



**FINAL YEAR PROJECT**  
**Virtual Art Gallery**

**BY**

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This Report Presented in Partial Fulfillment of the Requirements for the  
Degree of Bachelor of Science in Multimedia and Creative Technology

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**DAFFODIL INTERNATIONAL UNIVERSITY**

**DHAKA, BANGLADESH**

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## **APPROVAL**

This Project titled ‘Virtual Art Gallery’, submitted by Anindya Ghosh to the Department of Multimedia and Creative Technology, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Multimedia and Creative Technology and approved as to its style and contents. The presentation has been held on 29 November 2018

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## DECLARATION

I hereby declare that, this project has been done by me under the supervision of Mr. Arif Ahmed, Associate Professor, Department of MCT. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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## ACKNOWLEDGEMENT

I would like to express my utmost gratitude to the Almighty creator for allowing me to complete such an incredible research that is beneficial to artists of ages.

I would also like to appreciate all those helpful people who made this following research possible with their consistent support, inspiration, criticism and good wishes.

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I am grateful to all the lecturers of the Department of MCT, Daffodil International University, for spreading their kind help at any time I needed.

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## ABSTRACT

Art forms and mediums kept developing with the evolution of human civilization. Thereby from time to time, the way artists presented their arts have also changed. From the paintings on the cave wall to the virtual life we have now with the help of electronic media, the sole purpose was to present the artworks effectively. As the technology right now is on a pick, I felt the necessity to present the classic arts, in a modern form, which can be parallel to the era we are living in. Thereby, a virtual art gallery is the best way an artist could present his arts through an interactive manner.

Initially, the plan for such a virtual art gallery was proposed to the ingenious artist, Respected Arif Ahmed. As the goal of this project is to modernize the presentation styles of arts, Paintings of Arif Ahmed was the best choice for me. He has introduced science inspired paintings in wide scale for the first time and thereby his paintings are perfect fit to be included in this modern form of Art gallery.

The Plan of the gallery and it's functionality was drawn in flowcharts first. Then with the help of several software, (e.g- Adobe Photoshop, Adobe After Effects, Autodesk 3ds Max, Unity) the project was developed through several challenging steps. Finally a virtual art gallery was deployed as a desktop application.

The final version of the application deployed, has the functions to walk through a virtual gallery, See the paintings, gather information about them in both texts and voice over, and also to know about the artist and contact information, in one single file.

I hope, this project will work as a pioneer of modern presentation techniques of Art.



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## CHAPTER 1

### Introduction

#### 1.1 Background

Art is something that is always present in any creation. It's not a moral thing like good or bad, neither it's always a substantial form that anyone can see. Art in nature is always present in any visible or invisible form. Those can be the art of creation, the art of living, also the art of destruction is possible. What a so called "Artist" does is, actually grabbing a part of experience of that art and give that a visible form that others can also experience through their senses. Thereby, the media the artist is presenting the art can be very different from person to person, cause that's only a tool of representation. And thus, different art mediums and forms have come to the human civilization.

Among all the art mediums, Paintings are one of the oldest. Since the cave painting's <sup>[5]</sup> era, or maybe even since long before that, drawing and painting has always been a part of our civilization. Human discovered the visible language of communicating ideas and feelings with paintings! So, the importance of such art is always undeniable. Artists are truly documentary makers of history and evolution. So, it's our sincere duty to preserve and expand the possibilities of art as much as possible.

So whenever the thought of making a painting came to human mind, they probably came up with the solution of a canvas with a comparatively plane stone. They could draw the same thing easily on soft land or sand; but they didn't. This simple act of our ancestors prove that, art had always an appeal to be exhibited and preserved for viewers. And from there, the idea of exhibition came.

There are proofs that, arts were started to be given priority from thousands of years ago. Even the most ancient civilizations had certain appreciation of art that helped them to create new things with more artistic forms. So, whatever tools we are using now a days are actually developed artistic forms of their ancient versions. Alike anything else, even the



presentation styles of art today, definitely had its ancient forms. If that is true, there is definitely scope for a better future of the exhibition tools of art.

The most popular way of presenting paintings are through a museum or art gallery, where the paintings are collected and mounted in frames with the wall. People are allowed in that place from time to time to see and know about the arts there. Sometimes the artists are also present there which allows the viewer to know more from him. There are both public and private galleries with different motives. Public galleries are mostly free of cost, and they intend to exhibit only. But most private galleries intend to exhibit the artworks as a product and provide the viewers with the opportunity to buy or make some trade deals with the owners. But whatever the motive is, paintings are mostly exhibited this way for thousands of years.

Now, modern electronic technology is emerging day by day. People are being busier too. In many societies, the appreciation for arts are lessened because, people don't give priority of going to a museum to see the artworks comparing with their other productive works. Some may have the wish to attend exhibitions, but misses for time schedule. A lot of people definitely loose the opportunity just because they are from a different country! So, a solution was required.

People now a days have access to a computer, or at least a smart mobile phone, which is quite a powerful computer indeed. So, the best way of facing the limitation of real exhibitions was to find out a virtual solution.

Modern computer graphic technology is so advanced that, it can create almost anything in 3d, which enables the possibility of a virtual art gallery. Thus, the tradition of exhibiting arts will be preserved well, with the integration of modern technologies and abilities.



## 1.2 Motivation

I started to think about a smarter way of presenting art in this era of electronic devices. This is above debate that, human life is very much affected by electronic devices now a days. So, the practice of appreciating and practicing art are also needed to be on that format, that suit the lifestyle of present civilization. If we just closely observe the tools of making art now, we see they are already too much electronic tools based. Even the films are converted to higher form of electronic media like animations. All drawing and painting tools are available in software and other electronic hardware devices. So, this art medium is definitely converting it's pattern day by day.

Now this will be very improper if an artist is creating exciting paintings or any visual form of art, but becomes unable to show it to a large number of people. Exhibiting one's art requires several needs to be fulfilled like- managing a space, binding the artworks properly, arranging the events and organizing them properly and lots of stuffs like those. That process can spoil a huge time and effort of a talented artists. So, unless it's a reputed exhibition, a solo exhibition costs a lot to an artist. This cost includes money, time, effort everything.

So thereby I came up with the idea of making a virtual art gallery for an artist. This will be his/her own solo exhibition, and that has no deadline. This one software, forever will serve them as a solo exhibition of their artworks. And also, that will not hamper the original artworks anyway. There won't be any security issue, and the whole process will be highly cost effective and customized.

The final output will allow a visitor/ viewer to visit a virtual art gallery, where the selected artworks are exhibited and the detail information about the artwork will be found in smart ways, both in written texts and voice over. Also, they will be able to know about the artist, his contact details and all necessary relevant information in one single plug and play software.

## 1.3 Objectives

The objectives of the project are to:

1. Develop a 3d architecture of a virtual gallery that itself becomes a piece of art; so that viewers experience a head to foot pack of art during the virtual tour.
2. Present 3d replica of original arts in the virtual environment, with proper necessary lighting.
3. Inform the viewers about the painting's sizes, prices, media and identity with texts.
4. Let the viewer know about the inspiration or background of the artwork with subtle voice over.
5. Provide a melodious environment with tasteful background music.
6. Provide simplest User Interface to experience the virtual tour smoothly.
7. Give an artist the opportunity to exhibit his/her work beyond borders.
8. Give viewers the chance of attending their favorite artist's solo exhibition at their own suitable time and place.
9. Show the possibilities of modernization of art presentation.
10. Provide artists a one stop low cost solution to exhibit their works in a smarter way.

Above all, the principle objective of the project is to appreciate art and the effort of artists.

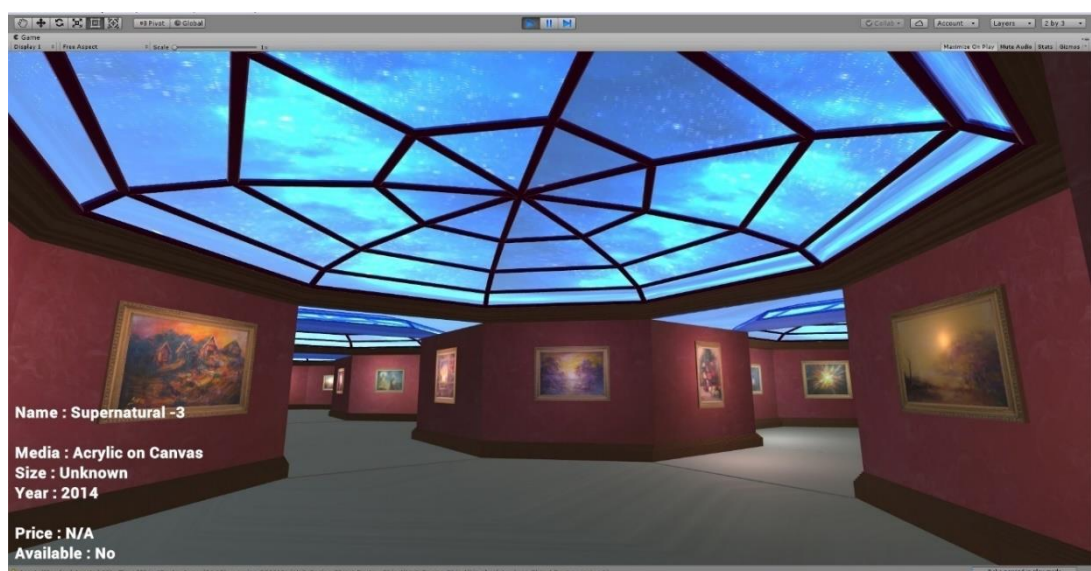


Figure 1.1: A glimpse of the project created



## CHAPTER 2

### Literature Review

#### 2.1 Introduction

In this chapter, the necessity of such a virtual art gallery is proved through some comparative study. It was tried to put together some similar efforts on this sector by some other enthusiasts. Based on their output and effects of the product, I tried to get the concrete idea of my project. I also tried to emphasize on, why the project I did is differently appealing rather than the existing solutions.

#### 2.2 Art Gallery and Art Museum

There are similarities between these two places, art gallery and art museum <sup>[6]</sup>. Both the places are intended to preserve some art (mostly visual art) and allows the viewers to visit the place and see the artworks. But the basic difference is, a Museum has the responsibility to preserve the artwork too. An important artwork, which is worth to be taken care of for the sake of human society and culture is always taken care of by certain professionals in a museum. So, besides the responsibility of exhibiting, the art museums also has the key responsibility to preserve the artworks and maintain their security and lawful rights.

On the other hand, an art gallery has the key intention to exhibit the artworks, rather than preserving them for a long time. Art galleries can be both public and private. Most Public art galleries exhibit artworks almost for free. These institutions are mostly run by national organizations or other large foundations and academies.

