100%
Count	30s	30s	30s	30s
Unit	US\$/Kg	US\$/Kg	US\$/Kg	US\$/Kg
17-Dec-17	\$ 3.16	\$ 3.36	\$ 3.44	\$ 3.54
07-Jan-18	\$ 3.28	\$ 3.48	\$ 3.41	\$ 3.66
14-Jan-18	\$ 3.36	\$ 3.52	\$ 3.45	\$ 3.75
21-Jan-18	\$ 3.44	\$ 3.62	\$ 3.46	\$ 3.83
1-Week Change	0.08	0.1	0.01	0.08
1-Week Change (%)	2.38%	2.84%	0.29%	2.13%
5-Week Change	0.28	0.26	0.02	0.29
5-Week Change (%)	8.86%	7.74%	0.58%	8.19%

and more accurate. It is more expensive than combed yarns.

The amount of yarn consumed affects fabric pricing as well. The price decreases with a decreased yarn count.

In addition to cotton, we also work with synthetic fibres such as polyester, rayon, and viscose. Additionally, we employ mixed yarns such as Mélange, PC, and CVC. These are composed differently.

60/40 Cotton Poly Yarn Prices in Bangladesh last 4 week			
In USD \$ Per KG			
Yarn Types	Cotton-Polyester	Polyester-Cotton	Open End
Composition	60%-40%	60%/40%	100%
Count	30s	30s	20s
Unit	US\$/Kg	US\$/Kg	US\$/Kg
17-Dec-17	\$ 2.85	\$ 2.78	\$ 2.59
07-Jan-18	\$ 2.90	\$ 2.83	\$ 2.65
14-Jan-18	\$ 2.92	\$ 2.85	\$ 2.69
21-Jan-18	\$ 2.99	\$ 2.93	\$ 2.81
1-Week Change	\$ 0.07	\$ 0.08	\$ 0.12
1-Week Change (%)	2.40%	2.81%	4.46%
5-Week Change	0.14	0.15	0.22
5-Week Change (%)	4.91%	5.40%	8.49%

The cost of yarns is mostly determined by the length of the staples and the raw material used. The price of the staple length will increase.

In addition, we own several possibilities for raw materials, such as Pima, Giza, and Sea Island, among others.

We occasionally import yarns from India and China. We occasionally purchase from local markets.

Prices for different types of cloth vary; for example, single jersey fabric is less expensive than double jersey fabric. In addition, GSM is a rather important feature in this case. The pricing increases with the gsm.

When it comes to cloth dyeing, there are various costs associated with various dyeing techniques.

These fees could change from time to time.

M/S. PERFECT DYEING & FINISHING FACTORY
100% ORIENTED DYEING & FINISHING FACTORY

ESQUIRE GROUP
22/58, Kanchpur, Sonarganj, Narayanganj.

Subject: Price Quotation For Dyeing & Finishing with enzyme silicon.

SL NO	Particulars	Shade %	Tubular rate Tk./kg	Cotton Open Finish Rate USD./Kg	Open Finish(Lycra) USD/Kg
1	Light Color	0.01%-1.0%		0.96	1.12
2	Medium Color	1.01%-2.0%		1.03	1.19
3	Dark Color	2.01%-4.0%		1.12	1.28
4	Extra Dark Color	Above 4.0%		1.17	1.33
5	Re-Black			1.30	1.46
6	Royal Blue			1.60	1.76
7	White/ Scouring/P.Wash			0.65	0.81
8	Normal Wash/YD Wash			0.50	0.66

N.B:

SIM FABRICS LTD.
Knit Dyeing & Finishing Unit
Thakurbari Tek, Masumabad, Dhaka, Narayanganj.

Date: 23.10.2022
TO
The honorable managing director/director proprietor
ESQUIRE KNIT COMPOSITE LTD.

