

DESIGN AND DEVELOPMENT OF A CHILD CARE SYSTEM

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This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering

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APPROVAL

This Project titled “**Design and Development of a Child Care System**”, submitted by “**Bonolata Sarker**”, ID No: **213-15-14782** to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on July 16, 2024.

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I hereby declare that this project has been done by me under the supervision of **Nazmun Nessa Moon, Associate Professor, and Department of CSE** at Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for the award of any degree or diploma.

Supervised by:



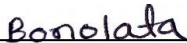
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Finally, I must acknowledge with due respect the constant support and patience of my parents.

ABSTRACT

In the present time, everyone wants an easy solution for their problem that will also be cost-effective. The project 'Design and Developing a Child Care System' is a kind of system for providing facilities related to child care. The project can help guardians to find a better place for their children to grow up. In Bangladesh, there are many childcare systems. Some of them are now also available online or have websites. But still, there are some lacking's in their system and features. So, for that reason, I am designing a web-based childcare system with some additional features that are needed. It can help the user with better facilities also the owner of the childcare will be benefited.

To design and develop the web-based project I have applied HTML, CSS, PHP, JavaScript and MYSQL Database as programming languages. I used Visual Studio as a code editor and Google Chrome browser for testing the code.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

In this time when everything turning digital people are also giving priority to online-based systems or I can say websites. Child care system is very important for working parents and if they can get facilities of the system in web-based then it is more useful. Parents want their children's safety and security the most. At this time there are many websites related to the child care system. In the website i am developing, I want to give some more facilities that I found out are missing in many childcare systems like different programs for different ages child, a more secure and user-friendly system.

Users of this website are the guardians who can register for their children and after login, they will go through a booking process in the child care system. Admin can change or update data from the database. User can see the programs and services in websites without having logged in but if they want to book any schedule they have to logged in after registering.

1.2 Motivation

Despite having so many websites for childcare in Bangladesh many missing features that can provide more advantages. That is one of the reasons for me to design a childcare system with those features. Guardians can visit the website anytime from anywhere and book any schedule and program.

1.3 Objective

My objective is to make childcare system easier and interactive to the user. Thus, I can take right decisions upwards.

More specifically these are called technical objectives which are as follow:

- To provide a daycare system that reduces parents' worry.
- To make the system more informative.
- To make sure children's proper learning.
- To provide a secure and healthy environment for children.
- To make the system user-friendly.
- To make it reliable and easy to access.
- To make the system more effective.
- To save the users both time and money.

Here are some main objectives that I want to fulfil.

1.4 Expected Outcome

Those are some outcomes I am expecting to get at the project is complete.

- Users can take a look at all the facilities and features of the childcare center.
- Users are capable of observing the programs and schedules for children.
- Admin can manage the database of the system.
- Users can make a schedule of dates anytime from anywhere without any complexity.
- By using the website users can save time and money.
- Users can do all the processes of booking online.

I expect that at the end of the childcare system project, these results will come.

1.5 Report Layout

Chapter 1: Introduction

In Chapter 1, there are discuss about the project's motivation, objectives and expected outcomes. In the last the report layout is mentioned.

Chapter 2: Background

Chapter 2 is about projects background study, related works, comparison of some other websites, scope of the projects in solving problems and its challenges.

Chapter 3: Requirement Specification

Chapter 3 discusses about the requirements for the project. Here, the topics are process model, gathering requirements and analysis, use case model and its description of the project, modeling relational database and design requirements.

Chapter 4: Design Specification

Chapter 4 is all about the designs like front-end, back-end, interaction design of the project and implementation requirements. Here the project outcome can be shown.

Chapter 5: Implementation and Testing

In Chapter 5, implementation of the database, design, testing and the test results and report are discussed about.

Chapter 6: Conclusion and Future Scope

Chapter 6 is the last chapter where future scope and works, conclusions are discussed.

CHAPTER 2

BACKGROUND

2.1 Introduction

The background study is very important for any project to be completed properly. I research and study the projects related to childcare that have been done before. From that, I got some information and learned about the limitations of their work. I found many websites in Google related to childcare systems and I visited some of them. I try to understand their features and what is missing for working on that.

In this project, my purpose is to overcome the limitations and design a childcare system effectively. I get the concept of current features of a child care system by researching related project works. Though there are very less areas to add new features to this type of system I try to improve my system.

2.2 Related Work

There are so many childcare centers in our country. But many of them have very limited features and programs for children. Here, are some related websites about childcare:

- Daffodil Angels day care and preschool [1]
- Tiny Tots child care [2]
- Kids Paradise Day Care [3]

Features: Some childcare center don't have a website system. Some have website but that are not that much facilized.

- Those websites or centers have only pre-school and infant program for children.
- Activities and programs are not that much described.
- Websites have limited information and registration process is not easy.

Problems:

- Child between infant and pre-school need separate program.
- User want to know more about activities and program.
- User need an easy registration process and much information.

2.3 Comparative Studies

In this project of my website I work on developing new features along with some similar features with other websites. I have designed the website with the information I get and improve it with better facilities.

- User can see the programs and activities briefly in the websites beforehand. Many websites give this facility after log in.
- User can easily register to the website by providing required information where in some websites it is done manually. After that User can make a schedule of booking in online.
- Only Admin can handle the database of the user and it provide more security of user information.
- Admin can change any program details or activities of the system.

2.4 Scope of the Problem

There are many difficulties that I face while doing the project. I need to solve the problem and make a better website. For that I need to know about Childcare systems; its activities, booking process and other things. I collected information from some childcare system in Bangladesh and work with it. For database of my website I used MYSQL [4] and Visual studio as code editor. For developing my project, I used various programming language that include PHP [5] and JAVASCRIPT [6]. The website is designed by using markup

languages like HTML [7] and CSS [8]. I have used this programming languages because it's easy for developing. I keep the website user-friendly, so can user access it without any complexity.

2.5 Challenges

Here are some challenges that I need to overcome for developing the website:

- To develop an interface that is user-friendly.
- To create and improve new features and unique design.
- Learn to connect and use MYSQL Database for the website.
- Ensuring authorized access and data security to the database.
- Maintaining User and Admin part of the website.

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Process Model

Process Model is a diagram that defines the flow of data of the project. It is very important to design the structural view of the system before starting the project.

Users can register the information of the child and log in the system to make any schedule of any program, shown in figure 3.1.

