

A Web Application on E-Learning & Career Counselling

BY

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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 “**A Web Application on E-Learning & Career Counselling**”, submitted by Mohammad Nazmul Ahsan Ovi, ID No: 153-15-824 and Md. Shariful Islam, ID No: 153-15-583 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 Bachelor of Science in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 06 August 2019.

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DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Md. Reduanul Haque, Lecturer, Department of CSE** Daffodil International University. We 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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ABSTRACT

Skilled manpower is an asset for any developing country like Bangladesh. Their contribution can influence the development process. E-learning is a learning system where educational resources are provided for free or with fewer cost. We have developed an application based on e-learning to achieve our goal which is solving the unemployment problem of our country. The Big percentage of people of our country who are not properly prepared to take challenges of 21st century. We can convert this lacking into the strength through our application to where learners must have creativity, collaboration, communication, critical thinking skills. Our application is giving the opportunity to users to take quality education through necessary course materials and preparing for to take future challenges. Everyone should grab the opportunity for the betterment of career and country. Instructor plays the important role in the e-learning system. Instructor follows rules to develop necessary courses and evaluate learners practically. Our developed system “A Web Application on e-Learning and Career Counselling” collaborate with learners and instructors to ensure quality education.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This project is developed for knowledge seekers of Bangladesh who wants to learn through online-platform. Users of this application can learn through course materials and quizzes according to their interest. Qualified skilled instructors are behind of creating useful courses. Application can give counselling to the learners to improve their skills for betterment of their career and preparation to take future challenges.

1.2 Motivation

In the area of interest, to create a better career being skilled is most important. In Bangladesh, there is a few e-Learning platform where quality resource in Bengali or English is not noticeable for knowledge seekers to enrich their skills. Career counselling is important for better career and prosperity. E-Learning platforms is the way to keep all educational resources in a place where using internet from anywhere anybody can access educational resources. Completing paid courses is also a problem for the learners of developing country like Bangladesh. A good number of instructors are motivated to spread the knowledge and ready to make educational content. We are combining knowledge seekers and instructors in a system which is a web application based on e-Learning and career counselling.

1.3 Objectives

- Setting user profile with various skill, interest and other information.
- Finding courses according to category, skills, interests.
- Viewing instructor full profile including qualification, experience, skills before enrolling a course
- Enrolling in a course to see course materials and give quizzes.
- Creating courses and quizzes for users.
- Creating course materials for ensuring quality education.

- Creating quizzes for evaluate learners by following rules.
- Managing users and instructors from admins perspective.
- Making E-Learning and career counselling platform more efficient using internet.

1.4 Expected Outcome

E-Learning and career counselling platform to solve the lack of skilled manpower availability problem in Bangladesh. From anywhere anybody can be benefitted through this learning materials to improve their skills. Qualified skilled instructors who are not getting enough opportunity to spread their knowledge will get opportunity.

CHAPTER 2

BACKGROUND

2.1 Introduction

Nowadays, E-Learning becomes one of the most popular and effective way of learning from almost every aspect. Completing a course for enhancing skills is needed, but at the era of the internet, going physically to do the course is not effective. A good number of manpower of Bangladesh is our investment for the future. They are the resource. But that resource will not work if they are not with proper skill, creativity, collaborative, critical thinking ability, communication skill. To solve this problem and use the manpower, we have developed a web application where using internet learners can be skilled to take future challenges.

Our web application has three types of users:

- Admin
- Instructor
- User who is actually learner

Anyone using the internet can browse our web application, can check categories, course information, instructors full profile including skills, qualification, experience. When a visitor will decide to enroll a course, he must be register and logged in. After enrolling course logged in users can access video content, justify their knowledge by several quizzes. Courses, course materials and quizzes are created by instructors to evaluate learners. Both of user and instructor can create, update, delete information, skills from their profile and an admin has access all things. Admin can manage user profile who are actually learners here and instructor profile. Admin can create and manage Event, seminar, workshop which is needed for spread knowledge and activity.

2.2 Related Works

In terms of E-Learning platform there is fewer effective developed platform in Bangladesh. 10 Minute School, Repto Education Center, eShikhon are the well-known e-Learning platform from Bangladesh. Functionality of these platforms are different ensure education from e-Learning

platform. But there is lacking of professional courses and contents which is a disadvantage. We want to solve the problem by creating skilled, creative manpower to take challenge of 21st century.

2.3 Comparative Studies

Purpose: In worldwide, there have many E-Learning based web application. But in Bangladesh, fewer E-Learning based application those courses are not also free. For this purpose, we have developed this project that anyone can registered as user and instructor, and logged user enroll course for free and instructor add course successfully.

Approach: In this project two actors are user and instructor. User can be helpful learn from course and instructor can spread their knowledge through course materials.

Originality: The project is more useful for instructor and student who learn from different categorized courses. Anyone can get facilities by using this application.

2.4 Scope of the problem

Getting professional educational contents from our Bangladeshi instructors is not much more available. E-Learning application like Coursera, Udemy, khan Academy are offering different categorized courses in the English language and other languages but not in Bengali. That's why we are not able to adapt knowledge properly. We are offering courses in both Bengali and English languages created by Bangladeshi instructors through our web application. That will reduce dependency from foreign e-Learning application and create huge opportunity for our learners and instructors.

2.5 Challenges

Artificial Intelligence (AI) nowadays effecting every sector and some work is completing automatically using the power of AI. Though our system is intelligent but in the future, we want

to implement AI in our system. Reason behind implementing AI is giving job suggestion from different job portals like skill.jobs, bdjobs, indeed etc. Our system will analyze user profile their information, skills, interest and completed courses to give them career development suggestion.