PRICE QUOTATION OF KNIT DYEING (OPEN & TUBE FINISHING) WITH ENZYME & SILICON WASH (RATE PER KG)

SL/NO	COLOUR TYPE	OPEN FINISH	OPEN FINISH (LYCRA)	DOUBLE FINISHING	DOUBLE FINISHING (LYCRA)
1	AVERAGE LIGHT COLOUR (0.01% TO 1%)	\$ 0.96	\$ 1.12	\$ 1.31	\$ 1.47
2	MEDIUM COLOUR (1% TO 2%)	\$ 1.03	\$ 1.19	\$ 1.38	\$ 1.54
3	DARK COLOUR (2% TO 4%)	\$ 1.12	\$ 1.28	\$ 1.47	\$ 1.63
4	EXTRA DARK COLOUR (4% TO ABOVE)	\$ 1.17	\$ 1.33	\$ 1.52	\$ 1.68
5	ROYAL BLUE COLOUR	\$ 1.60	\$ 1.76	\$ 1.95	\$ 2.11
6	REACTIVE BLACK COLOUR	\$ 1.30	\$ 1.46	\$ 1.65	\$ 1.81
7	NORMAL WASH	\$ 0.50	\$ 0.66		
8	WHITE	\$ 0.65	\$ 0.81		

Following the dyeing process, finishing is required. In essence, it raises the product's worth. Textiles come with a variety of finishing techniques, some of which are listed here.

6. Viscosa Linen or any special fabric will be added 25%.

Sl. No.	Finishing (individual) Rate	USD
1	Heat Process	0.18
2	Stenter	0.16
3	Open Compaction	0.12
4	Peach finish/ Sueding	0.25
5	Tube Compaction	0.10
6	Tube Dryer	0.12
7	Brush	0.10
8	Singeing	0.25

UOM: A unit of measurement (UOM) is a quantity that is used as a measuring standard. Weaved fabric is usually measured in metres or yards, while knitted fabric is usually measured in kilograms or yards as well. A merchandiser should be aware of the unit of measurements when figuring up the cost of material. Sometimes, buyers will request the UOM of the cloth.

MOQ: Simply put, a fabric minimum order quantity (MOQ) is the smallest amount of a product that a fabric manufacturer is willing to provide. Minimum order quantity varies based on supplier capacity and fabric type. When selecting textiles, the minimum order quantity is crucial since it directly impacts the garment's price. The seller will impose a larger fee than usual if the fabric order falls short of the anticipated minimum order quantity. Retailers should compute small orders with the minimum order quantity in mind. .

Order quantity: The pricing of the fabric may change based on the order quantity in particular. Up to a point, cloth cost can be optimised. This basically mainly depends on the kind of cloth needed, the manufacturer's skills, and the discussions between the buyer and the maker.

Incoterm used: This element has a major impact on the cost of cloth. Merchandisers must oversee the supplier for texture conveyance when importing a texture from another nation. Incoterms such as EXW, Coxcomb, CIF, DDP, and others are employed to establish who is responsible for risk and transportation expenses. Whichever incoterm is applied, all expenses will be borne by the buyer. The merchandiser must account for shipping expenses, customs clearance fees, and fabric costs (if acquired using the EXW incoterm) when determining the garment's cost.

The expense of texture can be determined by the following way

Yarn cost + fabric manufacturing cost (knitting or woven) + dyeing cost + finishing cost = total fabric manufacturing cost

The cost of dyeing indicates how much more will be charged based on the type of fabric and whether it is coloured using yarn, fibre, or pieces. The cost of finishing comprised the cost of heat setting, standard finishing, knitting fabric compacting, etc.

● Cost Calculations of Fabric in a Garment:

Calculating fabric consumption using the knitted fabric and t-shirt as the final product

$$\frac{(\text{Body length} + \text{Sleeve length} + \text{Allowance}) \times (\frac{1}{2} \text{ Chest width} + \text{Allowance}) \times 2 \times \text{GSM} \times 12}{10000000} + \text{Wastage\% (in kg)}$$

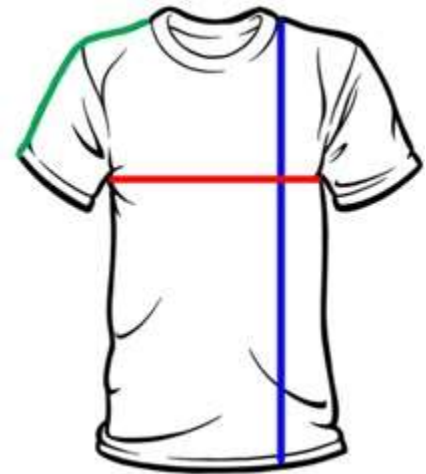
Note:

1. Sorts of texture and texture GSM will be affirmed by the purchaser.
2. For body length and sleeve length, inexact sewing recompense (12cm) ought to be required at body fix, shoulder joint, sleeve fix, and armhole joint.
3. For chest width, a rough sewing recompense (6cm) ought to be required at both side creases.
4. Furthermore, surmised texture wastage in different stages is almost near about 10%.