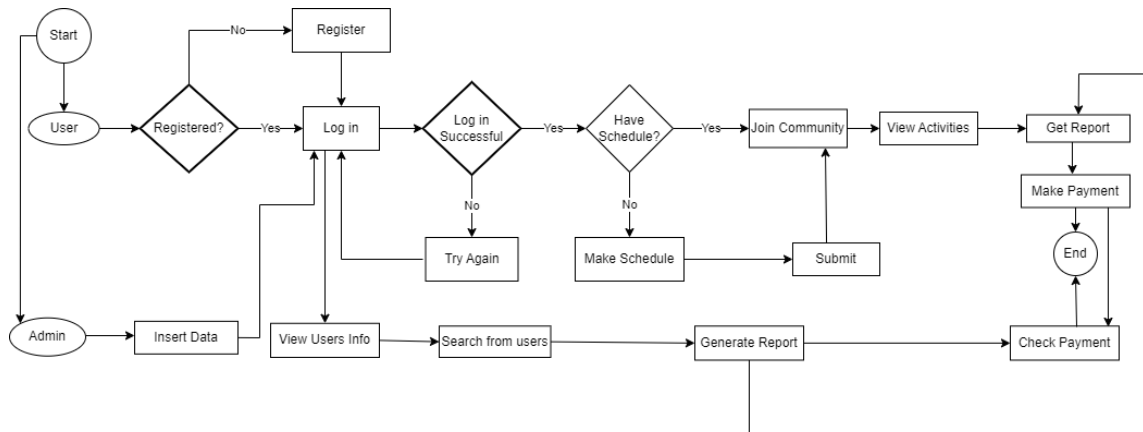


Figure 3.1: Process Model of the System

3.2 Gathering Requirements and Analysis

The first thing for designing and developing project work is to gather requirements and analyze them. Requirement specification is a very important and complex task to do. I tried to collect proper information from the existing childcare system and listed the requirements that I needed for my project. I got some information from childcare websites in Bangladesh and some by visiting the childcare center physically to learn how the system works. After

that, I analyzed the requirements and arranged some models and methods for presenting the childcare system. I selected one model from it and worked on it to complete the project.

3.3 Modeling Use Case with Description

Use Case Diagram is a type of behavioral UML diagram that is used for analyzing any system. It shows different roles in the system and how it interacts with the system. This diagram also helps to identify the functions of the system and how it works for different users. It gives a high view of the internal and external factors of the system, Shown in figure 3.2. In the use case diagram of my project, there are two actors: one is users and another is admin.

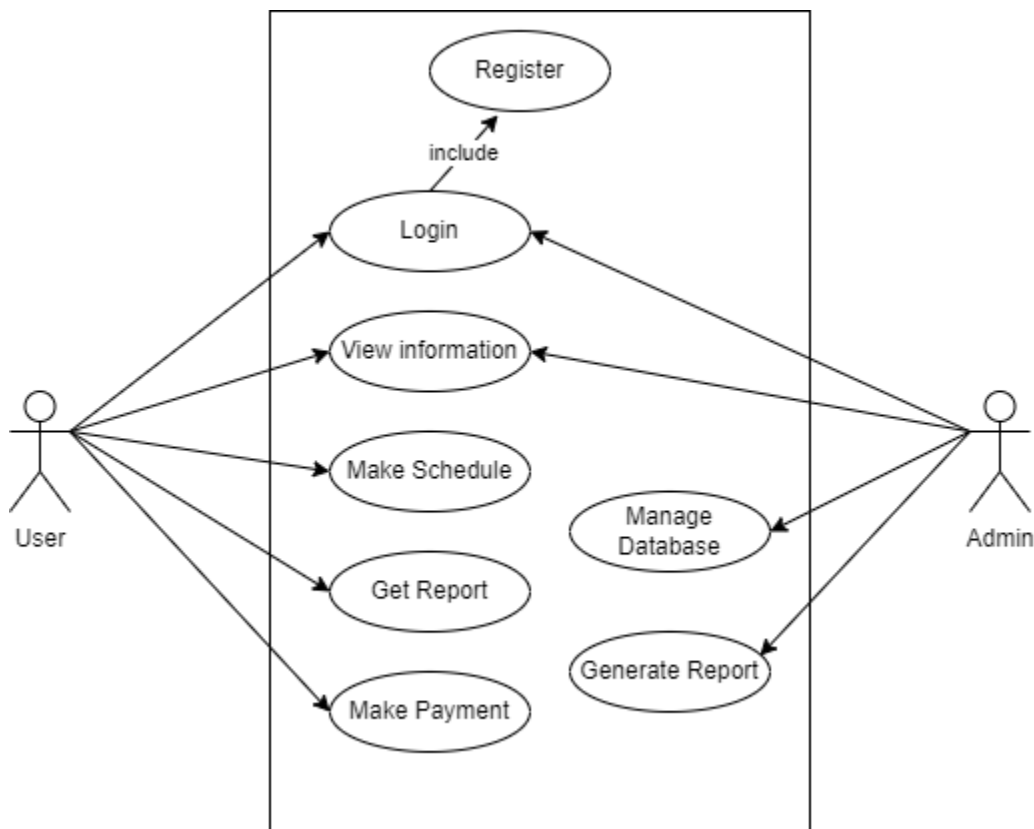


Figure 3.2: Use Case Diagram

Table 3.1 is the description of the use cases that I figured in the use case diagram in figure 3.2.

Table 3.1: Use Case Description:

Actors	Functions	Description
Users	Log in	Users have to log in the system by entering E-mail and password. Pre-condition: Users have to register before log in. Post-condition: Then user can log into the system. Process: When users enter the e-mail and password, the system checks that it is correct or not. If its correct then user can access further but if it is incorrect then they have to try again.
	Make schedule	User can make schedule by their information by filling the form. Pre-condition: Users must be logged in the system. Post condition: User can access the form and fill it up. Process: User will get a form for the booking information. They have to fill it with proper and accurate information.
	View Information	Users can view their information here. Pre-condition: Users must be logged in the system. Post condition: User can access their information and show the details.