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

Business process modeling is created and shown in diagram statement.

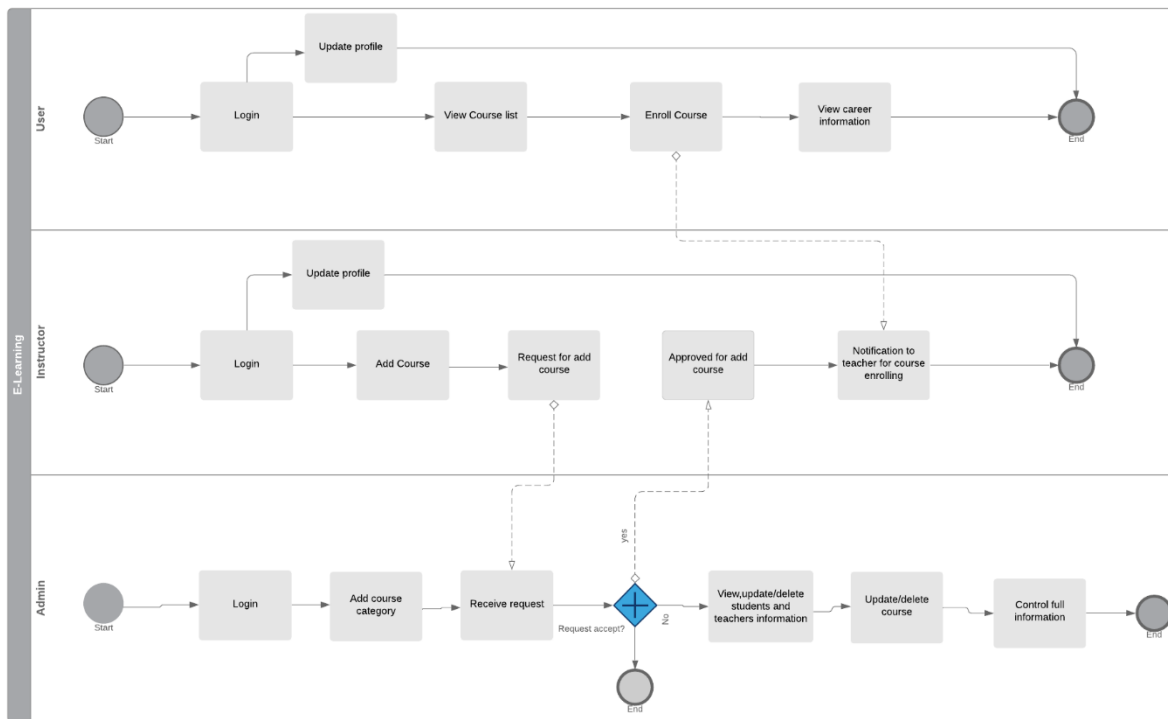


Figure 3.1: Business Process Model

3.2 Requirement Collection and Analysis

Requirement collection plays a key role and requirement analysis sets the base of web application development or software development. Requirement analysis is categorized and can be functional, implementational and performance. In this system, we have worked requirement analysis for software and hardware.

3.2.1 User Requirement

In this system user can be anyone. User can view course list and instructor profile without login in this system. If user wants to enroll any course or give quiz then need to sign up and after signup they need to login. After enrolling the course user can view course material. User can also see jobs depending on their career interest.

List of the key Requirement:

- Enroll course
- View course material function
- Quiz functionality
- Review course functionality
- View career information

3.2.2 Instructor Requirement

Instructor can add course material in selected categorical course. But at first, he must login. Instructor can add own profile information and skills. Course materials are shown in course section. Instructor

List of the key Requirement:

- Add course functionality
- View user information
- View course functionality

3.2.3 Admin Requirement

Admin is the main role of this system. Admin can control the whole system. At first, Admin will login in the system. Admin can add course category from admin panel. Admin can manage instructor and user list. Admin set event date and time.

List the key Requirement:

- Category functionality
- Course functionality
- Manage user and instructor

3.2.4 Technical and Legal Requirement

We have developed this project by the Laravel framework which is a server scripting PHP framework. We have to ensure that this system is more secure and reliable. Laravel has default many secure protections so that user's data can't be stolen.

- Protecting this application from SQL Injection.
- Protecting cookies from hackers.
- Protecting with Cross-Site Request Forgery (CSRF) Protection
- Password is protected with strong Hashing function

3.2.5 Hardware and Software Requirements

If anyone access to our application here is the minimum hardware and software requirement.

3.2.5.1 Hardware Requirements:

Table 3.2.5.1 Hardware Requirement

Processor	Intel Atom or above
Motherboard	Any
Ram	512MB or more
Hard Disk	30 GB
Monitor	Any
Internet Connection	Mobile network or Broadband Connection

3.2.5.2 Software Requirements:

Table 3.2.5.2 Software Requirement

Browser	Google Chrome, Mozilla Firefox, Opera, Safari
---------	---

3.3 Use Case Modeling and Description

A use case model interacts different types of user with the system to solve a problem. There are three types of user in our project. We have designed use case model for user, admin and instructor. Here is our use case model and description.