But private galleries are mostly intended to make a space of exhibiting and trading artworks. So, there are some financial issues related in this case. Sometimes both artists and viewers have to pay the middleman (owner of gallery) for this circulation of showing and seeing arts.



## 2.3 Art Exhibition

Art exhibition <sup>[7]</sup> is generally a place, where selected artworks of selected artists are exhibited for a certain period of time. The initiate can be taken either by the artist, any organization or any people. Even the motive can be different. Some arrange exhibitions just for the pleasure of sharing their artworks with others, some arrange exhibitions for trading with the artworks. Some organization or people can also arrange tribute exhibitions with the artworks of honorable artists. Even, sometimes paid exhibitions are arranged just to raise fund for any social welfare. So, as we can see, the motives of an art exhibition can be very different. But the key point is, it is arranged for a period of time, and this is not always a solo exhibition, where an artist can show his/her own creations only.

## 2.4 What I made?

My project contains the opportunity to exhibit the artworks virtually. So, obviously the place and architecture of this gallery is under artist's and developer's will. Also, this virtual gallery is something that can be used forever once it's made. So there is no chance of running an exhibition of limited period. Any viewer can see the artworks anytime, from anywhere. Though the artworks shown in the software are replica of real artworks, those are good enough to serve the purpose of exhibiting at a certain extent. If the real artworks were exhibited for so long like the replica in software, the original artworks would be very much harmed. Thereby, using such a virtual gallery keeps the original artworks safer. Which actually serves the purpose of an art museum too. And also, this virtual gallery is an artist's personal gallery of art, with the trading information in it too.

So, regarding all the facilities stated above, I come to conclusion that, this project is a one stop Art museum, Art gallery and Art Exhibition, with the opportunities to customize as the artist and developer wants.



## 2.5 Why it is Necessary?

There are multiple art galleries in almost any metropolitan city. Any university with a fine arts department also has their own exhibition halls. If anyone wants to exhibit their works, they can arrange that event in those places in real life! Then why we need such a virtual art gallery?

Well, to know what limitations we have eradicated with the project, we need to focus a little on the limitations of traditional exhibitions. In short:

1. Traditional Exhibition galleries costs a huge amount of money for the period of exhibition.
2. Traditional galleries may not be available just when the artist need. Because there are other artists to show their works too.
3. The traditional galleries are in permanent places. So, people staying far from that area may have problems reaching there in time. Also, for national borders, international visitors can't always attend an exhibition.
4. Even if the exhibition is run for plural days, there is always an effective time range when there are more visitors in galleries. So, most of the time, artists visit the place at those effective hours. Visitors can only then hear from him about the works. Yet, one artist can't whisper painting details to every visitor present at the gallery.
5. The whole money invested in one event, is gone forever once the exhibition is over. It's better to have something permanent when money is invested.
6. In traditional art galleries, there is always a need of caring for the artworks continuously, so that no one can harm any piece of art.
7. Traditional exhibitions has an opening and closing time which may not suit the timetable of the visitors.

So, considering the above limitations, we still can't ignore a real life traditional exhibition, because of it's reality. But, if the reality is not experienced by a large number of audience and the artist is not able to reach the amount of audience he/she deserves, then the whole process is terminated. So, we came up with this idea of a virtual art gallery, which will work as the artist's personal virtual place for exhibiting artworks. It won't be able to give the





reality, but will definitely offer another form of art- Virtual reality. Also keeping the main artworks unaffected. So the reasons that make this project a very desirable thing are:

1. It doesn't cost for the duration of visiting (using). Once the software is made, anyone can visit it as long they want without any payment.
2. This virtual gallery is always ready for the artist. Artist can show this to anyone at any time without any schedule complex.
3. Through this virtual gallery, even far and international audience can take part in the exhibition.
4. Every user gets the opportunity to know about each individual painting, in details without any crowd and noise problems.
5. For this project, once the payment is done to manufacture it, there is no need to pay again each time the virtual exhibition is happening. Unlike a traditional exhibition, this is a single time payment and unlimited exhibitions indeed.
6. There is no tension of taking care of the original arts here. As the main pieces now can be kept safe. The 3d replica is being used for this virtual exhibition.
7. There is no closing time and opening time. Audience can see, as long they want!
8. Artists don't need another traditional portfolio of their works. This will work as the new smart portfolio for them.

## 2.6 How others tried?

Artists of different country any genre tried to present their artworks in different ways from time to time. The most manual way of this is to print the photograph of their artwork and make a portfolio. For those who work on papers, they laminate the original paper and bring them in portfolio bags. Even now a days these process is followed by a lot of artist, though some websites came up with solution to exhibit artworks and make online portfolios. For example: Behance, Pinterest<sup>[4]</sup>, Linked in, Facebook, they all have ensured free individual profiles for their users. Now a days, people can add their images and videos with details in these websites. A large necessity of portfolio presentation is solved there. But still, that experience of exhibition, is missing in this web services. So, updated ways were to be searched.

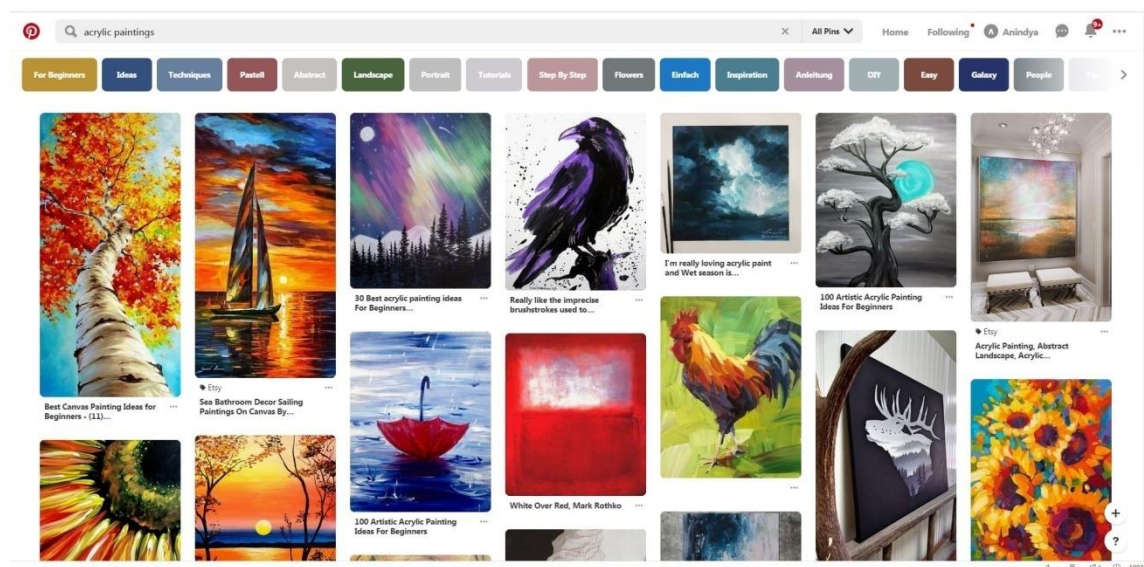


Figure 2.1: Popular but static 2d solution of digital exhibition

Then the necessity of a virtual 3d environment arose. Now, a lot of artists have realized that, this experience can bring life to presentation patterns. So, they made 3d models of simple galleries and provided the service of adding any artist's artworks there. But, their service had few fundamental limitations, even though they have lots of minor benefits. The limitations be:

1. The architecture of the gallery they offer, are too simple and same for all. They gives very limited variety and costs a lot for that variation too. Mostly the architecture can't be customized as artist's taste.

2. They cost for the service on a monthly or yearly basis. After that period, the exhibition is over. One must repay to get that service back.
3. They don't provide the option to add sound or voice over for individual paintings.
4. The cost of the service is very high. According to the website of such a company "Exhibitbit<sup>[2]</sup>", they charge 25\$ per month for a set of 20 paintings! For 32 paintings, the charge is 50\$ ( 50 x 80 = 4000BDT , for ONE month ) !

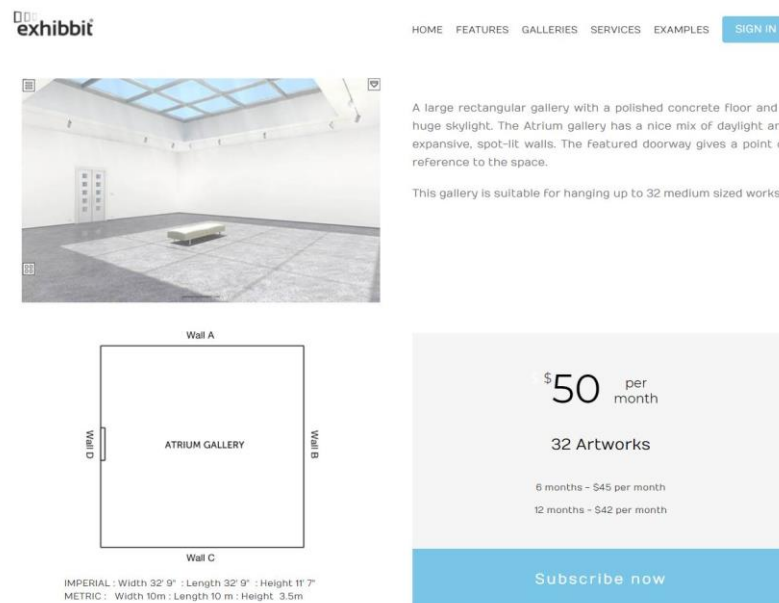


Figure 2.2: Currently available, high cost but low quality 3d gallery support

Considering the above information, we can come to a statement that, though some company have started to provide such services, still they are not able to provide the best thing in best cost.

So, I came up with the idea of delivering the whole virtual gallery to the artist, forever, after single payment. There is no need to update, and the cost will be negotiable. I have also integrated the voice over description for individual paintings which adds a different dimension to the media. And last but not least, in our type, we can always provide custom architecture of gallery according to artist's own tastes and requirements.



## CHAPTER 3

### Pre- Production

#### 3.1 Introduction

Pre- production phase is the planning section for any project. Especially for any large scale project where a lot of money and time is going to be invested, a proper planning before the actual work, is a great idea. In this phase, we usually put together all the information and ideas about the project in writing and sketches. Then we come to a final goal and objectives. Then according to the plan, we detect the pre requisite tools for the project and manage them in time. Finally the work is done (Production) keeping the pre- production documents as a directional script.

#### 3.2 Planning the User Experience

For my project, it was necessary to come up with the idea of what the users can actually do during the use of the software. So the major functionality were decided to be added as followed:

1. User must experience an astonishing architecture.
2. A large number of painting should be included.
3. Individual details of each painting should be shown properly.
4. Each painting must have a voice over attached so that viewers can also know about the inspiration.
5. The user interface should be simple and subtle.
6. The contact information must be added inside.
7. About the artists, About the Developer, credits and Instructions should be added in the main menu.