Example:

Let's say a customer sent you the standard T-shirt sizing chart below, along with the fabric's GSM and the quantity of the order. (In this instance, the fabric's GSM is 160, it is 100% cotton single jersey, and the order quantity is 10,000 pieces). Next, figure out how much fabric will be needed overall for this order.

	Chest Width	Shirt Length	Sleeve Length
S	19" (48cm)	28" (71cm)	14" (36cm)
M	20 1/2" (52cm)	29" (74cm)	15" (38cm)
L	22" (56cm)	30" (76cm)	16" (41cm)
XL	24" (61cm)	31" (79cm)	17" (43cm)
XXL	26" (66cm)	32" (82cm)	18" (46cm)
XXXL	28" (71cm)	33" (84cm)	19" (49cm)



Solution:

Measurement of XL size

- Fabric GSM gram per square meter- 160,
- Order quantity of total clothing- 10000
- Body length or shirt length- 79cm

- Sleeve length- 43cm
- ½ Chest width- 61cm

These are applied on the following formula now-

Fabric Consumption per Dozen (measurement in cm)

$$\frac{(\text{Body length} + \text{Sleeve length} + \text{Allowance}) \times (\frac{1}{2} \text{ Chest width} + \text{Allowance}) \times 2 \times \text{GSM} \times 12}{10000000} + \text{Wastage\% (in kg)}$$

$$= \frac{(79+43+12) \times (61+6) \times 2 \times 160 \times 12}{10000000} + 10\% \text{ (in kg)}$$

$$= \frac{134 \times 67 \times 2 \times 160 \times 12}{10000000} + 10\% \text{ (in kg)}$$

$$= 3.45 + 10\%$$

$$= 3.795 \text{ kg per dozen.}$$

Consequently, 10,000 pieces (833.33 dozen) of garments require 3162.5 kg of material.

Considering woven fabric as the end product and a simple shirt as the measurement tool, there are two methods to calculate fabric consumption. The first of the two approaches is explained in brief below: The consumption of the different shirt portions must be calculated using the formula below.

Length x Width

Formula =

Fabric width x Fabric Unit

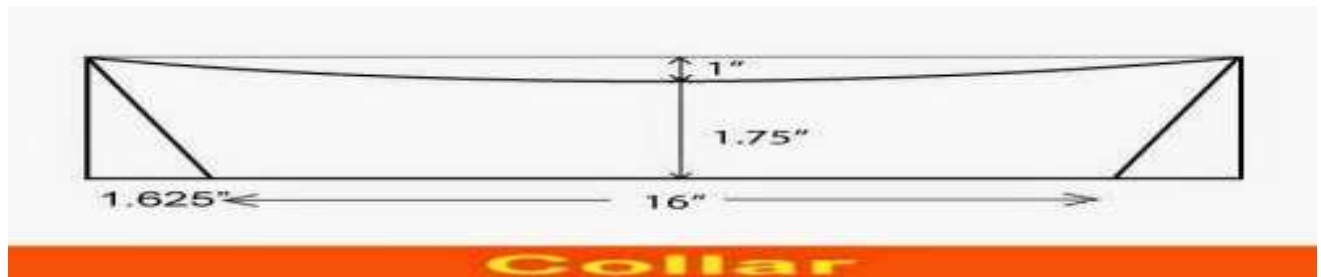
We know that woven cloth is measured using the yardage approach. So, it would be helpful if we measured each piece of the garment in inches.

$$\begin{aligned} \text{Consumption} &= \frac{20.25'' \times 3.75''}{44'' \times 36''} \times 2 \\ &= \frac{151.875}{1584} = 0.10 \text{ yd} \end{aligned}$$