3.3.1: Use Case Model for User:

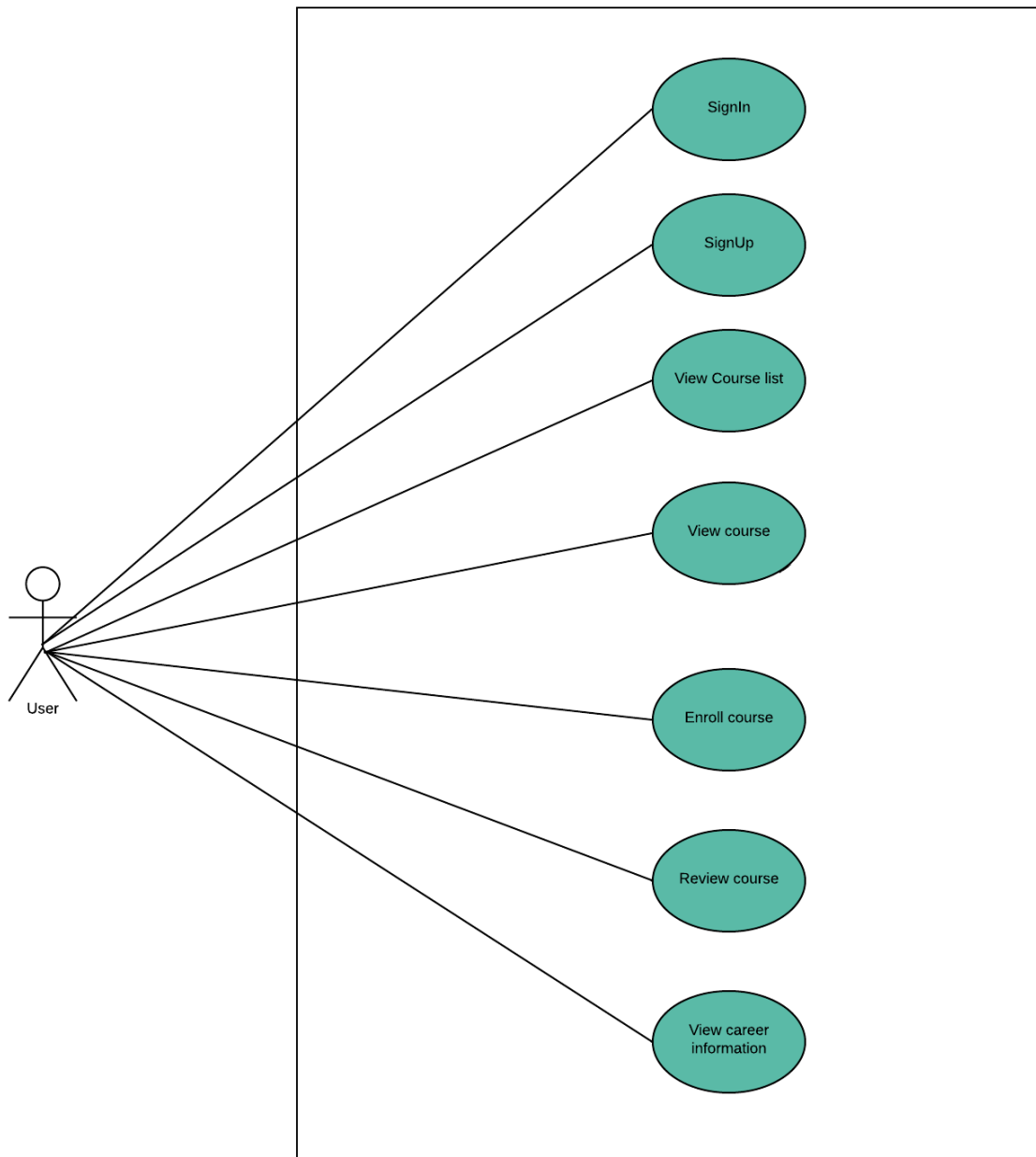


Figure 3.3.1: Use Case Model for User

3.3.2: Use Case Model for Instructor:

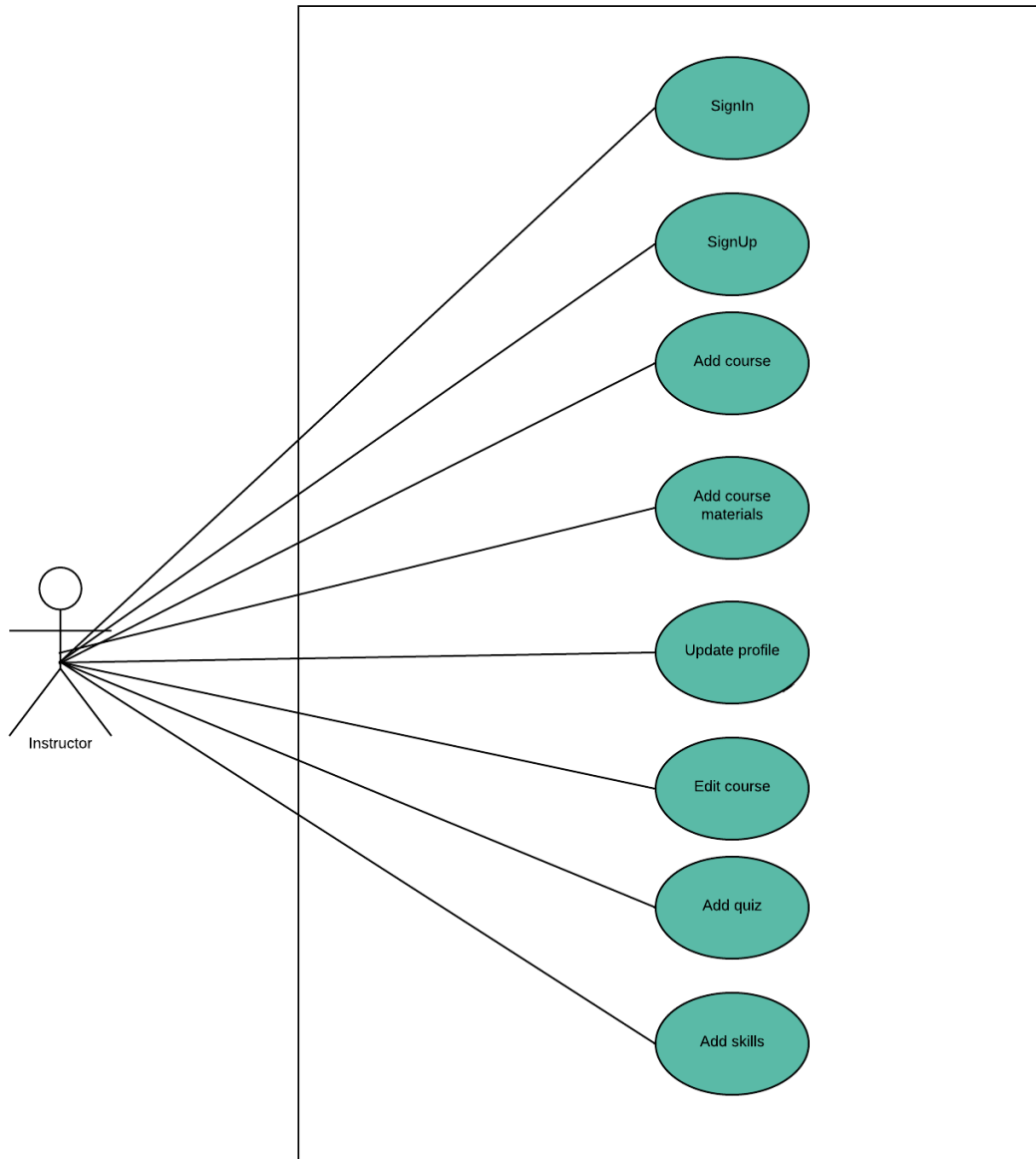


Figure 3.3.2: Use Case Model for Instructor

3.3.3: Use Case Model for Admin:

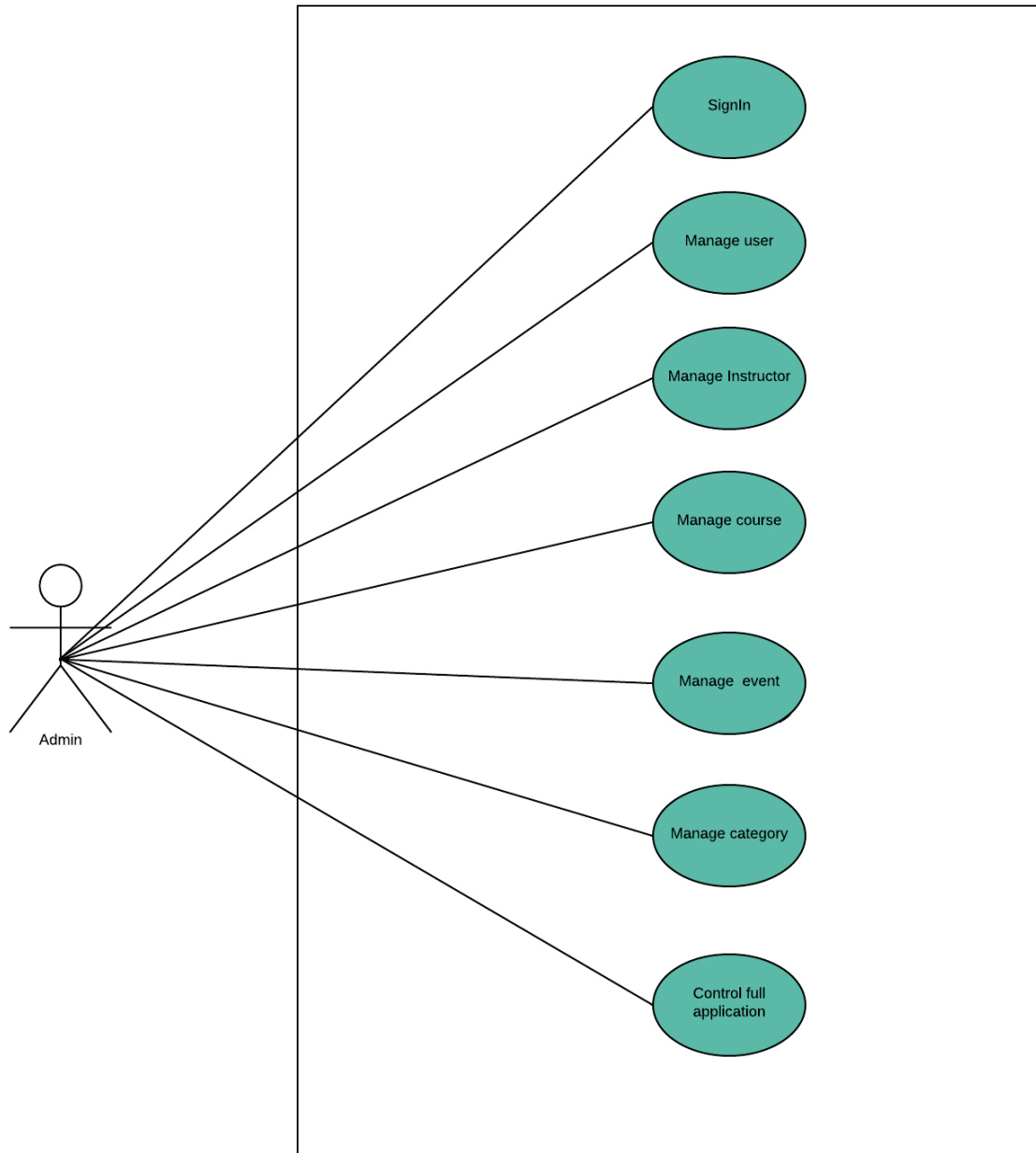


Figure 3.3.3: Use Case Model for Admin

3.3.4 Use Case Description:

Table 3.3.4: Use case for Sign Up

Case Id	1
Statement Name	Sign Up
Created By	Shariful Islam
Date of Creation	02.06.2019
Description	Instructor and User can register successfully
Primary Actor	Instructor, Students
Secondary Actor	None
Precondition	None
Postcondition	None