So, whenever I was ready with knowing what to do, then I searched for the requirements. There were basically three types of tools and information I required to complete the project. Those are discusses below.

### 3.3 Data Collection:

As I was determined to work with the paintings of renowned artist and my honorable supervisor Arif Ahmed, It was necessary to have his kind permission and cooperation for this project. So, I made a formal proposal via the department and my will was considered.

Now, this should be mentioned that, Arif Ahmed<sup>[1]</sup> is practicing his art crafts for decades. So, he has already traveled different patterns and forms of painting. So definitely he has a large number of paintings in his sack. The first and probably one of the toughest challenge was to pick up the best paintings among all possible options. Honorable artist was so kind in this case that he never interfered with this curator's job and kept me at liberty to choose paintings of my choice.

So, as the paintings were selected, it was necessary to photograph them in a way that those can be used as textures in 3d visualization. I searched in websites and pages of Arif Ahmed for the images, and also took the help of honorable lecturer Apurba Ghosh to gather the photographs and information. Once a huge number of painting was collected, I gone through them several times and considering all forms and patterns, I finalized 48 paintings, to be exhibited virtually.

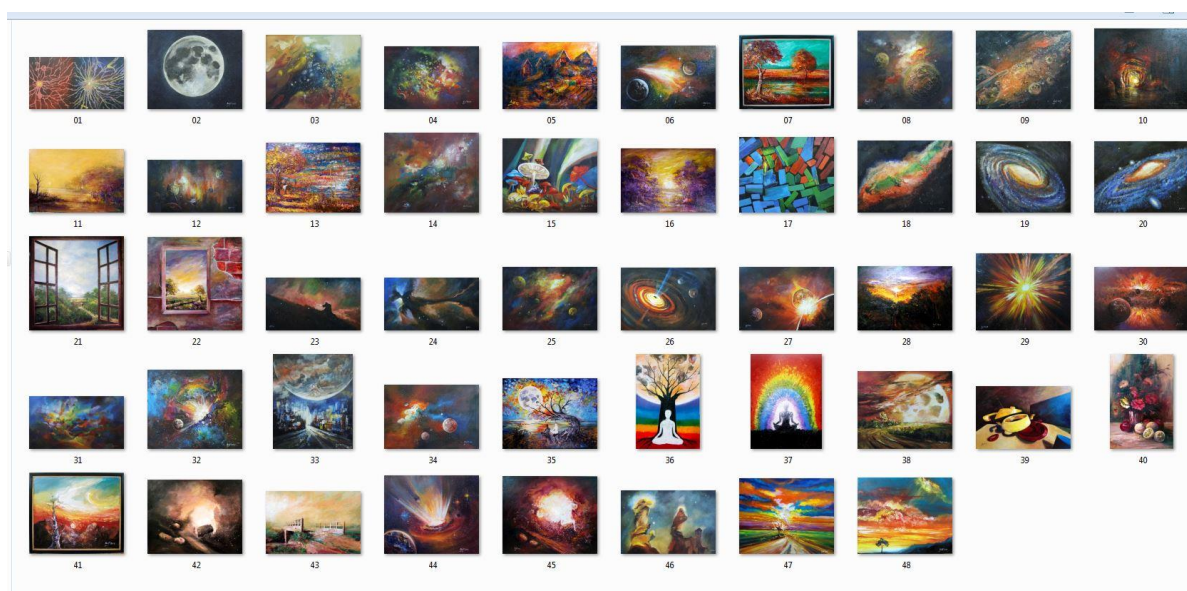




Figure 3.1: The selected paintings to be exhibited virtually




I decided that, I will include the Name, the dimension, the price, the media, the year of completion and availability of each paintings in written forms. So I searched for the information from all possible ways. Also I needed to have voice over on every individual




painting. So I discussed about artist's own inspiration for the artworks he created and wrote the voice overs with the help of honorable lecturer Apurba Ghosh. The data table I created with the necessary information is as below. It's noted that, some information were later updated and added which are missing in this table. Obviously, every project has some phase of error solving to reach the goal.

**Table 1:Selected paintings and their details**





<b>Serial No.</b>	<b>Paintings</b>	<b>Painting's Name</b>	<b>Dimensi on</b>	<b>Price</b>	<b>Voice Over</b>
<b>01</b>		Brain and the universe-1	25"x45"	36500 BDT	This painting unleashes the surprising similarity between the pattern of brain and the universe. Though there are variations in size and activity, the similarity between these two is meaningful enough to grab the attraction of a think full mind.
<b>02</b>		Apollo moon-1	20"x24"	20000 BDT	Back in the year of 1969 when Apollo-11 started its mission to catch the moon, an astonishing sight appeared on the window of the spaceship. It was the









					sight of the moon. Artist has portrayed the breath taking scene in this paintings.
<b>03</b>		Birth of stars 2	24"x30"	35000 BDT	Like all the living creatures, the twinkling stars on the sky have a life cycle. They get birth, becomes mature and lastly die. This painting shows the marvelous moment, when the stars are getting a new life in the universe.
<b>04</b>		Untitled -2 (Cosmic garden)	20"x30"	19000 BDT	If we consider the entire cosmos as a huge flower garden, then what is supposed to be the flower? Definitely the colorful nebula. This painting shows the diversity of that sight where the nebula is just like a blooming colorful flower.
<b>05</b>		Supernatural-6, Acrylic on Canvas	92" X 61"	Negotiable	Maybe a beautiful planet exist somewhere, where even solitude looks





					so colorful, like the painting you see !
06		Supernova – 2	20”x30”	30000 BDT	How it would look like if a super-giant star explodes? What kind of color it will show us? The answer of these question are inside this painting named “Supernova – 2”. This is the second one from the “Supernova” series.
07		Supernatural-5, Acrylic on Canvas	61”X 46”	N/A	Have you ever thought of a planet, with such a sky you have never seen before? Maybe there is land, there are trees, and water too. Just the color will make you feel - You, are alone...
08		Isolated planets -3	20”x24”	21000 BDT	There may be billions of planets in our Galaxy having no gravitational bound with a particular star or brown dwarf. They are free, they are orphan. How these nomads look like? The answer is








					on the canvas.
<b>09</b>		Isolated planets – 4	20”x24”	19500 BDT	There may be billions of planets in our Galaxy having no gravitational bound with a particular star or brown dwarf. They are free, they are orphan. How these nomads look like? The answer is on the canvas.
<b>10</b>		Untitled – 3	20”x24”	21500 BDT	The inspiration of making this painting came from a nebula and has presented in an abstract form.
<b>11</b>		Unnatural-2, Acrylic on Canvas	76”X 51”	N/A	Nature keeps balance. But Artists are not bound to keep that balance on their Art. The symbolic misbalanced painting will remind you - Even if it’s beauty, it’s unnatural to be partial. It’s Un natural to be alive and dead, at the same time!
<b>12</b>		Brain and the universe -1	25”x45”	33000 BDT	This painting unleashes the surprising similarity between




					<p>the pattern of brain and the universe. Though there are variations in size and activity, the similarity between these two is meaningful enough to grab the attraction of a think full mind.</p>
13		Supernatural-3, Acrylic on Canvas		N/A	<p>Life, Can be mysterious. This supernatural Painting will take you to a journey of mysterious colors of Life.</p>
14		Space – 2	20”x24”	22000 BDT	<p>The inspiration of making this painting came from a nebula and has presented in an abstract form.</p>
15		Fungi Kingdom	24”x30”	22000 BDT	<p>If we consider the most widely cited estimation, there may be 1.5 million species of fungi in our world which made it more than six times as diverse as flowering plants. Let’s explore the diversity on the canvas.</p>

<p><b>16</b></p>		<p>Supernatural-2, Acrylic on Canvas</p>	<p>76”X 51”</p>	<p>N/A</p>	<p>Life is not only as we experience daily. There is enormous possibility to expand. And in that expanded dimension, you may discover such supernatural views, maybe for which we all are waiting for!</p>
<p><b>17</b></p>		<p>Liquid pattern</p>	<p>24”x30”</p>	<p>26000 BDT</p>	<p>Liquid crystals produce patterns that are unlike any that we have observed with other compounds. This particular painting shows the diversity of forms produced by the unusual state of matter.</p>
<p><b>18</b></p>		<p>California nebula</p>	<p>30”x40”</p>	<p>94500 BDT</p>	<p>How a nebula in the cosmos can have the same name of a U.S state? Its because it appears to resemble the outline of the U.S state of California on long exposure photographs. So now you are looking at the cosmic California.</p>

19		Milky way galaxy	30"x40"	42500 BDT	A dim glowing band arching across the night sky where our solar system exists is known as "Milky way galaxy". This painting is inspired by the marvelous beauty of Milky way.
20		Andromeda galaxy	30"x40"	95500 BDT	After traveling 2,538,000 light years we will find the Andromeda, the neighbor of our Milky way galaxy. This painting will make our journey shorter to bring us near Andromeda to see its beauty.
21		Through The Window, Acrylic on Canvas	36"X36"	N/A	In a clumsy Urban life, we don't have the luck to smell the nature through the window. Why not make a window, that no urbanization can shut !
22		Through the Window-2, Acrylic on canvas	61" X 61"	N/A	Through a window or in a canvas? what you see, is all up to you. Artist have shown you, just your imagination.