➤ Collar

Length = $16'' + 3.25'' + 1''$ (Sewing allowance) = $20.25''$

Width = $1.75'' + 1'' + 1''$ (Sewing allowance) = $3.75''$



➤ Collar band

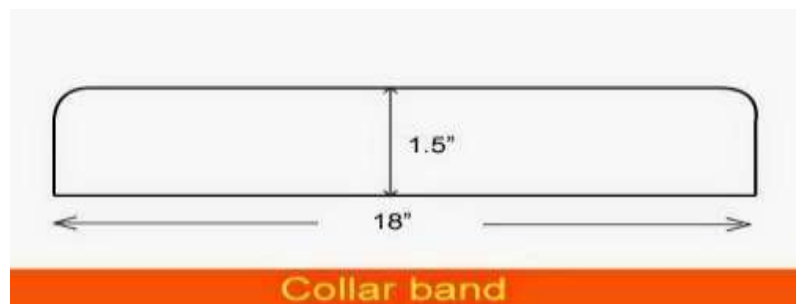
Formula = $\frac{\text{Length X Width}}{\text{Fab. Width X 36'' (Fab. Unit)}} \times 2$

Length = $18'' + 1''$ (Sewing allowance) = $19''$

Width = $1.5'' + 1''$ (Sewing allowance) = $2.5''$

So, Consumption = $(19'' \times 2.5'') / (44'' \times 36'')$

$\times 2 = 95/1584'' = 0.05'' = 0.06 \text{ yd}$



➤ Yoke

Formula = $\frac{\text{Length X Width}}{\text{Fab. Width X 36'' (Fab. Unit)}} \times 2$

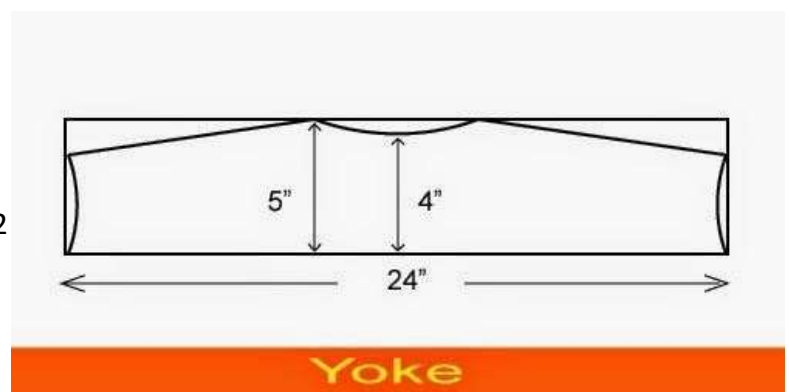
Length = $24'' + 1''$ (Sewing allowance) = $25''$

Width = $4'' + 1''$ (Round) + $1''$ (Sewing allowance) = $6''$

So, Consumption = $(25'' \times 6'') / (44'' \times 36'') \times 2$

$= 300/1584 = 0.189393$

$= 0.19 \text{ yds}$



➤ Back part

(Centre back length) – Shoulder width = (Length X Width) / (Fabric Width X 36")

Or, $34.5 - 4" = 30.5"$

Length = $30.5" + 1"$ (sewing allowance) = $31.5"$

Width = $24" + 1"$ (Sewing allowance) = $25"$

Consumption = $(31.5" \times 25") / (44" \times 36") = 787.5/1584 = 0.49715909 = 0.50$ yd

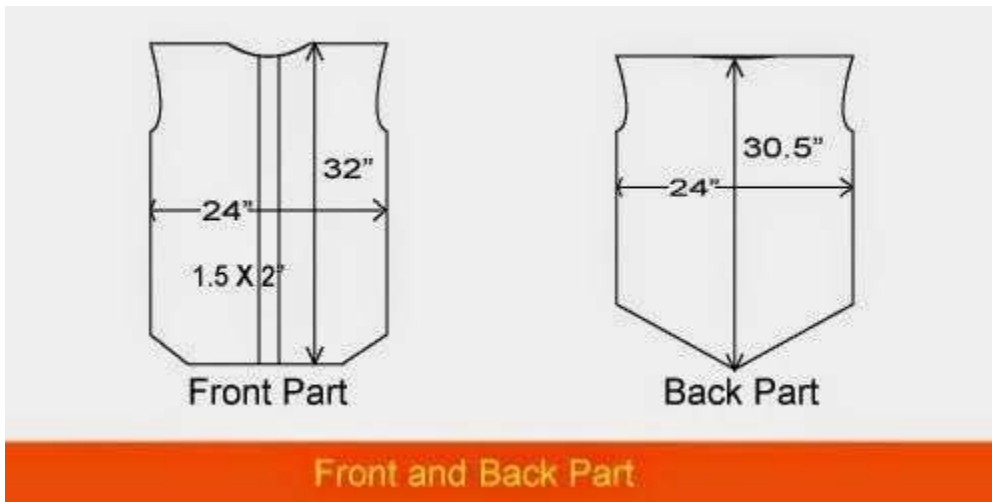
➤ Front part

Formula = (length X Width) / (Fabric width X 36")