Table 3.3.5: Use case for Sign In

Case Id	2
Statement Name	Sign In
Created By	Shariful Islam
Date of Creation	02.06.2019
Description	Admin, Instructor and Students can register successfully. Also view other pages.
Primary Actor	Admin, Instructor and Students
Secondary Actor	None
Precondition	Admin, Instructor and Students need to login in this application.
Postcondition	Admin, Instructor and User can see their home page

Table 3.3.6: Use case for View course

Case Id	3
Statement Name	View Course
Created By	Shariful Islam
Date of Creation	02.06.2019
Description	Students can view course
Primary Actor	Students
Secondary Actor	None
Precondition	None
Postcondition	None

Table 3.3.7: Use case for Enroll course

Case Id	4
Statement Name	Enroll Course
Created By	Shariful Islam
Date of Creation	02.06.2019
Description	User can see course and enrol course.
Primary Actor	Students
Secondary Actor	None
Precondition	User need to login
Postcondition	User will see course material

Table 3.3.8: Use case for Review Course

Case Id	5
Statement Name	Review Course
Created By	Shariful Islam
Date of Creation	02.06.2019
Description	Students can review course in their enrollment course.
Primary Actor	Students
Secondary Actor	None
Precondition	Students need to login
Postcondition	None

Table 3.3.9: Use case for View career Information

Case Id	6
Statement Name	View career Information
Created By	Shariful Islam
Date of Creation	03.06.2019
Description	Students can view their career information.
Primary Actor	Students
Secondary Actor	None
Precondition	Students need to login
Postcondition	None

Table 3.3.10: Use case for Add Course

Case Id	7
Statement Name	Add Course
Created By	Shariful Islam
Date of Creation	03.06.2019
Description	Instructor can add course
Primary Actor	Instructor
Secondary Actor	None
Precondition	Instructor need to login
Postcondition	None

Table 3.3.11: Use case for Update Profile

Case Id	8
Statement Name	Update Profile
Created By	Shariful Islam
Date of Creation	03.06.2019
Description	Students and Instructor can update their own profile.
Primary Actor	Students and Instructor
Secondary Actor	None
Precondition	Students and Instructor need to login
Postcondition	None

Table 3.3.12: Use case for Edit Course

Case Id	9
Statement Name	Edit Course
Created By	Shariful Islam
Date of Creation	03.06.2019
Description	Instructor can edit course
Primary Actor	Instructor
Secondary Actor	None
Precondition	Instructor need to login
Postcondition	None

Table 3.3.13: Use case for Add Quiz

Case Id	10
Statement Name	Add Quiz
Created By	Shariful Islam
Date of Creation	03.06.2019
Description	Instructor can add quiz for students
Primary Actor	Instructor
Secondary Actor	None
Precondition	Instructor need to login
Postcondition	Instructor will see quiz list

Table 3.3.14: Use case for Manage Course

Case Id	11
Statement Name	Manage Course
Created By	Shariful Islam
Date of Creation	03.06.2019
Description	Admin can add, delete and edit any course
Primary Actor	Admin
Secondary Actor	None
Precondition	Admin need to login
Postcondition	None

Table 3.3.15: Use case for Manage Students

Case Id	12
Statement Name	Manage Students
Created By	Shariful Islam
Date of Creation	03.06.2019
Description	Admin can add, delete and edit any student
Primary Actor	Admin
Secondary Actor	None
Precondition	Admin need to login
Postcondition	None

Table 3.3.16: Use case for Manage Instructor

Case Id	13
Statement Name	Manage Instructor
Created By	Shariful Islam
Date of Creation	03.06.2019
Description	Admin can add, delete and edit any instructor
Primary Actor	Admin
Secondary Actor	None
Precondition	Admin need to login
Postcondition	None

Table 3.3.17: Use case for Manage Event

Case Id	14
Statement Name	Manage Event
Created By	Shariful Islam
Date of Creation	03.06.2019
Description	Admin can add, delete and edit any event.
Primary Actor	Admin
Secondary Actor	None
Precondition	Admin need to login
Postcondition	None

Table 3.3.18: Use case for Manage Category for Course

case Id	15
Statement Name	Manage Category for Course
Created By	Shariful Islam
Date of Creation	03.06.2019
Description	Admin can add, delete and edit any category of courses
Primary Actor	Admin
Secondary Actor	None
Precondition	Admin need to login
Postcondition	None

Table 3.3.19: Use case for Manage Control Full Application

Case Id	16
Statement Name	Control Full Application
Created By	Shariful Islam
Date of Creation	03.06.2019
Description	Admin can control full application
Primary Actor	Admin
Secondary Actor	None
Precondition	Admin need to login
Postcondition	None

3.4 Logical Data Model

Logical data model describes attributes, entities and relationships them.