23		Horse head nebula	25''x45''	42500 BDT	<p>A journey of 1500 light years will bring you to a nebula who's shape is too much similar to a horse head. Because of it's identifiable shape, it is known as "Horse Head Nebula". This painting will show you how a horse head can really exist inside cosmos.</p>
24		Eagle nebula	25''x45''	39500 BDT	<p>In 1745-46 Jean-Phillippe de Cheseaux discovered a nebula which looks very similar to the shape of Eagle. The identifiable shape has gave it the name of "Eagle Nebula" which contains several active star-forming gas and dust regions and most importantly the pillars of creation as portrayed in this painting.</p>




25		Deep space -1	30"x45"	95500 BDT	The inspiration of making this painting came from a nebula and has presented in an abstract form.
26		Massive Black hole	30"x45"	46000 BDT	In the center of almost all massive galaxies a supermassive black hole exists which is the largest type of black hole on the order of hundreds of thousands to billions of solar masses. Artist has tried to grab this supermassive thing in an abstract form.
27		Cosmic Collision	30"x45"	38500 BDT	Cosmic collision happens when astronomical bodies come into contact. The extinction of dinosaurs from earth is a notable signature of cosmic collision which took place 66 million years ago. How it would feel if you think, you are watching a sight older than 66 million years. Time travel,

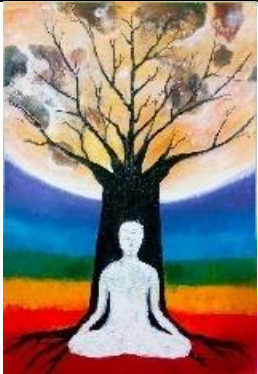


					isn't it?
<b>28</b>		Untitled , Acrylic on Canvas	76''X 51''	N/A	Disaster has always been a part of life. Some disasters harm physically, but others, shatter our inner world like a wild fire ! Yet, we try to live, we try to come out.. we keep on fighting !
<b>29</b>		Big bang	36''x45''	34500 BDT	The Big Bang Theory is an effort to explain what happened at the very beginning of our universe. This theory refers to a huge explosion which has created continuously expanding universe. That moment of mystery has brought to the canvas in an abstract form.
<b>30</b>		Birth of stars -1	30''x45''	36000 BDT	Like all the living creatures, the twinkling stars on the sky have a life cycle.They get birth, becomes mature and lastly die.  This painting shows the marvelous moment, when the









					stars are getting a new life in the universe.
31		Cosmic landscape	25"x45"	34000 BDT	Have you ever thought of watching the entire cosmos at a single frame? Have you ever thought how the endless sea of colorful stars and galaxies would look like? Probably at the very deep of his heart, artist has found an image similar to this one. You may compare yours with this.
32		Super nova explosion	20"x24"	17500 BDT	Some stars behave as if it's better to burn out than to fade away. These stars end their evolutions in massive cosmic explosions known as supernova. This particular type of ending of star's life is presented on the canvas in an abstract form.





<p><b>33</b></p>		<p>Moonlit city/ Moon dream – 1</p>	<p>20”x24”</p>	<p>16500 BDT</p>	<p>In your dreams moon may come very close to you as if it wants to touch the roof of your apartment. It’s color may change as well as it’s size. After all you are dreaming and there is no bound in dreams. The “Moonlit city” is for those dreamers who always thinks of crossing the limit.</p>
<p><b>34</b></p>		<p>Isolated planet - 1</p>	<p>20”x30”</p>	<p>24500 BDT</p>	<p>There may be billions of planets in our Galaxy having no gravitational bound with a particular star or brown dwarf. They are free, they are orphan. How these nomads look like? The answer is on the canvas.</p>
<p><b>35</b></p>		<p>Full Moon meditation- 1, Mixed media on canvas</p>	<p>30” X 20”</p>	<p>Negotiable</p>	<p>The moon has enormous effect on the nature of the Earth. Aren’t we a</p>

					part of the Earth? Won't we feel the effects of a full moon, just like nature does? Can we feel it? Can we feel what the painting whispers?
<b>36</b>		Full Moon meditation-2 (Vibration in Chakra Meditation) Mixed media on canvas	114” X76”	Negotiable	This painting symbolizes the vibration in chakra meditation on a Full Moon.  The Full moon and its enormous forces, inspired the Artist to represent that in different canvases.
<b>37</b>		Chakra meditation-1, Mixed media on canvas	20” X 30”	Negotiable	Meditation is something of inner exploration.  To some people painting is just something drawn with paints. And to others, that is a matter to explore.  Let's Explore this art of Meditation... !
<b>38</b>		Moon Dream – 2	24”x30”	21500 BDT	The dramatic moon may become more dramatic in your dreams. Its color may change as well as its size. After all

					<p>you are dreaming and there is no bound in dreams. The “Moon Dream -2” is for those dreamers who always thinks in a different way.</p>
39		Field of View-1, Acrylic on Canvas.	76”X 61”	Negotiable	<p>Can we imagine how a daily object would look if nature rejects it’s laws? Can we imagine it, wider than we see ? Let’s see how the artist imagined that on the canvas !</p>
40		Fruits and Flowers, Acrylic on Canvas	91”X61”	N/A	<p>Flowers and fruits, can simply symbolize Life, birth, survival. What do you think of this painting? It’s up to you! After all, it’s just flowers and fruits, isn’t it ?</p>
41		Polar aurora -2	20”x24”	22500 BDT	<p>A natural light display in the sky, predominantly seen in the high latitude regions, most commonly known as an aurora or polar light. The divine beauty</p>

					has portrayed on the canvas in abstract form.
42		Cold fire -1	24"x30"	35500 BDT	It's hard to believe but it's true that ice can be exploded. If thermite is placed on the top of ice and if it starts ignited, a highly exothermic reaction begins which results a big explosion. The catastrophic beauty is on the canvas.
43		Culvert-2, Acrylic on Canvas	91"X 61"	N/A	A bridge that connects the Visible and invisible worlds! Can you see what's on the other side? Can you imagine? Can you feel? Only you can answer to you. The canvas, just have the questions!
44		Super nova -1	20"x24"	22000 BDT	How it would look like if a super-giant star explodes? What kind of color it will show us? The answer of these question are inside this

					<p>painting named “Supernova – 2”.</p> <p>This is the first one from the “Supernova” series.</p>
45		Cold fire -2	24”x30”	29000 BDT	<p>It’s hard to believe but it’s true that ice can be exploded. If thermite is placed on the top of ice and if it starts ignited, a highly exothermic reaction begins which results a big explosion. The catastrophic beauty is on the canvas.</p>
46		Pillars of creation	32”x45”	75500 BDT	<p>“Pillar of Creation” is a photograph captured by Hubble Space Telescope. “Pillar of creation” is found in Eagle nebula and it is so named because the gas and dust in this region are in process of creating new stars. The divine beauty is portrayed on the canvas in an abstract form.</p>

47		Polar aurora -3	24"x30"	19500 BDT	A natural light display in the sky, predominantly seen in the high latitude regions, most commonly known as an aurora or polar light. The divine beauty has portrayed on the canvas in abstract form.
48		Polar aurora -1	24"x30"	21500 BDT	A natural light display in the sky, predominantly seen in the high latitude regions, most commonly known as an aurora or polar light. The divine beauty has portrayed on the canvas in abstract form.



### **3.4 Software:**

Once I knew what to do for my project and I had the necessary data to shift to the production phase, I made the list of necessary software as below, and made sure I have them installed in my workstation.

- Autodesk 3ds Max 2017
- Adobe Photoshop CS6
- Unity - 2018.1.6fi
- Adobe After Effects CS6
- Microsoft Visual Studio 2017

#### **Autodesk 3ds Max 2017:**

Autodesk 3ds Max <sup>[8]</sup> is a 3d designing and modeling software with the capabilities of animating CG objects. This software was released in 1996. Since then, this software is being widely used for 3d modeling. Because of having a user friendly interface, 3ds max has become one of the favorite 3d modeling and animating tools to the industry professionals. After the initial release, the software is being upgraded with newer and smarter opportunities and the latest versions include realistic shader and dynamic simulation tools to get even physically and visually perfect models and animations. I have chosen this software for all the 3d design and modeling parts of my project. Which includes the Gallery building, the 3d painting frames, and the necessary decorative items in the gallery.

#### **Adobe Photoshop:**

Adobe Photoshop <sup>[11]</sup> is the most popular raster graphic editor in the present industry. This mighty software was developed in 1988 by Thomas and John Knoll and the developer company was Adobe Systems. Adobe Systems also created a bundle of leading software for the CG industry's different fields. After the initial release in 1990, photoshop became a worldwide popular tool to advertising and entertainment industry. With the development of computer graphics, the software also improved its features with multiple updates. Creative Suite (CS) and Creative Cloud (CC) are the branding names for the update numbers. Adobe Photoshop can be used in different operating systems and thereby it is widely accepted as an industry standard.



I have used adobe photoshop in my project to edit the paintings and make them ready for the virtual environment. Also, textures of 3d models of architecture were also edited in photoshop. And most importantly, the UI development was done widely in Adobe photoshop.

### **Unity:**

Unity Technologies developed a cross platform game engine called UNITY <sup>[9]</sup>. It was first released in 2005 and has already launched several updated versions with greater tools to develop interactive games, software and application. The most beneficial part of Unity is, it can be used in multiple operating systems, and the deployed software from unity can opt for almost any popular operating system. Thereby, one can develop software in unity for both Windows, MAC and android, linux, ios; everything. The game engine has basically two parts to work with. One is the frontend which includes making the scene with necessary elements and other is the backend, where the scripting/programing is done. User only experience the results showed in frontend. Unity game engine allows scripting in two languages. The C# and JavaScript.

I have chosen this game engine for my project because of it's user friendly user experience and useful workflow. I designed the scenes and user interface in this engine and C# programming language to make them interactive.

### **Adobe After Effects:**

Adobe After Effects is another mighty product of Adobe Systems. This is basically used for post- production in non-linear editing panels. This software has a reputation in the film, television and game industry for it's opportunities of motion graphic animation, visual effects production, 2d animation, video and audio editing. This is the one stop solution for almost any kind of compositing works in the industry now. The software was first released in 1993 and since then it has been upgraded with several newer versions. Though there are other node based powerful compositing tools in the industry now, Adobe after effects is still





the first choice for artists like me who like to work with layers and timelines. In my project, I used Adobe after effects for the intro video of the project.

### **Microsoft Visual Studio 2017:**

An Integrated Development Environment (IDE) was developed by Microsoft and named as Microsoft visual studio <sup>[10]</sup>. This software is used to develop computer programs, websites, applications, mobile apps and lots other items. This IDE can produce both native code and managed codes. Also the integrated debugger makes it capable of source level debugging and machine-level debugging.

As Unity game engine needs an IDE to script for the product, it includes some external IDE with it. Microsoft Visual Studio is preferred by the Unity officials for it's latest versions and that persuaded me to use this for my project's backend.

### **3.5 Hardware Requirement:**

Knowing about what my objectives are and which software are going to be used, I rechecked the configuration of my work station. The performance of all the above listed software can be highly affected because of the capacity of hardware. These will work in variety of hardware settings, but below is the set of mine which gave me a fair experience of working with good response rate:

- Processor - intel core i7 , 8mb cash
- Hard disk- ssd 240 GB (cosair) ; 2 TB (western digital blue)
- RAM- 16GB, 7th Generation
- Graphics card- 4 GB, (NVIDIA ZOTAC 1060)
- MotherBoard - Gigabyte GA-Z270-Gaming K3
- Catching and air cooler- Thermaltec
- DUAL Monitors - ASUS VZ229 ( 21.5" wide, IPS )



## CHAPTER 4

### Production

#### 4.1 Introduction

Production phase is the period when the project actually is being made. After extracting the concrete script and directions from the pre-production phase, it's the time to work to give the project a shape.

Production of different products include different stages of work. In this chapter, we are going to put some light on the detailed process of developing this innovative virtual art gallery. The discussion will be in 4 major parts. Development of 3d design and models, Texturing the models, Making the project and scenes in unity, Adding features with game engine, Scripting and UI development.