Centre front length = $32" \times 1"$ (Sewing allowance) = $33"$

Width (Chest) = $24" + 1"$ (Sewing allowance) + $3"$ (Pleat W) = $28"$

So, Consumption = $(33" \times 28") / (44" \times 36") = 924"/1584" = 0.583333 = 0.59$ yd



➤ Sleeve

Sleeve length = $23" + 1"$ (Sewing allowance) = $24"$

Sleeve width = $(23" + 11.5")/2 = 34.5"/2 = 17.25" + 1"$ (Sewing allowance) = $18.25"$

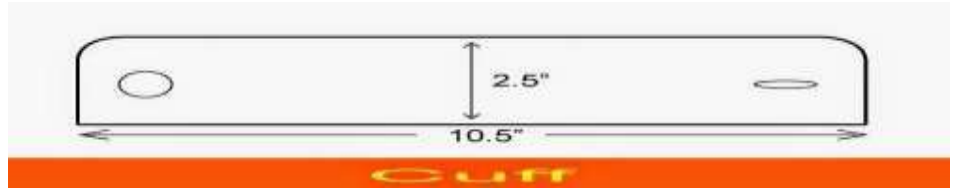
So, Consumption = $(24" \times 18.25") / (44" \times 36") \times 2 = 876"/1584" = 0.553$ yd.

➤ Cuff

Cuff length = $10.5'' + 1'' = 11.5''$

Cuff width = $2.5'' + 1'' = 3.5''$

So, consumption = $(11.5'' \times 3.5'' \times 4'') / (44'' \times 36'') = 161/1584 = 0.10$ yds



➤ Pocket

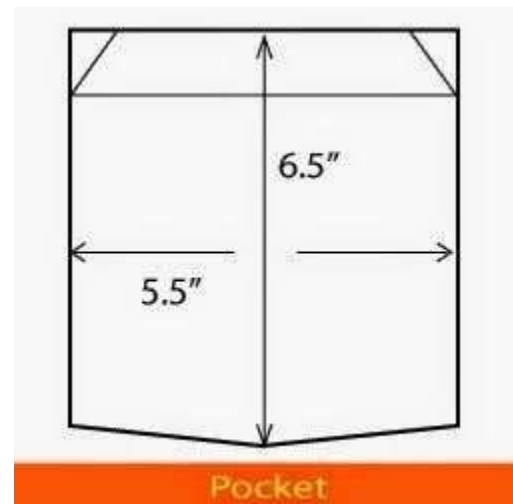
Pocket length = $6.5'' + 1''$ (Sewing allowance) + $1''$ Pleat W = $8.5''$

Pocket width = $5.5'' + 1''$ (Sewing allowance) = $6.5''$

So, Consumption is = $(8.5'' \times 6.5'') / (44'' \times 36'') = 55.25/1584 = 0.03488 = 0.035$ yds

Total fabrics needed

- ✓ Collar = 0.10 yd.
- ✓ Collar band = 0.06 yd.
- ✓ Back yoke = 0.19 yd.
- ✓ Back part = 0.50 yd.
- ✓ Front part = 0.59 yd.
- ✓ Sleeve = 0.553 yd.
- ✓ Cuff = 0.10 yd.
- ✓ Pocket = 0.035 yd.



So, total = 2.128 yards

Total fabrics = 2.128 + 5% (Wastage)

$$= 2.128 + 0.1064$$

$$= 2.2344 = 2.235 \text{ yards is the consumption of a basic shirt.}$$

Second Method:

This quick-consumption "shortcut formula" is well-known. The length of the body, the sleeves, and the stitching allowance (if the clothes are cleaned) add up to the total length. Body width = Chest width + Sewing stipend (if there should be an occurrence of wash pieces of clothes); washing stipend should be included with the previously mentioned. Incorporate a wash allowance into the calculation below:

$(\text{Length} \times \text{Width}) / (\text{Fab. Width} \times \text{Fab. Unit})$