		Process: User will have the full access to navigate of their personal information.
	Get Report	Users can get the report for check out. Pre-condition: Users must be logged in the system. Post condition: User will get check out information and make payment. Process: User will have the authority to check the information.
	Make Payment	Users will make the payment done in the time of check out. Pre-condition: Users must be logged in the system. Post condition: User will get payment information and done the payment. Process: User can payment in any way offline or online.
Admin	Log in	Admin can login by entering admin e-mail and password. Pre-condition: Admin E-mail and password have to save in database. Post-condition: Admin log into the system. Process: When admin enter the e-mail and password, the system checks that it is correct or not. If its correct then admin can access further but if it is incorrect then admin have to try again.

	Manage Database	Admin can manage the database and update its information. Pre-condition: Admin need the authority of accessing the database. Post-condition: Admin have access in the database. Process: Admin can add user information, update or remove them.
	View Information	Admin can view the information of the users and their bookings. Pre-condition: Admin have to log in the system. Post-condition: Admin can view the information. Process: Admin can go to the page of user information and see the users those are making bookings.
	Generate Report	Admin can generate report for the users after their schedule completed. Pre-condition: Admin have to logged in the system. Post-condition: Admin can generate the report. Process: Admin view the user's information, stating date, programs, time and generate a report of their payment.

3.4 Logical Data Model

I represent my database tables by entity and columns as attributes, that is the logical data model. Entity Relationship diagram (ERD) can present the relationship between the entities of a database. Figure 3.3 shows the ERD of my project.

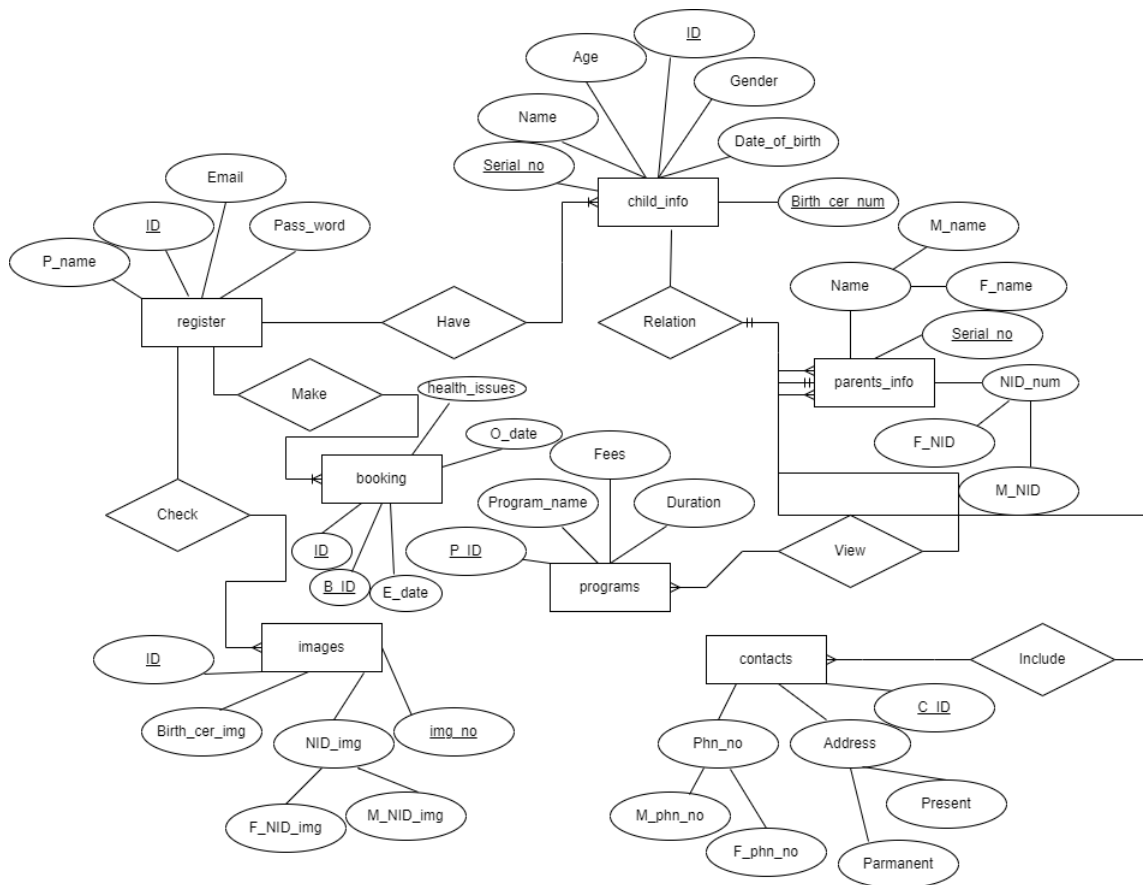


Figure 3.3: E-R Diagram

3.5 Design the Requirements

- In the project, website system has common users and admin type user.
- Users can view the programs and other information about the center.
- System have register option for the users.
- After that user can log in and see their information.
- Users can book any schedule for their children.
- They can get a report for discharge activities.
- User will get a payment option at last.
- Admin can also login to the system to view the information.
- Admin have access to manage and update the database.
- Admin can change the programs fees and schedule along with activities.

CHAPTER 4

DESIGN SPECIFICATION

4.1 Design of Front-End

Front-End design is very important for any website design. Users interact with the website using this. Here, I have used HTML for making the user interface.

There are many pages in the project of childcare website that I need to design separately. Here is some design of pages with the code.

Figure 4.1 and figure 4.2 is the code for designing menu bar and home page. Here, I used HTML and some JAVASCRIPT code for the design.

```
<nav class="nav">
  <ul>
    <li><a href="#"><i class="fa fa-home" aria-hidden="true"></i> Home</a></li>
    <li><a href="#about"><i class="fa fa-circle" aria-hidden="true"></i> About</a></li>
    <li><a href="#services"><i class="fa fa-chevron-circle-down" aria-hidden="true"></i> Services</a></li>
    <li><a href="#contact"><i class="fa-solid fa-phone" aria-hidden="true"></i> Contact</a></li>
    <li><a href="#"><i class="fa fa-user" aria-hidden="true"></i> <button class="loginbtn" onclick="document.
('login-form').style.display='block'" style="left: 452px;width: 45px;top: 6px;"> Log in</button></a></li>
  </ul>
  <div class="search">
    <form>
      <input id="searchbar" type="text" placeholder="Search..">
      <button onclick="search()" type="submit"><i class="fa fa-search" aria-hidden="true"></i></button>
    </form>
  </div>
</nav>
</div>
<script>
  function search(){
    let input = document.getElementById('searchbar').value
    input = input.toLowerCase();
    let x = document.getElementsByClassName
  }
</script>
```