#### 4.2 Development of 3d Models:

**4.2.1 Modeling the Gallery:** We planned this virtual art gallery in such a way that the player (user) can have a unique view of the interior. Most traditional art galleries are too straight in their plans and geometry that, in most cases it's a boring space with the artworks hung in walls. So we researched on the architecture and came up with an octagonal base for each room of the gallery. Thereby, the first person camera having a wide field of view, gives the visitor to look at a good number of paintings in a master view and undistorted single views when get close to any artwork.

I have created the 2d plan of the architecture first. Then following that image and some other random references, this magnificent art gallery was modeled in Autodesk 3ds max.

Modeling in 3ds Max is a very exciting experience because it provides multiple ways to solve a matter. This building could be made in numerous ways, but I made this with the poly modeling process with an octagonal base.

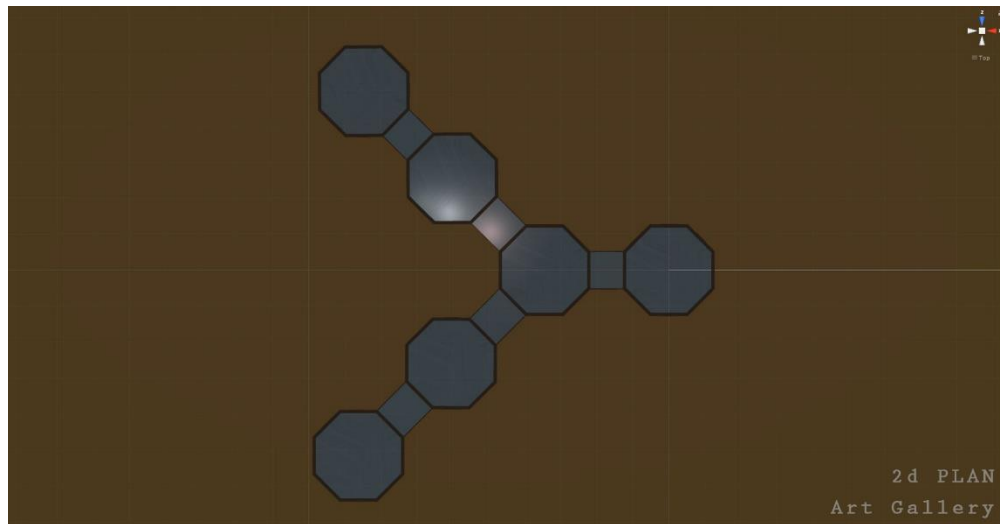


Figure 4.1: 2d plan of the Gallery building

The building architecture was needed to be done in such a manner that, it's parts can be textured separately later and also respond with lights in game engine according to requirements. So first I modeled one octagonal room with a separate floor and roof. Then I made 5 copies of that room and joint them with corridors which formed shape quite similar to the letter –Y.

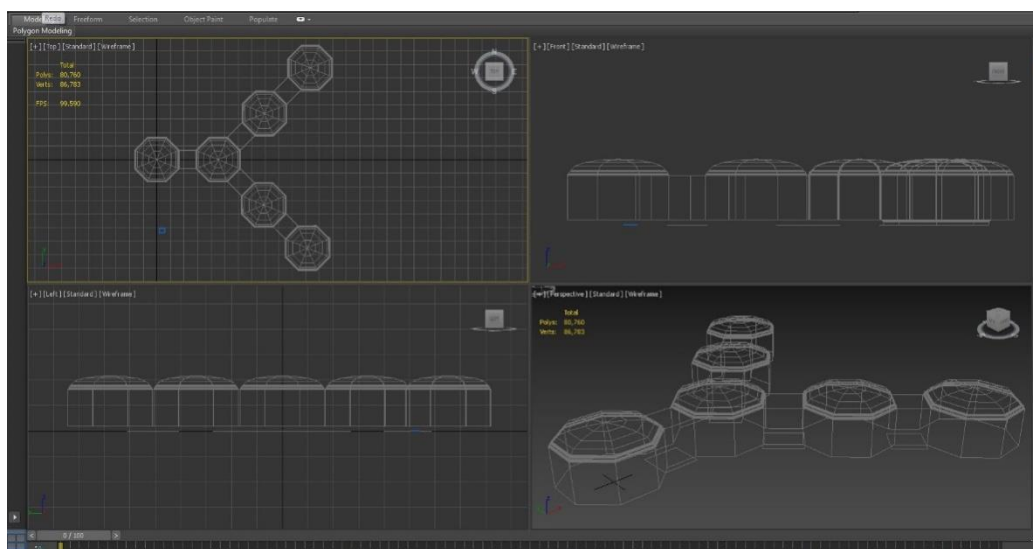


Figure 4.2: Topology of the Gallery



Once the full gallery was present visually, then it was important to attach and detach polygons of different objects predicting the texturing procedure of the walls, floor and roofs. Because, in lieu of creating the rooms as different object, they were needed to respond with similar commands. Like the wall texture of one room, should not be different to the others. So all the polygons of the walls were attached to one element so that any change on any polygon creates similar changer on every wall. And the same were done for the roofs, floors, and corridor – every common part of the gallery interior.

Another key issue was kept in mind that, no matter how complicated the output be, the topology of every 3d model must be clean. It was also important to make a low poly model so that it doesn't have trouble in realtime rendering when used in game engine. It is proved that, high poly 3d models, reduce the performance of the applications. So, as showed in previous figure, I managed to get a very lowpoly architecture for this project.

**4.2.2 Modeling the Painting frames:** When the gallery was ready, the time for modeling the frames of the paintings came. In this case, firstly a skeleton of a simple frame was made so that it can be easily scaled to different sizes and ratio. For this, I used a normal box object and using poly-modeling techniques, the frame was made out of it.

Later, from the data table, I filtered out 17 variety of frame sizes. Which simply means, the selected 48 paintings are in 17 different sizes. So I created a dummy measurement box, gave it the value of a frame's dimensions and scaled the painting frame accordingly. Keeping a copy of this frame, the next values were put to the measuring box and again the frame was scaled as the box is. So manually the 17 different sizes of paintings frames were modeled. Now, it was time to texture them.

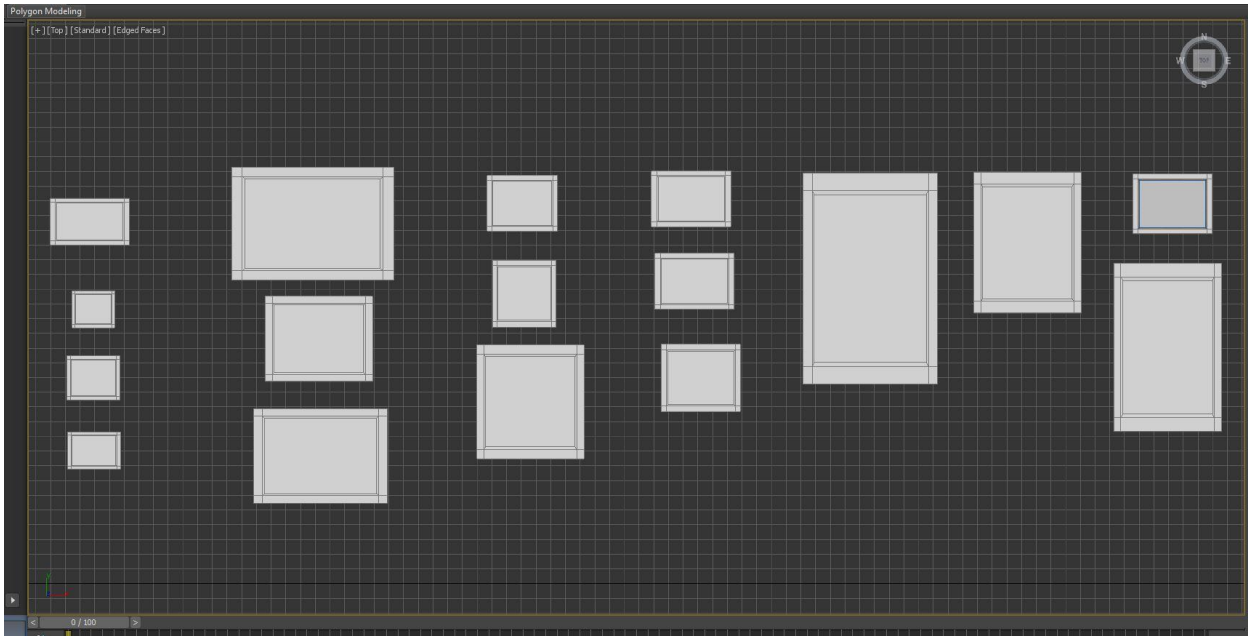


Figure 4.3: Model of Painting frames of multiple dimensions

## 4.3 Texturing the 3d Models:

**4.3.1 Texturing the Gallery:** The gallery was needed to be textured in walls, roofs, grills of roofs, floors and corners of wall and floor. So, at first I edited the necessary texture in Adobe photoshop and then applied them in the objects in 3ds max via material editor.

**4.3.2 Texturing the Painting Frames:** First of all I got the frame border textures edited from Adobe Photoshop and applied that in the 3d models. Then I took each model of painting frame and applied the painting on the canvas area as a texture. Thereby the 2d image goes into a 3d canvas. But important note is, not all the images directly get applied to the 3d surface always as needed. Sometimes stretched too much or unusually tiled or scaled. So, in order to get distortion free look, anyone may have to use the tile and offset option in material editor, or applying Modifier named- UVW map will help to sort the problem out.



## 4.4 Exporting 3d models for Game Engine:

In order to use the 3d models created with 3ds max in Unity or any other game engine, It's important to export that model in the perfect format and settings. Otherwise the topology and textures may get highly affected during the transformation of work environments.

So, the best format in this case is “.fbx<sup>[3]</sup>” format. The short form “.fbx” came from the word ‘Filmbox’. In our case, I selected each 3d model and exported the selected object in .fbx format. In this process, an important option “Embed Media <sup>[15]</sup>” should always be checked in 3ds max during the export. Otherwise the model will miss the texture when imported in the game engine.