Body length = 32" + 1" (Sewing remittance) = 33"

Sleeve length = 23" + 2.5" (Sleeve width) + 1.5 (Sewing remittance) = 27"

All out length = 33" + 27" = 60"

Body width = 48" + 2" (S. A) + 3" Pleat W = 53"

So, Formula = $(\text{Length} \times \text{Width}) / (\text{Fab. Width} \times \text{Fab. Unit})$

= $(60" \times 53") / (44" \times 36")$

= $3180 / 1584 = 2.007575 = 2.0075 + 5\%$ (Wastage)

= $2.0076 + 0.10038$

= $2.10798 + 0.95$ (Shoulder one part)

= $2.20298 = 2.20$ yards

During the retail sample phase, these techniques are used to mimic the utilisation of textiles. This formula gives a reasonable approximation of the precost phase for apparel. In certain situations, the CAD department will also utilise textiles to prototype his marks. The following are the limitations on the usage of textiles: The cuttable fabric width, repeat size, and pattern type must be sent to the CAD together with the buyer's technology package in order to determine the precise width and utilisation. 80–85% label efficiency, depending on the kind of cloth. H. Solid hues, chevrons, and pattern. Efficiency might differ according on buyer matching factors, fabric characteristics, and style type.

It is mandatory for the retailer to incorporate a consumption buffer into the fabric, often ranging from 0.03 to 0.08% of the total fabric consumption.

i. H. Interlining will have an extra buffer of 10-15% when ordering interlining for trimming in order to maintain stock levels and avoid stockouts during manufacture. When calculating the amount of fabric utilised, the fabric waste rate must be taken into account. The kind of clothing, the fabric, and the manufacturing procedures all affect how much waste is produced.

Trims

Materials other than the cloth used to make the garment are utilised as trimmings. For instance, the majority of clothing comes with various embellishments including elastics, tags, buttons, zippers, and threads. The cost of the garment is closely correlated with the kind, amount, and effort of the trimmings as well as the time and work required to attach them. The units of measurement varies throughout setups. The same instrument may have two to three distinct units of measurement, which can be summed up as follows:

Trims	UOM
Thread	1000 meter tube, 2000/5000 Meter Cone
Labels	Unit
Zippers	Unit
Buttons	Gross (144 Units)
Polybag	Unit , thickness is measured in mm. or gauge
Carton	Unit
Hand tags	Unit
Shanks	Gross
Rivets	Unit
Lace	50 Meter
Hanger	Unit
Tapes / Velcro	50 Meter or Kg.
Elastics	50 Meter

Table 1 UOM of Various Trims used in Garment

The MOQ, order quantity, lead time, and quality of the raw materials used to create the trims are additional elements that must be taken into account when estimating the cost of the trimmings.

- **Thread:**

The next crucial factor that must be taken into account for determining the overall cost of clothing is the manufacture of the fabric. The IE department calculates the thread utilisation. The type of seam and SPI determine how much tread there is. The number of sewing machines needed for a specific style and the division of labour should be taken into account when buying thread. Ordering the thread cone quantity appropriately is important. To compute and find the precise thread usage, specialised software programmes are also available.

In certain instances, the threads can be computed by first weighing the thread cone during sample preparation and then weighing it once again following sample preparation. The difference in weight reflects the amount of yarn used, which, when translated to metres, provides the garment's actual yarn consumption. It is vital to account for wastage, which is usually between 10% and 15% of the yarn ordered.

- **Labels:**

Clothes have several labels on them. H. Content, Care, and Main Labels. The brand of label determines how much it costs. H. While factors like fibre composition, printing, jacquard labels, label size, and colour may not have a big impact on cost when it comes to consistent clothing labelling, mass manufacturing does. The minimum order quantity and order quantity are additional things to consider when placing an order for labels.

- **Zipper:**

Additionally, there are other varieties of zippers, such as metallic and nylon zippers, which account for a portion of the zipper's unique cost. A merchandiser should be aware of the zipper's limitations in order to accurately price and exchange goods. The MOQ is the threshold that significantly affects zipper costs; only zippers at a given MOQ will be available at the desired price.

● **Buttons:**

Buttons can be constructed from shells, plastic, acrylic, metal, wood, and nylon. The button maker sets the minimum order quantity (MOQ) for each type of button. Gross purchases of buttons are made after the ligne is established.