Figure 4.1: Design code of Menu bar

```

<div id="slider">
  <figure>
    
    <div class="banner-text">
      <h4>Children Day Care Center</h4>
      <p>We are with you in your parenting to help you with
        <br><br>Monthly program <i class="fa-solid fa-droplet"></i> Weekly program <i class="fa-solid fa-droplet"></i>
        <i class="fa-solid fa-fan"></i> Our facilities are <i class="fa-solid fa-fan"></i><br><br>
        <i class="fa-regular fa-lightbulb"></i> Indoor and Outdoor activities <br><br> <i class="fa-solid fa-see"></i>
        | Better environment <br><br><i class="fa-solid fa-notes-medical"></i> Health Care<br><br>
        <i class="fa-solid fa-heart"></i> Love and care <br><br> <i class="fa-solid fa-hands-holding-child"></i> S
      </div></p>

      
    </figure>
  </div>

```

Figure 4.2: Design code of Home page

Figure 4.3 is the design of home page. User can view this page first after loading the website.

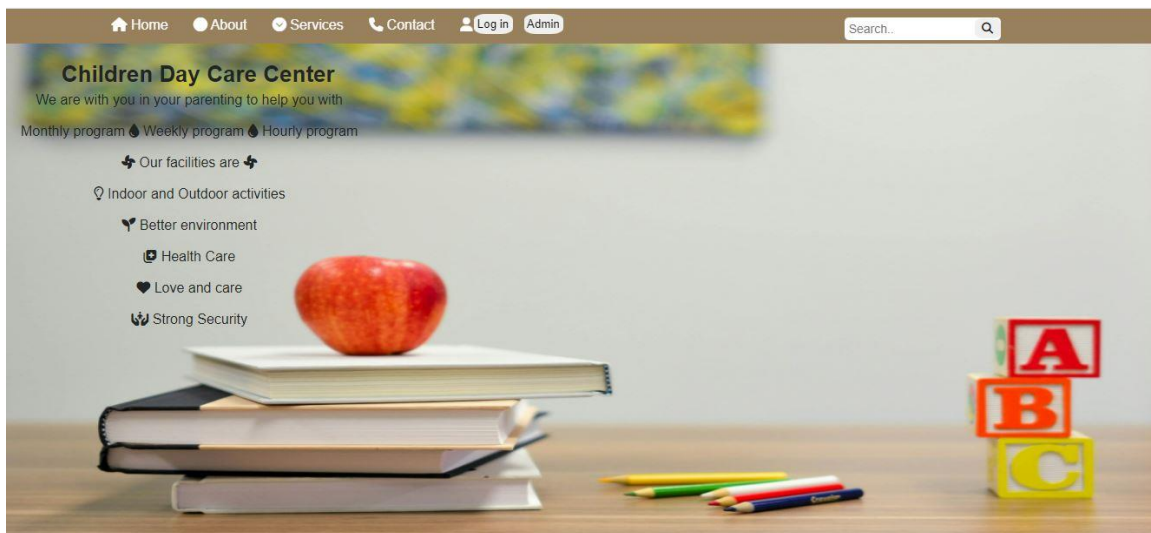


Figure 4.3: User Home Page Design

Figure 4.4 is the code for designing the register form. Here is the HTML code of the design. I also use CSS and JAVASCRIPT code for this.

```

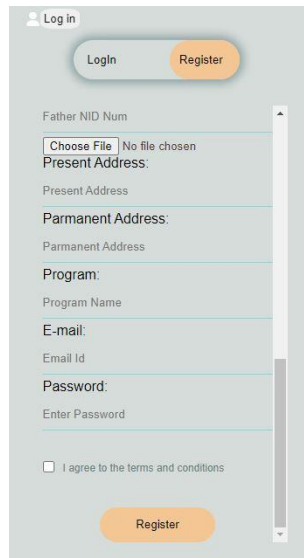
<form id='register' class='input-group-register' method="post" action="connect.php" style="overflow-y:scroll; height: 400px;">
  Child Name: <input type='text' class='input-field' placeholder='Child Name' required name= 'Child_Name'>
  Child Age: <input type='text' class='input-field' placeholder='Child Age' required name= 'Child_Age'>
  Date of Birth: <input type='text' class='input-field' placeholder='Birth of Date' required name= 'Birth_Date'>
  Gender: <input type='text' class='input-field' placeholder='Gender' required name= 'Gender'>
  Birth Certificate: <input type='text' class='input-field' placeholder='Birth Certificate Number' required name=
  <input type='file' onchange ="readURL(this)" accept="Image/*" class='file-upload-input' placeholder='Child birth
  Mothers Name: <input type='text' class='input-field' placeholder='Mothers Name' required name= 'Mothers_Name'>
  Phone Number: <input type='text' class='input-field' placeholder='Phone Number' required name= 'Mother_phnno'>
  Mother NID: <input type='text' class='input-field' placeholder='Mother NID Num' required name= 'MNID_Num'>
  <input type='file' onchange ="readURL(this)" accept="Image/*" class='file-upload-input' placeholder='NID image' r
  Fathers Name: <input type='text' class='input-field' placeholder='Fathers Name' required name= 'Fathers_Name'>
  Phone Number: <input type='text' class='input-field' placeholder='Phone Number' required name= 'Father_phnno'>
  Father NID: <input type='text' class='input-field' placeholder='Father NID Num' required name= 'FNID_Num'>
  <input type='file' onchange ="readURL(this)" accept="Image/*" class='file-upload-input' placeholder='NID image' r
  Present Address: <input type='text' class='input-field' placeholder='Present Address' required name= 'Present_Ad
  Parmanent Address: <input type='text' class='input-field' placeholder='Parmanent Address' required name= 'Parman
  Program: <input type='text' class='input-field' placeholder='Program Name' required name= 'Program'>
  E-mail: <input type='email' class='input-field' placeholder='Email Id' required name= 'Email'>
  Password: <input type='password' class='input-field' placeholder='Enter Password' required name= 'Pass_word'>
  <input type='checkbox' class='check-box'><span style="top:1118px;">I agree to the terms and conditions</span>
  <button type='submit' class='submit-btn' style="top:1170px; left:20px;">Register</button>

```

Figure 4.4: Design Code of Registration

Figure 4.5 and figure 4.6 is the Registration form design. User can register by click in login option from menu bar then register.