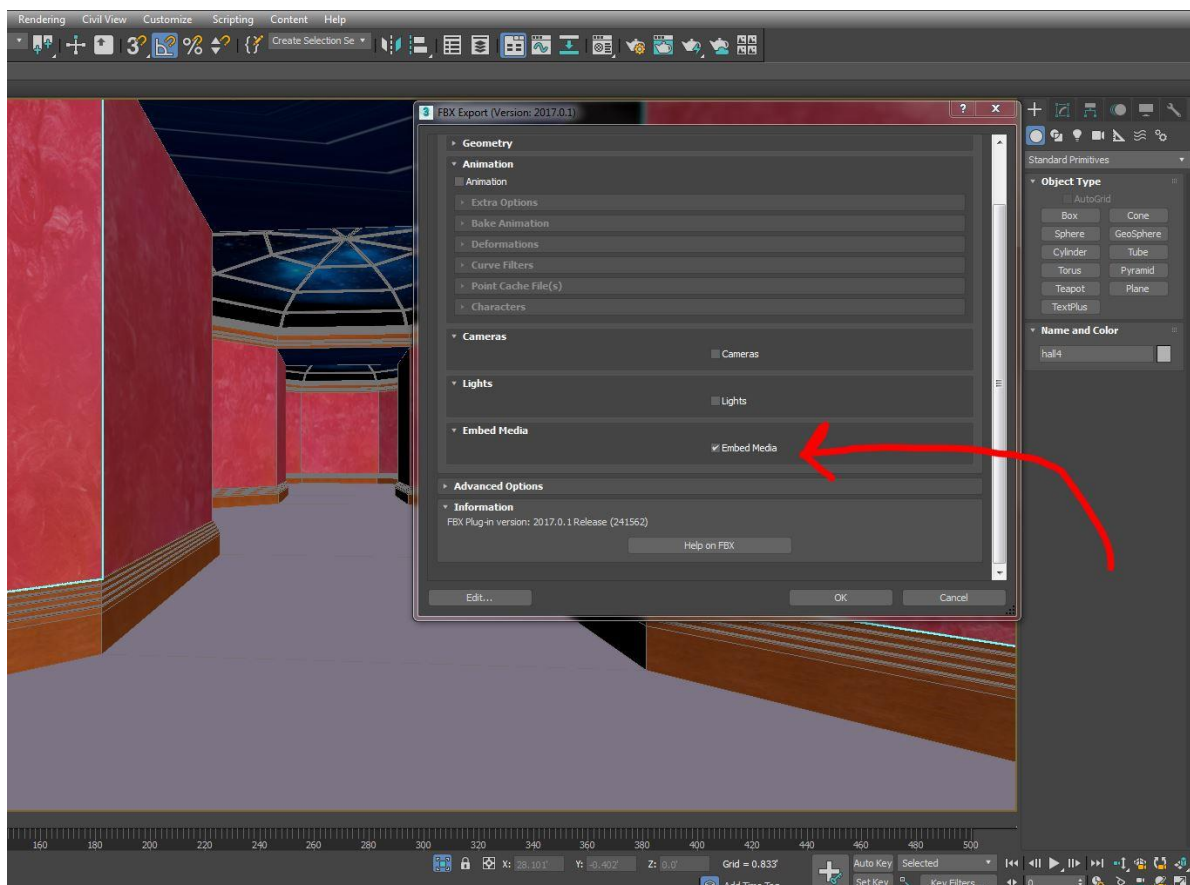


Figure 4.4: Exporting in fbx format with media embedded



## 4.5 Making the Project and Scene in Unity:

**4.5.1 Creating the project:** To work in Unity game engine, creating and managing the project is a very sensitive issue. Each time the unity game engine is started, it shows the option to create new project. While creating the project I made a distinct folder for the whole project at first. Because, just when the project is created, unity automatically creates sub folders inside the project folder and keeps the “Project settings” saved. These project settings folder is unavoidable to build the final program or even to work with the file in different workstations. Also, there is an “Asset” folder created inside the directory, where everything used in this project, e.g.- images, sounds, scripts, materials; are preserved. This folder is responsive with the unity interface which allows the developer to add or delete items in this project either from inside the game engine, or normally from file explorer.

When the project is created, developer must switch the 3d or 2d option depending on the type of his/her project. I created a 3d project in this case.

**4.5.2 Creating the Scene in Unity:** When the project is created, it shows the first default scene. In unity, the first scene contains a main camera and a directional light. Now here we needed to build our environment.

I brought all the materials, textures, fbx models, audio clips everything in the asset folder first. Then I brought the gallery model inside the hierarchy just by dragging and dropping. Later I added mesh collider to the meshes, so that they collide with other rigid body objects in this project.

When the gallery is ready, I imported standard assets package and inserted a First Person Character prefab in the scene. This allows us to walk through the environment like fps games. But before that, deleting the existing main camera is a must. Because every camera is an audio listener and the FPS prefab itself has a camera. Thereby the scene contains 2 audio listener. In unity, 2 audio listener in one scene is a serious error that will stop the application to work as needed. So, I deleted the main camera and the FPS camera works as the main camera and main audio listener indeed.



By now, we could walk through our scene. Now I brought every painting's 3d model and placed them in the wall with necessary scaling according to ratio. All the paintings were hung keeping the subject matter in mind. Thereby, everything in the scene is added.

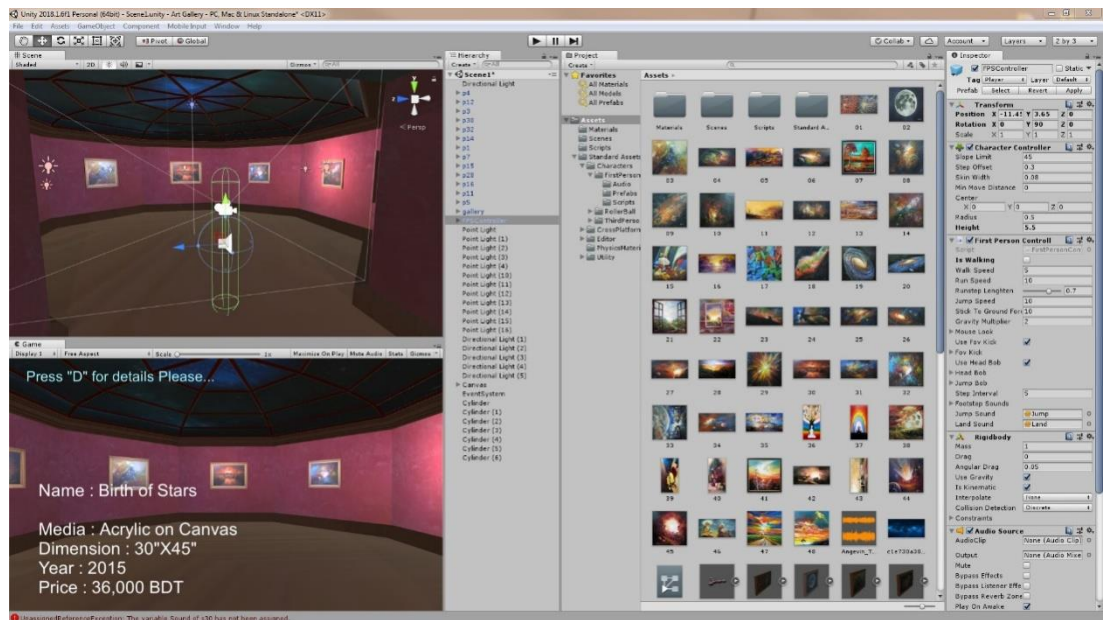


Figure 4.5: A glimpse of scene development in Unity

**4.5.3 Lighting the Scene in Unity:** When all the paintings were in place, I found the necessity of light in the scene. I deleted the main directional light from the scene and added 48 individual point lights for 48 paintings. The intensity, effective area and color of these lights were customized from the inspector. Later I added one master light on top of every room and made the roof a light emitting material. Thus it also works as the master light of the gallery. Besides, the bluish glossy roof, brings the concentrated mode for a gallery. After researching a lot with the lights and color. Finally the scene becomes visually ready. But still, functions are to be added.





## 4.6 Adding responsive functions in Unity:

In unity we can make things react with our action. That's the sole purpose of a game engine. So now our objective is to add text information for each painting. To do that we first need to create texts under a canvas in hierarchy. But using unity's default text could make the information blurry when the screen is scaled <sup>[16]</sup>. So, I imported a free package called "Textmesh Pro", owned by Unity technologies themselves. So, with this text editor, I have created 48 text panels and wrote the necessary information about each painting in the individual panels. In order to trigger them when the camera get's close to a painting, I have created a dummy cylinder before every paintings and kept it's mesh renderers of. But, a trigger condition script is added with these cylinders and the texts are added in the public variable fields. Thus, according to the script's logic – Whenever the camera get's to the collider range of any artwork, this trigger gets activated and show the instruction. The instruction text says to press 'T' key for details and 'V' key for voice over. Now if we put respective text panels in their public variable holder places in the inspector, the information texts just starts appearing nicely.

But still, pressing V, we can't find the voice over. Because we didn't assign the voice clips in the public variable holders in the inspector of the trigger cylinders. As soon as I dragged and dropped the clips in places, the whole function started to run. Now we could walk inside the gallery, get information in texts with one key and listen voice over with the other.

Here I would like to add that, I recorded the voice over earlier before this process. Honorable lecturer Apurba Ghosh gave his efforts to be the voice artist of this project and I am grateful for his support on this project.

But still, we had a lack of sound in our project which is the background music. I searched for cool piano music and came in contact with musician Aakash Gandhi <sup>[14]</sup>, who played the 2 piano tracks used in this project. Once I had the clip in hand, I just had to add this in the audio source component of the camera. After some adjustments with normal parameters, we found our desired environment of the virtual art gallery; where we could already hover and enjoy the artworks and their information.