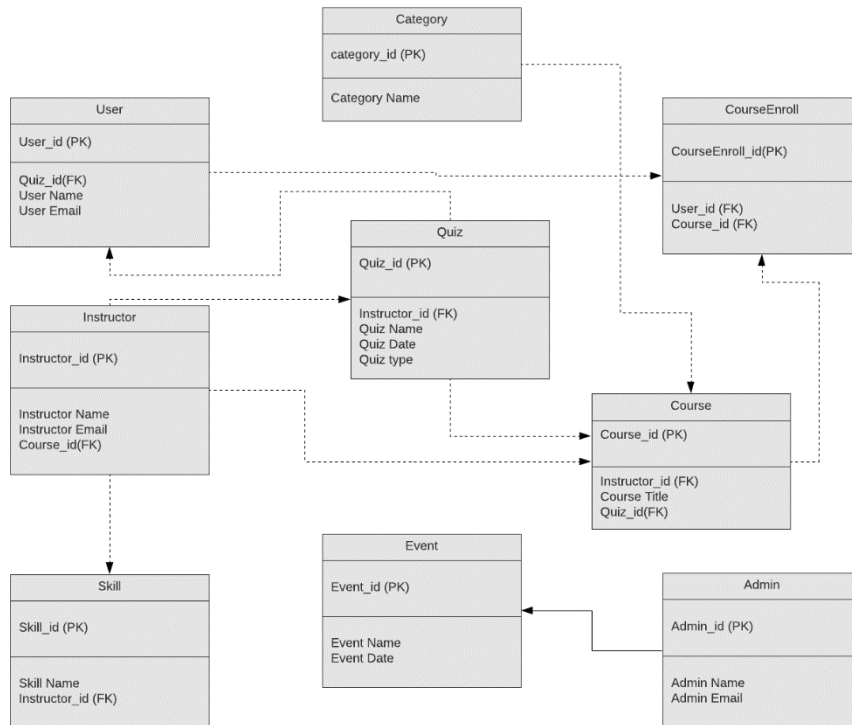


Figure 3.4: Logical Data Model

3.5 Design Requirements

In our project, we have implemented back-end design and front-end design. Design requirement is the functional requirement. Firstly, we have implemented front-end design that how looks our application. For front-end design we need some programming language and markup language. We have used HTML, CSS, JavaScript and some libraries for font-end design. Backend design is the main part for developing a web application. Back-end design is functional that how interacts it with user. For back-end design, we have used PHP and its framework Laravel. We also need a computer for design this web application.

CHAPTER 4

DESIGN SPECIFICATION

4.1 Front-end Design

We have completed front-end design of our project by markup language, style sheet language, programming language and some libraries.

- HTML
- CSS
- Bootstrap
- JavaScript
- Ajax
- jQuery

4.1.1 HTML

Hypertext Markup Language (HTML) is the standard markup language. HTML is not a programming language. A Markup Language is a way that computers speak to each other to control how a text is processed and presented. To do this HTML uses two things: tags and attributes. Tags are used to mark up the start of a HTML element and they are usually enclosed in angle brackets. For example, `<h1>` tag must be opened `<h1>` and closed `</h1>`.

4.1.2 CSS

CSS is the style sheet language. We have used CSS in this project for design. We can add color and background images and change the layout of our page using CSS. We can insert CSS in three ways.

- Inline CSS
- Internal CSS
- External CSS

4.1.3 Bootstrap

Bootstrap is a free front-end framework for web development for responsive view. Bootstrap is developed with HTML and CSS. We have used this framework in this project.

4.1.4 JavaScript

JavaScript is an interpreted programming language. With JavaScript HTML DOM we can create dynamic web pages. JavaScript code can be written in HTML page with `<script></script>` tag. For the dynamic purpose we have used some JavaScript libraries, such as: Ajax and jQuery.

4.2 Back-end Designs

Back-end design of this project was completed by some programming languages and framework.

- PHP
- Laravel
- MySQL

4.2.1 PHP

Hypertext Preprocessor (PHP) is a general-purpose scripting language that is used for web development. PHP code is executed on the server and generating HTML which is sent to the user. PHP code start with `<?php` instruction and ending with `?>` instruction. We can write PHP code in HTML tag with `<?php ?>` instruction.

4.2.2 Laravel

Laravel is an open source MVC PHP framework for development of web application. MVC stands for Model, View and Controller. We have used Laravel framework in this project for more secure, blade template engine. If we use Laravel we need to install composer-based dependency manager.

4.2.3 MySQL

MySQL is the open source Relation SQL Database system. It runs on a server. MySQL uses standard SQL query. We have used the query in our application to fetch data which data is viewed by admin, user and instructor.

4.3 Interaction Design and UX

Interaction design is the interaction between system and user by its interface. Here are some dimensions of interaction. Such as, Text, physical objects and animation. In our project what we have seen like text that's are all text dimension. Mobile, computer are physical objects that interact between system and user. Animation and images are also dimension of interaction design. Interaction design is related to User Experience. User experience is the process design that provide shaping and meaningful experience to users. UX is more important than interaction design.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of Database

A database management system handles the requests generated from the SQL. Here are steps of implement of database.