Figure 4.5: User Registration Design



The image shows a user registration form with a light gray background. At the top, there is a 'Log In' link and two buttons: 'Login' and 'Register'. The form fields include: 'Father NID Num' with a 'Choose File' button and 'No file chosen' text; 'Present Address:' with a text input; 'Parmanent Address:' (note the typo) with a text input; 'Program:' with a text input; 'E-mail:' with a text input; 'Password:' with a text input and 'Enter Password' text below it; and a checkbox for 'I agree to the terms and conditions'. A 'Register' button is at the bottom right.

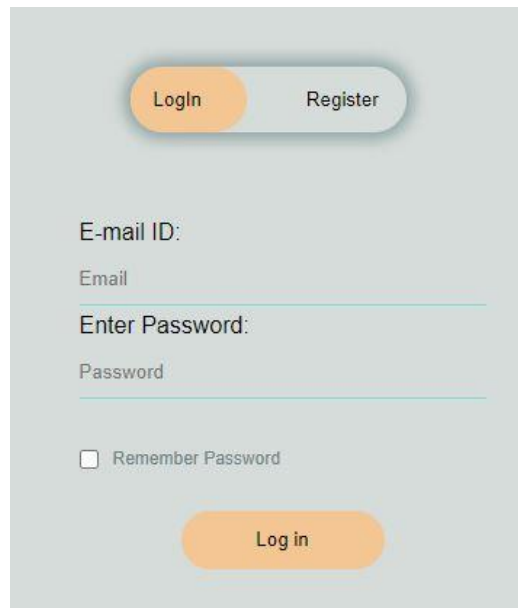
Figure 4.6: User Registration Design

Figure 4.7 is the login form code. With HTML here I used CSS and JAVASCRIPT code. I only provide HTML code to make the report simple.

```
div id='login-form' class='login-page'>
<div class="form-box">
  <div id='btn'></div>
  <button type='button' onclick='login()' class='toggle-btn' style="left: 6px; top:0px;">Log In</button>
  <button type='button' onclick='register()' class='toggle-btn' style="left: 77px; top:0px;">Register</button>
</div>
<form id='login' class='input-group-login' method="request" action="info.php">
  E-mail ID: <input type='text' class='input-field' placeholder='Email' required>
  Enter Password: <input type='password' class='input-field' placeholder='Password' required>
  <input type='checkbox' class='check-box'><span style="top:157px;">Remember Password</span>
  <button type='submit' class='submit-btn' style="top:200px;left:20px;">Log in </button>
</form>
```

Figure 4.7: Design Code for Login

Figure 4.8 is the Log in form design. User can log in by click in login option from menu bar.



The image shows a user login form with a light gray background. At the top, there are two rounded buttons: 'Login' in orange and 'Register' in light gray. Below these, the form has two input fields: 'E-mail ID:' with a placeholder 'Email' and 'Enter Password:' with a placeholder 'Password'. A checkbox labeled 'Remember Password' is located below the password field. At the bottom, there is a large orange 'Log in' button.

Figure 4.8: User Login Form Design

Figure 4.9 is a part of design code for admin page. Here, I have used PHP, HTML and CSS code.

```
<?php
$host = "localhost";
$dbusername = "root";
$dbpassword = "";
$dbname = "childcare";

$conn = new mysqli ($host, $dbusername, $dbpassword, $dbname);

if (mysqli_connect_error()){
    die('Connect Error ('.mysqli_connect_errno().') '. mysqli_connect_error());
}
else{
    $sql ="SELECT * FROM register";
}
$result=mysqli_query($conn,$sql);
if ($result->num_rows > 0)
{
    while($row= $result->fetch_assoc()){
        echo " <div align='center'><b> Name: " . $row["Child_Name"]. " *-* Age: " . $row["Child_Age"].
    }
}
else{
    echo "0 results";
}

$conn->close();
?>
```

Figure 4.9: Design code for Admin Page

Figure 4.10 is the design of Admin page. After login, admin can view the information of users, search by email and generate report.

The screenshot shows a web interface titled "All information of Users". At the top, there is a search bar labeled "Search User:" with a text input field containing "Email" and a button labeled "Enter". Below the search bar, there is a list of user information. Each entry includes the user's name, age, gender, father's name, present address, program, and email ID. At the bottom of the list, there is a button labeled "Generate Report".

Name	Age	Gender	Fathers Name	Present Address	Program	Email ID
Test name	-	-	Test name	Test address	Program name	admin@gmail.com
Rayan Hasan	3	Male	Rakib Hasan	Rampura,Dhaka	Hourly	d@gmail.com
Nira Sultana	1	Female	Noyam Hossain	Shamoli,Dhaka	monthly	d@gmail.com
Sagor Hasan	4	Male	Rakibul Hasan	Dhaka	Monthly	ng@gmail.com
Mira Mariom	1	Female	Aynal Islam	Dhanmondi,Dhaka	Weekly	lo@gmail.com
Sajib Shanto	2	Male	Naieem Hosen	Dhanmondi	Hourly	nay@gmail.com
Nodi Mahmud	3	Female	Nabil Mahmud	Asuliya,Savar	Monthly	nabil@gmail.com
Riya Akter	1	Female	Sabbir Ahmed	Asuliya,Savar	Monthly	ria@gmail.com

Figure 4.10: Admin Page Design

4.2 Design of Back-End

Back-End design is about the project Database design and use, connection with the website and maintenance. For design and maintain database in the back-end, I have used MYSQL database in this project. PHP is used as programming language for the coding of back-end and for the connection with the website.

Figure 4.11 is the project database. It shows all the tables of the database that is used in the project. Some tables are register, booking, programs, child_info, parents_info and so on. Admin can add, delete or update the table of the database and its features.

Server: 127.0.0.1 » Database: childcare

Structure SQL Search Query Export Import Operations Privileges Routines Events

Filters

Containing the word:

Table	Action	Rows	Type	Collation	Size	Overhead
☐ booking	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐ child_info	★ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_general_ci	32.0 KiB	-
☐ contacts	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐ images	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐ include	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐ parents_info	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐ programs	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐ register	★ Browse Structure Search Insert Empty Drop	8	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐ view	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
9 tables	Sum	9	InnoDB	utf8mb4_general_ci	160.0 KiB	0 B

Figure 4.11: Database of the Project

Figure 4.12 is the database register table. Database and the table are connected to the website using PHP code.