**The C# Script added with the trigger objects is as followed:**

*Note that, such a script was added with all 48 trigger points.*

“

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;

public class s1 : MonoBehaviour
{

    public bool activateTrigger = false;

    public GameObject text0;
    public GameObject text1;
    public GameObject Sound;

    void Start()
    {
        text0.SetActive(false);
        text1.SetActive(false);
        Sound.SetActive(false);
    }

    void Update()
    {

        if (activateTrigger && Input.GetKey(KeyCode.T))
        {
            text0.SetActive(false);
            text1.SetActive(true);

            // Sound.SetActive(true);

            //Destroy(this.gameObject);

        }
    }
}
```



```
if (activateTrigger && Input.GetKey(KeyCode.V))
    {
        text0.SetActive(false);

// text1.SetActive(true);
        Sound.SetActive(true);
//Destroy(this.gameObject);
    }
}

void OnTriggerEnter(Collider col)
    {
if (col.gameObject.tag == "Player")
    {
        text0.SetActive(true);
        activateTrigger = true;
    }
}

void OnTriggerExit(Collider col)
    {
if (col.gameObject.tag == "Player")
    {
        text0.SetActive(false);
        text1.SetActive(false);
        activateTrigger = false;
        Sound.SetActive(false);
    }
}
}”
```



## 4.7 UI development in Unity:

In a user interface, the simplest elements are the background images, texts, and buttons. In advanced settings menu, there can be checkbox and sliders also. But in our project, we just needed the buttons to be responsive. If we have a look at our main menu, it will be easy to demonstrate the procedure behind this settings.

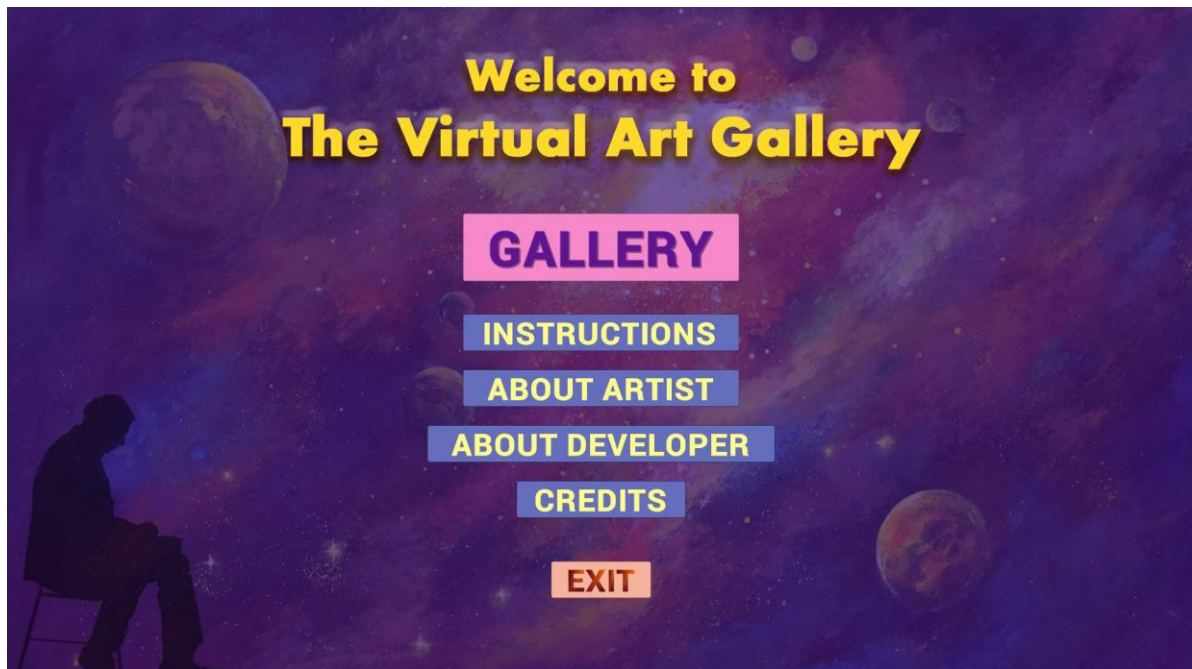


Figure 4.6: UI Development (Main Menu)

Here if we click any of the blue buttons, naming- Instruction, About Artist, About Developer, Contacts and Credits; the main menu page will just be inactive and another page like this will be active. For example, the below page will be shown in response to the click on “About Artist” Button.

And if we click the “Back” button on that page, that page will be inactive and the Main Menu page will be active again.

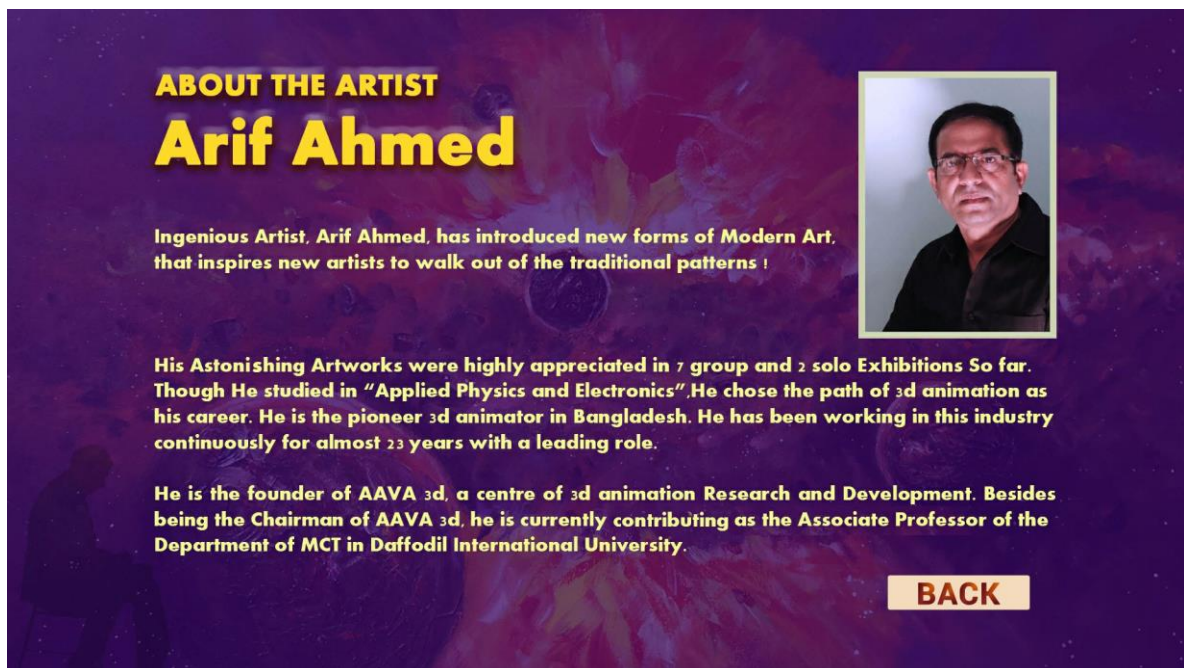


Figure 4.7: Example of a loaded page by "On Click" Event

So, the key concept of such button activity is – “On Click” event. In unity, every button has an “On Click” event in the inspector. There we can reference any canvas or object and can activate and deactivate UI environments with clicks. We can also call functions in “On click” event from the added c# scripts to reference object thereby we can change from one scene to another too! And that’s what done with the “Gallery” and “Exit” buttons.

The whole gallery is in one scene, and the whole UI is in another. When the “Gallery” button is pressed, the scene just changes to the next scene in serial. (This serial is maintained from Build settings). And when “Escape” key is pressed, that just redirects user to the previous scene, means Main Menu. The Exit button quits the application. So, all the scene management functions were added in C# scripts, and then were called by button’s “On Click” event or keycode functions.

**The Scene Management <sup>[12]</sup> Script looks something like the followed one:**

```
using System.Collections;  
using System.Collections.Generic;  
using UnityEngine;  
using UnityEngine.SceneManagement;
```



```
publicclassMainMenu : MonoBehaviour {  
  
    publicvoid PlayGame()  
    {  
        SceneManager.LoadScene(SceneManager.GetActiveScene().buildIndex + 1);  
    }  
  