1 bulk = 1 package = 12 dozen buttons

● **Polybags:**

The price of poly bags is significantly influenced by their thickness, dimensions, and raw material. The poly bag asked for a specific quantity of components. The cost of the poly bag is equally significant as it has a significant impact on the order's overall amount. Application of Poly Pack: Clothes merchandisers need to be aware of the preceding information in order to apply poly sacks.

1. Poly pack length in inch
2. Poly sack width in inch
3. Thickness of poly sack in check,
4. 1/2 of a poly bag's flap Print on the poly pack

Using it, it can be easily calculated the poly bag consumption .

Poly bag consumption (for 1000 pcs in kg),

(Poly bag length + ½ Flap) x Poly bag width x Thickness of poly bag

=

3300

● **Cartons:**

Like poly bags, the materials and dimensions utilised have a significant impact on carton pricing. The price of the carton is set by these variables. Generally speaking, boxes are measured in pieces, however the price varies based on the minimum order quantity. These are supplied according to the quantity of layers, the size and weight of the base paper used to construct the

box, and other factors. Carton layers typically consist of three, seven, or nine layers. Nine layers, 60 x 40 x 40, four-sided calico, one-sided printing, 180 g/m², as an illustration. cardboard consumption as well as the computation of cardboard consumption:

Carton cost calculation rule

$$= \{[(\text{Length} + \text{Width} + \text{allowance}) \times (\text{Width} + \text{Height} + \text{allowance})] \times 2\} / 10000 \times \text{Per square}$$

Liner rate

$$= \{[(60 + 40 + 6) \times (40 + 30 + 4)] \times 2\} / 10000 \times \$0.80 \text{ \{suppose\}}$$

$$= \{[(106) \times (74)] \times 2\} / 10000 \times \$0.80$$

$$= \{(7844 \times 2)\} / 10000 \times \$ 0. 80$$

$$= 15688 / 10000 \times \$0.80$$

$$= 1.5688 \times \$0.80$$

$$= \$1.25504 / \text{pc (Per carton rate)}$$

- **Hand tags:**

Price tags, also known as hand tags, are used as packing material. The cost of hand tags varies according on the material, printing, and minimum order quantity.

- **Shanks and rivets:**

These trimmings are often constructed of metal, and the number of parts individually is terrible, as is the UOM of the rivets and shanks. The cost of shanks and rivets is determined on the material used and the minimum order quantity.

- **Hangers:**

Although they can also be constructed of wood or hard plastic, hangers are often made of the latter material. A hanger's cost is determined by its size, colour, print, and material. Transparent hangers are typically more expensive than coloured ones.

- **Taps and Velcro:**

Mobilon tapes are available for purchase by the kilogramme, whereas tapes may be bought by the width. Thus, an 80% increase in cost results from a 100% increase in breadth. A 150% increase in width results in a 250% increase in cost for satin ribbon. MOQ has an impact on the pricing as well.

The kind of purchase and the mode of transportation are often taken into account when calculating trim expenses. Freight reduction plus a 15–25% premium will be applied to the buyer if shipping by air.

The customer will be responsible for an extra fee of cut cost + 10% to 15%, depending on the freight cost, if surface shipment is chosen.

The internal taxes are present if we discover that domestic sourcing is present. We also discover that the whole cut cost includes transportation expenses.

Depending on the business perspective, the buyer makes these additions.

Additional fees included in the goods pricing

Charges	In %
Rejection and wastage	2-5 % (depending upon order quantity)
Commission on foreign exchange	2-3%
Commission of buying house (if applicable)	1-1.5%
Transportation charges internally	1-2 \$/ garment
Margin (decided by marketing department by looking business scenario)	10-15%
Testing inspection charges	1-2%

	Items	Consumption	UOM*	Rate (\$)	Amount (\$)	Remarks
1	2/60s single jersey	0.224	KGs	6.5	1.45	
2	Cuff and collar ribs	0.08	KGs	5	0.4	
3	Sewing thread	150	Meters		0.08	approx.
4	Buttons	3	Gross		0.04	approx.
5	Main label	1	Unit		0.02	approx.
6	Care label	1	Unit		0.02	approx.
7	Hang Tags	1	Unit		0.06	approx.
8	Price Tags	1	Unit		0.04	approx.
9	Poly bags	1	Unit		0.02	approx.
	Total Cost				2.13	

Cost of Making

If a contractor completes the making, the contractor will tack on profit to this sum. The total cost per hour multiplied by the number of hours required to make the style and divided by the quantity of units produced is the basis for calculating the cost of creating anything "in house".