Server: 127.0.0.1 » Database: childcare » Table: register

Browse Structure SQL Search Insert Export Import Privileges Operations Tracking

Table structure Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐ 1	ID	int(11)			No	None		AUTO_INCREMENT	Change Drop More
☐ 2	Child_Name	varchar(100)	utf8mb4_general_ci		No	None			Change Drop More
☐ 3	Child_Age	varchar(50)	utf8mb4_general_ci		No	None			Change Drop More
☐ 4	Birth_Date	varchar(40)	utf8mb4_general_ci		No	None			Change Drop More
☐ 5	Gender	varchar(30)	utf8mb4_general_ci		No	None			Change Drop More
☐ 6	Birth_Cer_Num	int(20)			No	None			Change Drop More
☐ 7	Birth_Cer_image	blob			No	None			Change Drop More
☐ 8	Mothers_Name	varchar(100)	utf8mb4_general_ci		No	None			Change Drop More
☐ 9	Mother_phnno	int(20)			No	None			Change Drop More
☐ 10	MNID_Num	int(30)			No	None			Change Drop More
☐ 11	MNID_image	blob			No	None			Change Drop More
☐ 12	Fathers_Name	varchar(100)	utf8mb4_general_ci		No	None			Change Drop More
☐ 13	Father_phnno	int(20)			No	None			Change Drop More
☐ 14	FNID_Num	int(30)			No	None			Change Drop More
☐ 15	FNID_image	blob			No	None			Change Drop More
☐ 16	Present_Address	varchar(100)	utf8mb4_general_ci		No	None			Change Drop More

Figure 4.12: Register Table of Database

4.3 Interaction Design with UX

Design of User Home Page:

- Services (User can view the programs, schedule, fees and details that are arranged by the childcare center)
- Services Read More (User can know the activities and different programs that are for children in that defined age range)
- About (It is the description of the center, security features, environment, principles and goals of the childcare center)
- Contact (User can get connect to the child care by the contact information using a phone call or e-mail)
- Login (This option is for the user's registration and login. The user can log in by providing the e-mail and password that the user gets by registration)
- Register (User can register by providing the information that is required and that is needed for other activities)
- Search Bar (It is for searching the website by any keyword)
- Menu bar (It has Home, Services, Contact, About and Search bar)

Design of Admin Home Page:

- Login (By login, admin can view the admin page)
- Admin Page (Admin can see all the detailed information of the users that is registered before)
- Search (Admin can search a user by their e-mail address)
- Generate Report (Admin can generate a report for users)
- Check Payment (Fees calculation for the user's duration of stay)

UX

UX (User Experience) has a great impact on any website. I tried to make the website user-friendly. For that, I loaded this website in various browsers and worked on it. Some people give me a positive review of this website and from my site, everything is sound and fine. Though the website is not public so I have very little information about UX.

4.4 Implementation of the Requirements

For working on the project, I have used Visual Studio as a code editor. For the design and development, I have used HTML, CSS, JAVASCRIPT and PHP as programming language. There are some requirements that are needed for the implementation of the project. Those are:

- We need a local server for loading the website. For that XAMPP is used in this project. It is very compatible with the website.
- For the database I have used MY SQL. I get it with the server easily and connected to the Website using PHP.
- I need a browser where I test the code of my website to see whether it works smoothly or not.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Database Implementation

For the website of my project database is a very important and basic requirement. All the data that I get from the user through the website needs to be stored in a database. So, using MY SQL I have designed the database that is shown in Chapter 4 and connected the database with my project website using PHP code.

Figure 5.1 shows the PHP code for the connection of database with website. MY SQL query is added with it and it provides database authentication also advantage of create new table or database.

```
$Birth_Certificate_Number = filter_input(INPUT_POST, 'Birth_Cer_Num');
$Child_birth_Certificate_image = filter_input(INPUT_POST, 'Birth_Cer_image');
$Mothers_Name = filter_input(INPUT_POST, 'Mothers_Name');
$Phone_Number = filter_input(INPUT_POST, 'Mother_phnno');
$Mother_NID_Num = filter_input(INPUT_POST, 'MNID_Num');
$NID_image = filter_input(INPUT_POST, 'MNID_image');
$Fathers_Name = filter_input(INPUT_POST, 'Fathers_Name');
$Phone_Number = filter_input(INPUT_POST, 'Father_phnno');
$Father_NID_Num = filter_input(INPUT_POST, 'FNID_Num');
$NID_image = filter_input(INPUT_POST, 'FNID_image');
$Present_Address = filter_input(INPUT_POST, 'Present_Address');
$Parmanent_Address = filter_input(INPUT_POST, 'Parmanent_Address');
$Program_Name = filter_input(INPUT_POST, 'Program');
$Email_Id = filter_input(INPUT_POST, 'Email');
$Enter_Password = filter_input(INPUT_POST, 'Pass_word');

$host = "localhost";
$dbusername = "root";
$dbpassword = "";
$dbname = "childcare";

$conn = new mysqli ($host, $dbusername, $dbpassword, $dbname);

if (mysqli_connect_error()){
    die('Connect Error ('.mysqli_connect_errno().') . mysqli_connect_error());
}
else{
    $sql = "INSERT INTO register (Child_Name, Child_Age, Birth_Date, Gender, Birth_Cer_Num, Birth_Cer_image, Mo
    MNID_image, Fathers_Name, Father_phnno, FNID_Num, FNID_image, Present_Address, Parmanent_Address, Program,
    VALUES (' $Child_Name', '$Child_Age', '$Birth_of_Date', '$Gender', '$Birth_Certificate_Number', '$Child_birth_Ce
    '$Phone_Number', '$Mother_NID_Num', '$NID_image', '$Fathers_Name', '$Phone_Number', '$Father_NID_Num', '$NID im
```

Figure 5.1: Database Connection with PHP

5.2 Front-End Design Implementation

Front-end is designed for the users to interact with the website. Users are attracted to easy and meaningful design interfaces. Keeping this in mind I work on my website and make it simple but understanding for the user that will make interest to the users. Because complex UI can make users lose interest in using the website. The project has two modules: User Module and Admin Module.

5.2.1 User Module

Figure 5.2 and figure 5.3 is the user home page design implementation. Those are two different pages and have different features.