    publicvoid QuitGame()  
    {  
        Application.Quit();  
    }  
  
}
```

#### **4.8 Designing the UI in Photoshop:**

Making buttons responsive is the task of game engine. But the look, the color, the background panel design, the typography and use of images, were all done in Adobe photoshop. As stated earlier, Adobe photoshop is the best in its genre and thereby I chose this software for this project.

Reference images were taken in canvases of (1920 x 1080) dimension. Then with the photo editing tools available in Adobe photoshop, each panel was designed, keeping calculated distance for the buttons to be added later. The images were saved in .jpg format, and imported in Unity via the asset folder. All the jpg images were must to be used as 2d sprites in Unity. Thereby these images worked like UI rather than reacting like textures.



The following examples will clarify the process of designing UI and adding buttons later.

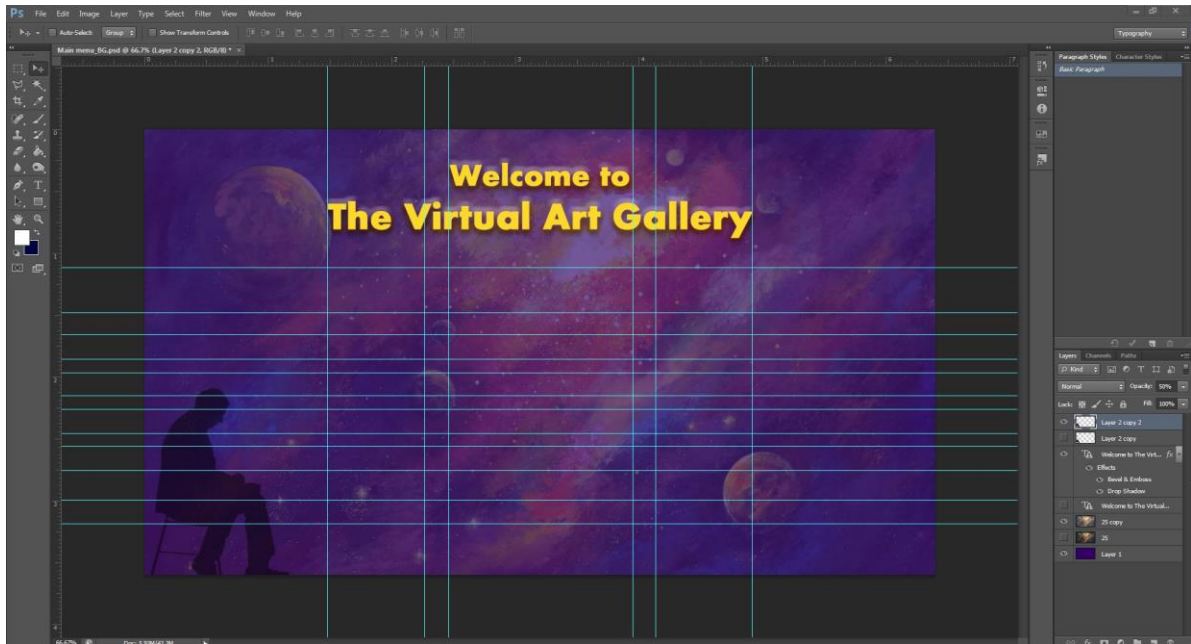


Figure 4.8: Background Panel designing in Photoshop

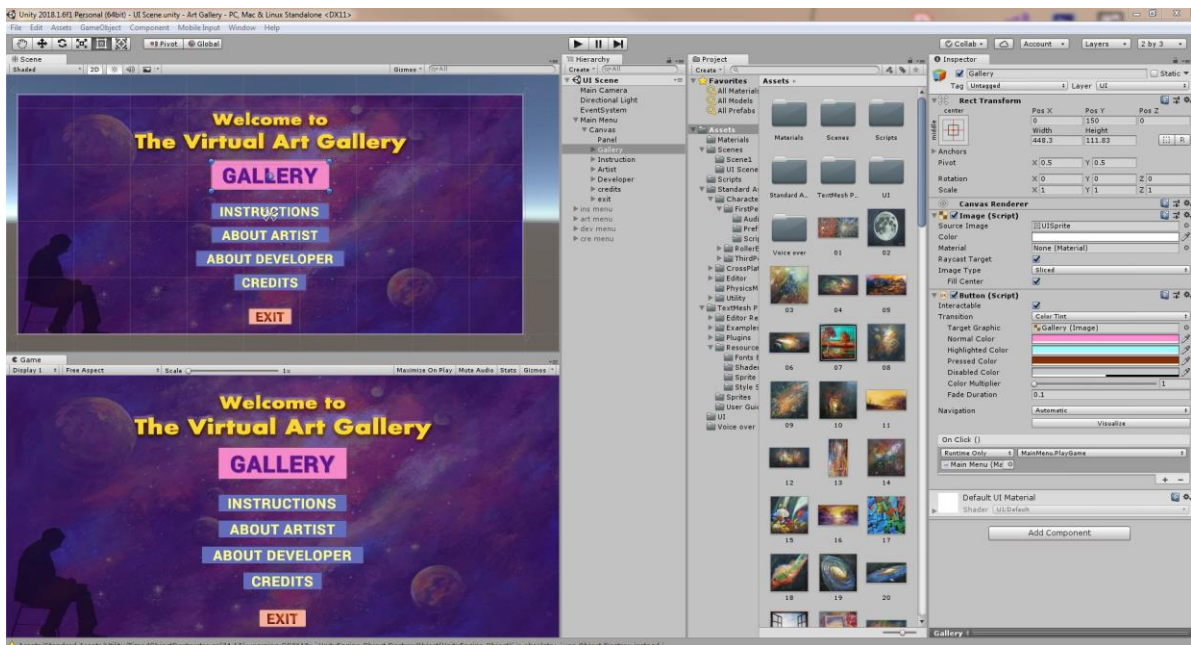


Figure 4.9: Buttons being added on the imported background image



## CHAPTER 5

### Post-Production

#### 5.1 Introduction

Production phase is the period when the main project is ready with all its elements but needed to be re-touched before being presented to audience. Post production is mostly common in film and TV production workflow which includes works like video editing, compositing, color correction etc. But, in our project the scenario is a little different. Here we will discuss about the Building of our application and the intro video of this project.

#### 5.2 Building the .exe file:

Through the process stated earlier, our application is ready with all functionalities. But, the main problem is, still we need to play and run this inside Unity game engine. So, it's not yet ready for audience. In order to build it to an .exe file, we need to do a "Build Settings"

In the "Build Settings" option, there are player setting options too. We can change the name of the App, the company name, the versions, the preferred devices, the logo of the Application, cutscenes and all other necessary formalities there. Inside the build settings, we must arrange our scenes according to order, keeping the Scene Management script in mind.

This is to be noted that, without building the scenes in serial, the application won't be deployed properly as useable .exe file.

If the work file was needed to be modified in other workstations, I found it useful to have the project settings folder always with the exported package. In order to use the same work files in other computer, we need to open a new project and import the custom package in that new project. The "Project settings" folder should be replaced by the previous saved project settings folder. Thus all tiny details will be reloaded. Otherwise, it's very common to have errors, which are almost impossible to solve without creating that part from scratch.



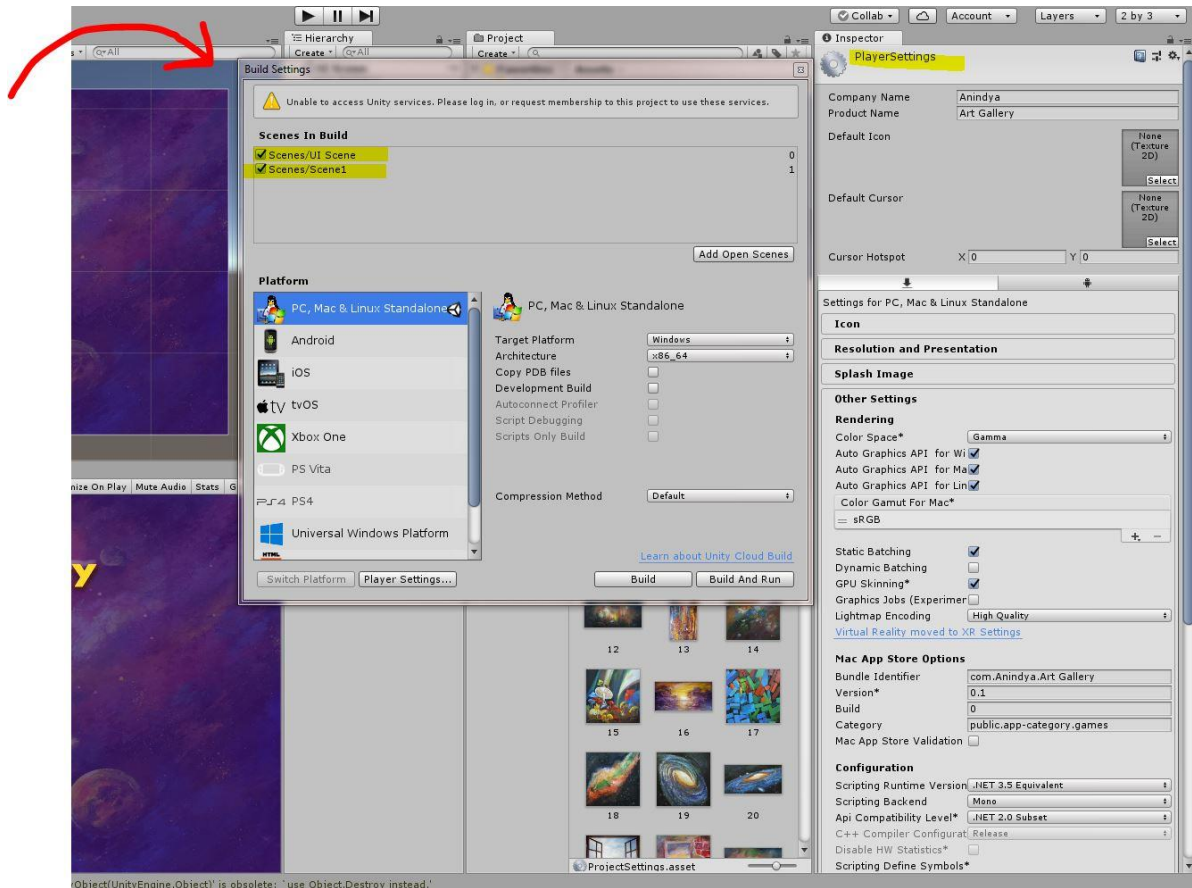


Figure 5.1: Build Settings to export the Application

### 5.3 Compositing the Intro:

The Introductory video is a very short video clip that is just made with the intention of appreciating art and artist, before the beginning of such a tremendous work on art appreciation and promotion. This video will also be used to promote this application. This short blood worming video is both a promotional and inspirational piece of art, indeed.

In the making of this video, the paintings used in the gallery are used with visual effects added and composited with Adobe After effects.



## CHAPTER 6

### Future Possibilities

#### 6.1 Introduction

In this chapter I tried to discuss about the enormous possibilities after this project. This Virtual Art Gallery is a milestone in the electronic mediums of representing art. But, this is definitely just a beginning. This kind of project has lot more to be expanded. There are scopes of adding newer features and making this application more useful to larger number of users. Enthusiastic people can get inspired from this step and draw their footprints in this journey in many different ways.

#### 6.2 Opportunities with this project in near future:

- This First Person Character experience can be converted to Virtual Reality, if someday the VR devices gets comfortable and more popular.
- This gallery can have a space in websites so that people can attend this virtual exhibition even without downloading this file.
- This gallery can be added with a framework, where any artist can use this application to make their own galleries by themselves.
- There can be options for changing the styles of the Painting frames, colors, lights and all such decorative stuffs.
- This representation style can also be used to showcase digital art, sculptures, or even for musical portfolios
- Architects can use this presentation style to provide their clients a view of their dream buildings; which has already started to be applied in small scale.
- Scientists can exhibit their prototypes and ideas with such virtual galleries.
- Automobile industry have more exciting possibilities of presenting cars in numerous ways!



## CHAPTER 7

### Discussion

#### 7.1 Introduction

In this chapter I have presented a comparative discussion about my project and other ways of presenting arts. Regardless of time and technology, how the outcome is being helpful and what it's lacking, are freely discussed in this chapter.

#### 7.2 Discussion:

Art has always two fundamental goals. First is to please the creator of the artwork through the creation. And the other is to be appreciated. Artist can be careless of name and fame at a certain state of their maturity, but seeking for appreciation of artwork, never dies. And this thirst is not even a sin to be considered as greed. Cause as long the artist is honest, it's his/her right to be appreciated as true artists.

Artists always have tried to get their artworks exhibited. In ancient times, the medium was different, the medieval era gave something smarter than those. No in this modern era, this is obvious that artists will find our modern ways of presenting their artwork. And those modern mediums will be different too. The project I have done, is definitely a milestone in that path of modernizing art representation. But this should also be acknowledged that, this is not the only modern smart way of presenting artworks. People will keep inventing more, there will be inspirations, motivations, changes, customizations and all kind of evolution of art technologies will be continued. All of the endeavors are important. Today any of the technologies may not be accepted for one limitation but tomorrow that might be solved with some magical invention! So I personally believe, there is no scope of overlooking any endeavor that is intended to appreciate art and appreciate human civilization thereby.



## CHAPTER 8

### Conclusion

In this century, human life has been widely affected by the electronic devices around them, and the rate is still growing. Some experts also believe that, this social media based society is actually breaking the bondage between human and humanity is under a threat too. But there must be ways to use every tools in a positive way because the tools are not controlling us, rather we are responsible as the users. So, if we can clarify our way of thinking, way of using the opportunities science has offered to us, we definitely can make a better future.

Now, appreciating arts is always an excellent practice to cultivate a positive mindset. Those who are at least interested to enjoy art as entertainment have certain amount of sensibility that allows them to lead a charismatic personality and be the part of a healthy society. So what could be better than a modern way of presenting arts to people that people don't find going to museums and galleries an old fashioned anymore? Isn't it a greater move to inject some sensibility in disguise of modern technology to our youth? I believe, someday people may not pull their heads up from their smart devices, but they will be experiencing arts, will be appreciating different art movements, will be discussing about creating their own artworks while they will be visiting such virtual art museums.

This project was just a beginning. More attractions, services and inspirations will help this endeavor to reach it's utmost success of creating a modern artistic society. Where modern art will not only be some meaningless splash of colors, but modern art will symbolize modern techniques of creating artworks, modern ways of presenting artworks, and above all, modern ways of looking to life.



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