The manpower cost per minute at 100% efficiency may be calculated as follows: (monthly operator salary / total minutes available).

CM cost is computed in this way: Line efficiency (%) is calculated as (garment SAM * manpower minute cost).

Services with additional value:

These expenses are tacked on to the cost of particular procedures like cleaning, printing, and stitching that give goods the intended look. The costs of hiring services, washing, and wet processing chemicals are all related to the production of garments.

Chemicals used in wet processing include bleaches, detergents, softeners, neutralizers, wetting agents, and resins. Detailed wet process finishes add a substantial amount to a product's cost. The merchandiser has to be well informed about all of these processes, including the sourcing, contracting, and timing requirements. The price of these varies according on the style. For instance, determining the cost of thread must be done for embroidery, and hand stitching incurs additional costs. Printing costs are influenced by the type of print, MOQ, and number of colours used.

- **Example of Garment Costing:**

The cost of the piece of clothing is determined by taking into account the polo neck's ancillary factors. Shirt, the number of pieces is equivalent to 4,000, and the operator is paid \$120 a month. of working days = 26, line effectiveness taken into account = half, sewing SAM = 15 minutes, cutting SAM = 7 minutes S/J fabric made of 100% cotton, 2/60s, was utilised. The measurements are 60 cm for the chest, 75 cm for the length (hip to waist), and 25 cm for the sleeves. The amount of fabric used may be computed as follows if the GSM is 180:

$$= (75 + 25 + 2) \times (60 + 2) \times 2 \times 180 / 10000 = 0.224 \text{ kg} + 0.08 \text{ (weight of collar and cuff)}.$$

• CMT charges are calculated as:

Total available capacity per month (in minute) = 26 working days*8 hours/day*60=12,480 minutes

Labor cost per minute = (Monthly salary of an operators/Total minutes available in the month) at 100% efficiency

$$= 6000/12480$$

$$=0.480 \text{ Rs.}$$

Sewing cost = (SAM of the garment * Minute cost of the labor)/Line efficiency (%)

$$=15* 0.480 / 50$$

$$=0.288 \$$$

Cutting cost = (SAM of cutting * Minute cost of the labor)/cutting efficiency (%)

$$= 7 * 0.480 / 50$$

$$=0.134 \$$$

Trimming cost is considered as 0.06\$as it depends upon how many operators are there for trimming.

Production cost of garment (CMT) = sewing cost+ cutting cost + trimming cost

$$= 0.288+0.134+0.06$$

$$= 0.482\$$$

FOB Cost of Garment

Fabric cost + 7% duty	1.97\$
Trim cost + 7% duty	0.3\$
Fabric and trims transportation charges	0.06\$
Testing + inspection charges	0.2\$
Commission on foreign exchange	0.08\$
Buying house commission	0.16\$
Rejection 5%	0.16\$
Value addition services	0.2\$
CMT	0.482\$
Margin	0.5\$
Total FOB cost of garment	4.11\$

Since production merchandisers are in charge of costs, they must be knowledgeable about the process. In addition to having a thorough understanding of costs, merchandisers need to be aware of periodic changes in the price of various clothing components. The process of costing is highly dynamic; only the cost of manufacturing, or FOB of the garment, is negotiated at the international level. As a result, merchandisers need to exercise extreme caution while haggling with buyers over the price of clothing. Globally, sourcing is a standard procedure in the apparel industry. Production merchandisers serve the function of buyers for fabric and trim manufacturers, and suppliers for garment purchasers. A production merchandiser is also responsible for managing costs for both jobs.

Chapter 5

Conclusion

The aforementioned study aims to provide insight into the process of product development and cost estimation. In order to both satisfy consumer demand and remain competitive, product creation is crucial. Will not buy the stuff if not. In addition, the product's pricing need to be competitive. The textile industry is quite competitive these days. Therefore, conducting study on it is crucial. Given that it is currently the most crucial topic. Merchandisers will thus be assisted in making the best choice possible by this study. It will assist us in selecting the best product for manufacturing at a reasonable cost. In addition to helping with buyer pricing, this study will be beneficial to anybody wishing to analyse new items.

Chapter 6

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