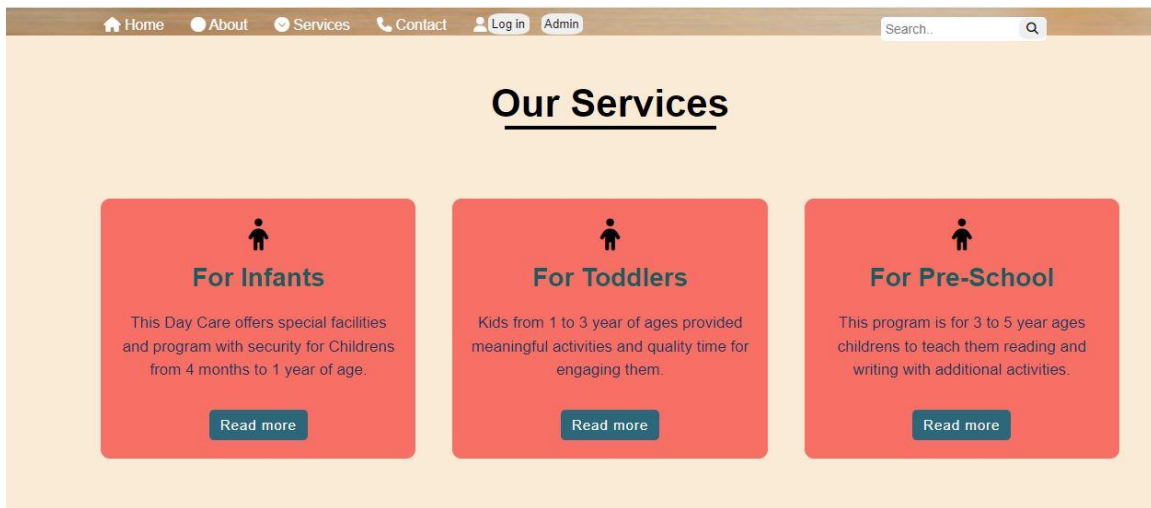


Figure 5.2: Home Page for User



Monthly Program

Schedule (7AM to 6PM) : It is full day schedule. Child can in at 7 in the morning and child will be provided necessary meals three times. (Payment: 8000 TK for one month)

chedule (7AM to 1 PM) : It is half day schedule from morning to afternoon. Child can in at 7 in the morning and child will be provided necessary meals two times. (Payment: 7000 TK for one month)

chedule (2PM to 6 PM) : It is half day schedule from afternoon to evening. Child can in at 2 in the afternoon and child will be provided necessary meals one times. (Payment: 6000 TK for one month)

Weekly Program

Schedule (7AM to 6PM) : It is full day schedule. Child can in at 7 in the morning and child will be provided necessary meals three times. (Payment: 5000 TK for one week)

Schedule (7AM to 1 PM) : It is half day schedule from morning to afternoon. Child can in at 7 in the morning and child will be provided necessary meals two times. (Payment: 4000 TK for one week)

chedule (2PM to 6 PM) : It is half day schedule from afternoon to evening. Child can in at 2 in the afternoon and child will be provided necessary meals one times. (Payment: 3000 TK for one week)

Hourly Program

Figure 5.3: Home Page for User

Figure 5.4 is the design of the login form. User can log in by inputting their e-mail and password that they get after registration. By clicking the log in button, they can view another page. Figure 5.5 is the page that is designed for users after login. Here, they can view their information and go to other pages from there.

Figure 5.4: User Login Form

Join Parents Community

View Activities

Your Information

Child Name: Riya Akter
Child Age: 1
Child Gender: Female
Fathers Name: Sabbir Ahmed
Present Address: Asuliya, Savar
Program Name: Monthly
Email ID: ria@gmail.com

There is your information. If you want a schedule for your child then make a schedule. Or if you already have sechedule you can see the report.

Make a Schedule

Get Report

Figure 5.5: Page after Login

Figure 5.6 is the page where user can make schedule of their child entry. They can input their entry information and submit it.

Make schedule of your child entry in Child Care Center. Provide your child a healthy and happy childhood with us. We care about their heath and security.

Program :

Schedule :

Entry Date :

Outing Date :

Health issues(if any) :

Submit

Figure 5.6: Child Entry Page

Figure 5.7 is the page where user can go by clicking Join our Community Option. In this page users can share their thoughts by the comment option. They can also join with other social media.

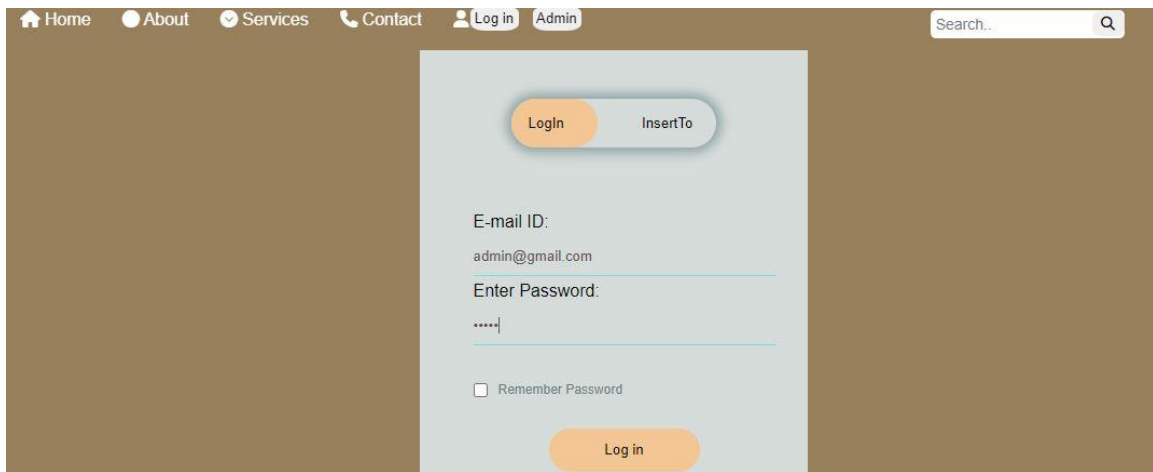


The image shows a web page titled "Our Family" with a light orange background. At the top, the title "Our Family" is centered in a bold, black, serif font. Below the title, there is a text input field with the placeholder text "Let us know your thoughts!!" and an "Enter" button to its right. Below the input field, there is a paragraph of text: "Share your experience and expectations to us.. Your comments are our achievement. We want to improve and go further. Stay with us". Below this paragraph, there is another line of text: "You can also join the whatsapp group for any update. The change in activities or schedule will be notified there." At the bottom, there is a WhatsApp icon followed by the phone number "01345678001".