- Install DBMS and configure
- Running
- Database and table creation
- Integrating with application

5.1.2 Entity Relationship Diagram

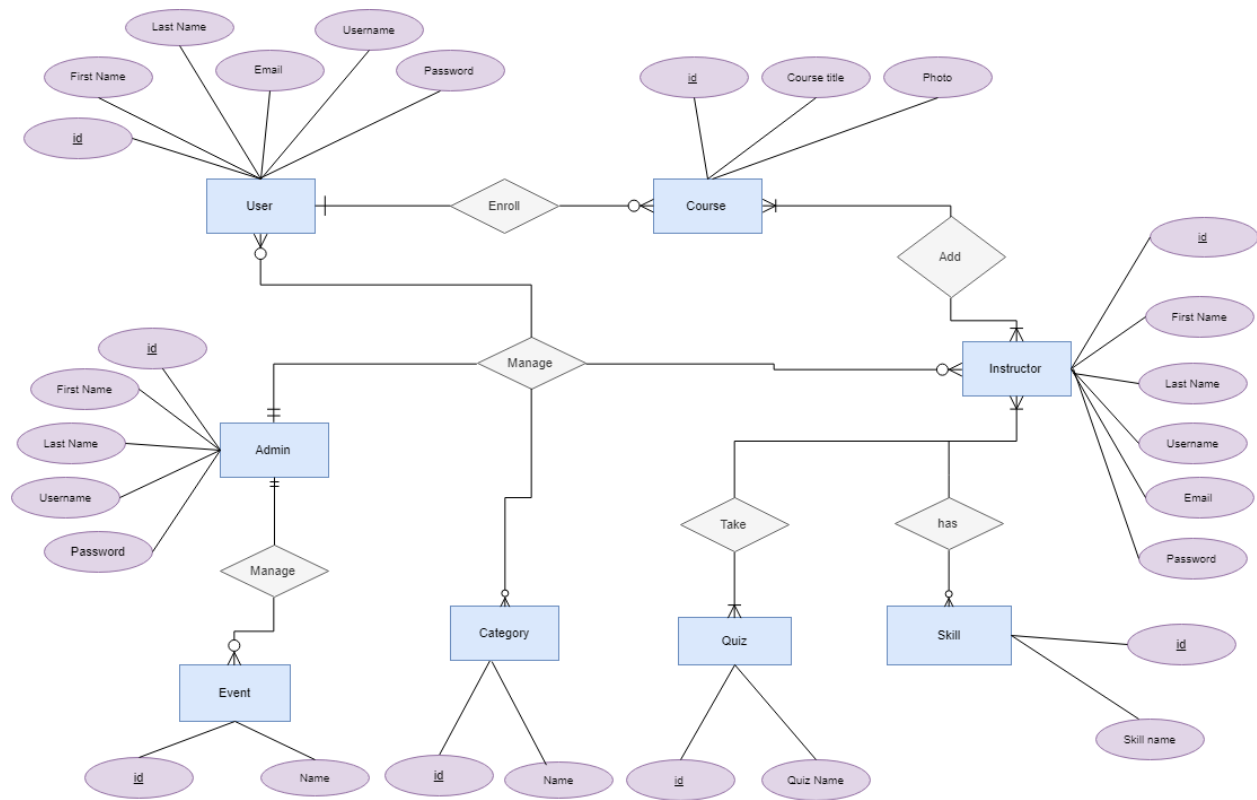


Figure 5.1.2: Entity Relationship Diagram

5.2 Implementation of Front-end Design

Designing a website or a web application requires some rules. Front-end design involves creating the HTML, CSS, and presentational JavaScript code that makes up a user interface. It is a graphical interface for user to view and interface. Here, we have implemented front-end design for this project.