Figure 5.7: Join Community Page

5.2.1 Admin Module

Figure 5.8 is the design of admin login form. Admin can login by admin email and password. Admin can input data of users from the Insert To option. Figure 5.9 is the admin page after login. Admin can search user by their email from the search option.



The image shows a web application interface with a dark brown header. The header contains navigation links: "Home", "About", "Services", "Contact", "Log in", and "Admin". There is also a search bar with the placeholder text "Search.." and a magnifying glass icon. Below the header, there is a light gray login form. The form has two tabs: "Login" (selected) and "InsertTo". Below the tabs, there are two input fields: "E-mail ID:" with the value "admin@gmail.com" and "Enter Password:" with the value "****". Below the password field, there is a checkbox labeled "Remember Password". At the bottom of the form, there is a "Log in" button.

Figure 5.8: Admin Login Form

All information of Users

Search User:

Name: Test name *- Age: *- Gender: *- Fathers Name: Test name *- Present Address: Test address *- Program: Program name *- Email ID: admin@gmail.com

Name: Rayan Hasan *- Age: 3 *- Gender: Male *- Fathers Name: Rakib Hasan *- Present Address: Rampura,Dhaka *- Program: Hourly *- Email ID: d@gmail.com

Name: Nira Sultana *- Age: 1 *- Gender: Female *- Fathers Name: Noyam Hossain *- Present Address: Shamoli,Dhaka *- Program: monthly *- Email ID: d@gmail.com

Name: Sagor Hasan *- Age: 4 *- Gender: Male *- Fathers Name: Rakibul Hasan *- Present Address: Dhaka *- Program: Monthly *- Email ID: ng@gmail.com

Name: Mira Mariom *- Age: 1 *- Gender: Female *- Fathers Name: Aynal Islam *- Present Address: Dhanmondi,Dhaka *- Program: Weekly *- Email ID: lo@gmail.com

Name: Sajib Shanto *- Age: 2 *- Gender: Male *- Fathers Name: Naieem Hosen *- Present Address: Dhanmondi *- Program: Hourly *- Email ID: nay@gmail.com

Name: Nodi Mahmud *- Age: 3 *- Gender: Female *- Fathers Name: Nabil Mahmud *- Present Address: Asuliya,Savar *- Program: Monthly *- Email ID: nabil@gmail.com

Name: Riya Akter *- Age: 1 *- Gender: Female *- Fathers Name: Sabbir Ahmed *- Present Address: Asuliya,Savar *- Program: Monthly *- Email ID: ria@gmail.com

Figure 5.9: Home Page of Admin

Figure 5.10 is the result page of admin search. From here, admin can check the payment of the user with their program and schedule.

Information of the User

Child Name: Riya Akter
Child Age: 1
Child Gender: Female
Fathers Name: Sabbir Ahmed
Program Name: Monthly
Present Address: Asuliya,Savar
Email ID: ria@gmail.com

This is the information of the User with the searched email id.

Figure 5.10: Admin Search Results Page

5.3 Interaction Design Implementation

Making an interactive interface for users is very important for the success of the project. Most people are connected to the Internet at this time. So, their experience makes them expect a more user-friendly interface of the website. If the website is hard to understand and has complexity then users will not be interested in using the website. That's why I take it seriously and try to make it as user-friendly as possible.

5.4 Testing Implementation

Table 5.1: Testing Information and Positive Test cases

Test Case and ID	Test Steps	Test input	Expected Outcome	Actual Outcome	Status	Comments
1.Load Website	Open any browser and type the website URL.	Enter correct URL	Successfully load the website in the browser.	Website successfully loads into the browser.	Successful	Test was successful on 25/06/24
2. Form opening	After loading website click on Login option.	No input needed.	Successful Display of the Form.	Form Displayed.	Successful.	Test was successful on 25/06/24
3.Registration	Click on form register option. Then provide information and click on register button.	Users Information	Registration successful.	Your Registration is Successful.	Successful	Test was successful on 25/06/24
4. Login	Click on the form login option then provide E-mail and Password and click login button.	E-mail: test@gmail.com Password: ***** ***	Load new page.	Loads new page.	Successful.	Test was successful on 25/06/24

Table 5.2: Testing Information and Negative Test cases

Test Case and ID	Test Steps	Test input	Expected Outcome	Actual Outcome	Status	Comments
1.Load Website	Open any browser and type any URL.	Enter wrong URL	URL not Found.	URL not found in the server.	Successful	Test was successful on 25/06/24
2.Registration	Click on form register option. Then skip any field information and click on register button.	Users Information	Fill out the field.	Fill out the field.	Successful	Test was successful on 25/06/24
3. Login	Click on the form login option then provide E-mail and Password and click login button.	E-mail: tes@gmail.com Password: *****	Wrong E-mail or Password. Try again.	Try Again	Successful.	Test was successful on 25/06/24

5.5 Results of the Test and Report

I have checked the code of the project and done some testing to find any errors. By that, I found some anomalies and solved them mostly. I will perform more tests on the code and it's working to reduce complexity and make the website work smoothly.

5.6 Ethical Aspects

There are some ethical issues included in the project of the childcare system.

- To the safety and respect of children.
- A positive environment for children's better development.
- Ensuring children's information from parents with their consent.
- Consideration of these ethical issues is done for children's security and ethical decision-making.

CHAPTER 6

CONCLUSION AND FUTURE SCOPE

6.1 Discussion and Conclusion

The web application is very useful in every field and as a child care system, it is also very helpful. Admin and users of the child care system can be benefited by using this. Admin can handle the center easily and perfectly while the user will get an interactive application. User's time will be saved with the worries about their children's security will be solved. I have spent time and worked hard on this project to make it useful and presentable. In future, I can change the design and add new features according to the user interest or requirements and demand of the childcare owner.

6.2 Scope for Future work and Development

It is a development project and there's no end of development. Though the project is made for the purpose of learning, in the future I can add more features to it. There are many scopes in the future, where I can develop the project to make it more reliable for the users.

I want to implement this project if I get a chance and work on the development of the system. Some features that I can develop in the system are:

- I can Improve the User Interface
- Add Online Payment Option
- Report download option for users
- Admin login system on the website
- Admin interface in the system
- More features and facilities
- Make involvement of the center authority.

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