5.2.1 Home page

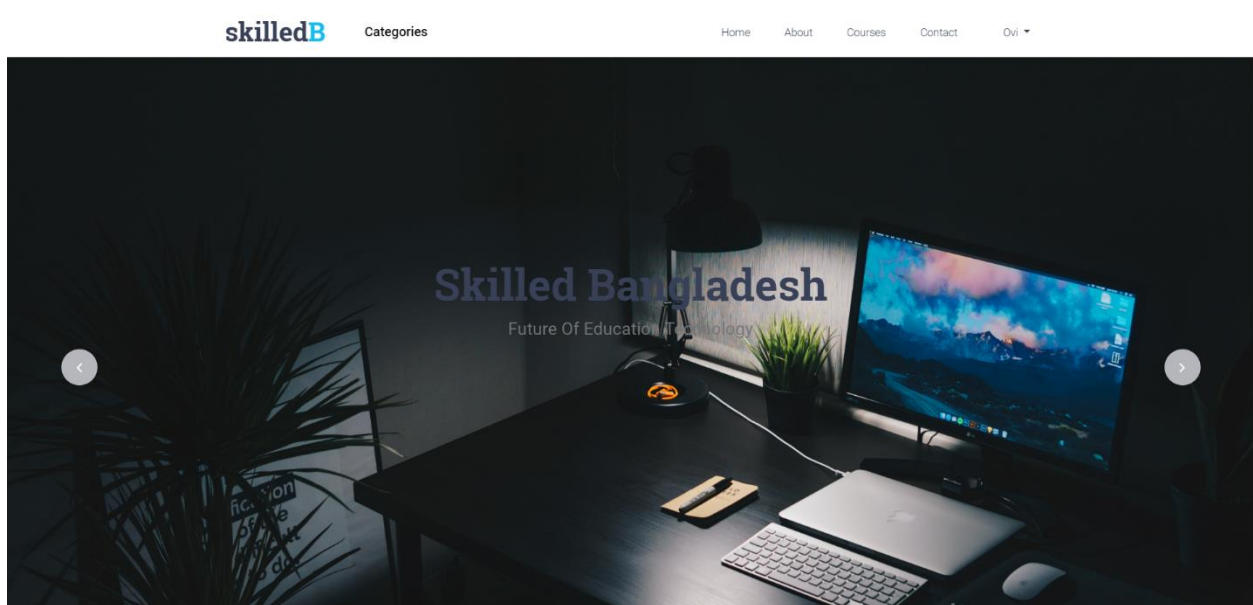


Figure 5.2.1: Home page

5.2.2 Category view

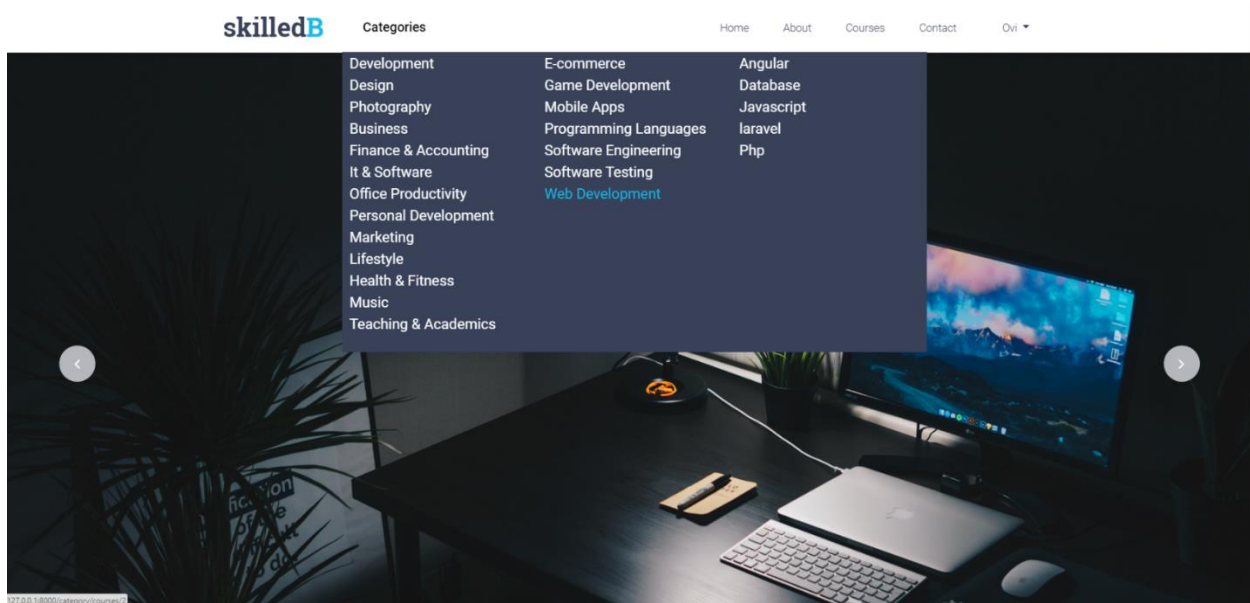


Figure 5.2.2: Category view

5.2.3 Users Courses View

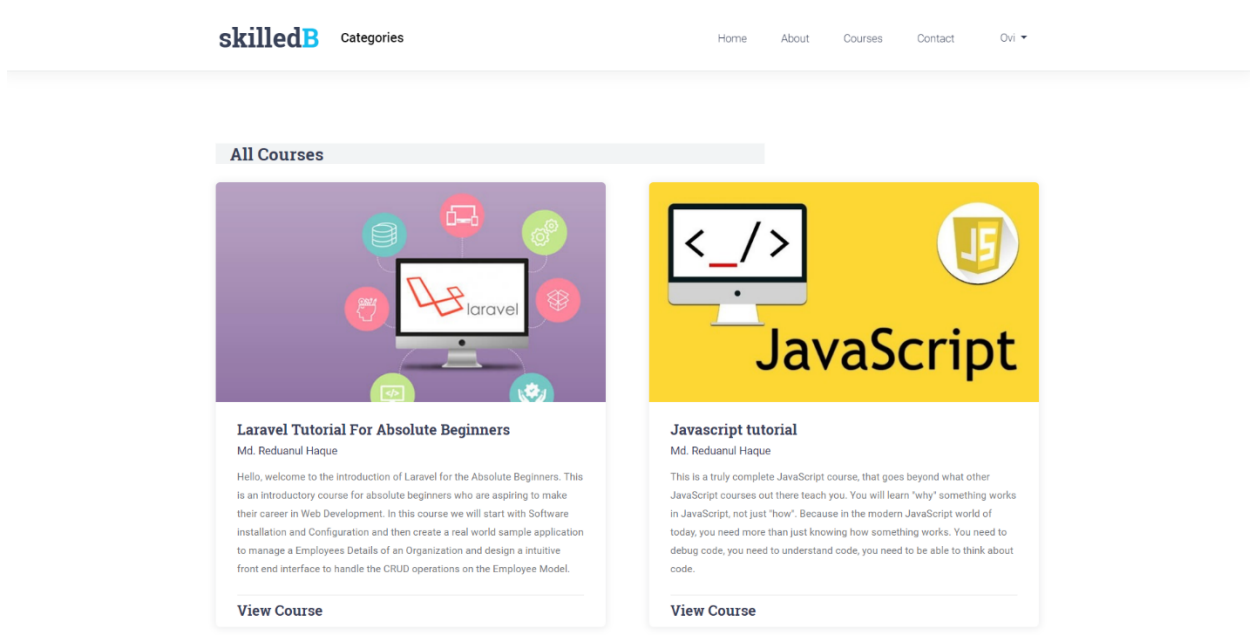


Figure 5.2.3: Course view for user

5.2.4 Course Enrolment for User

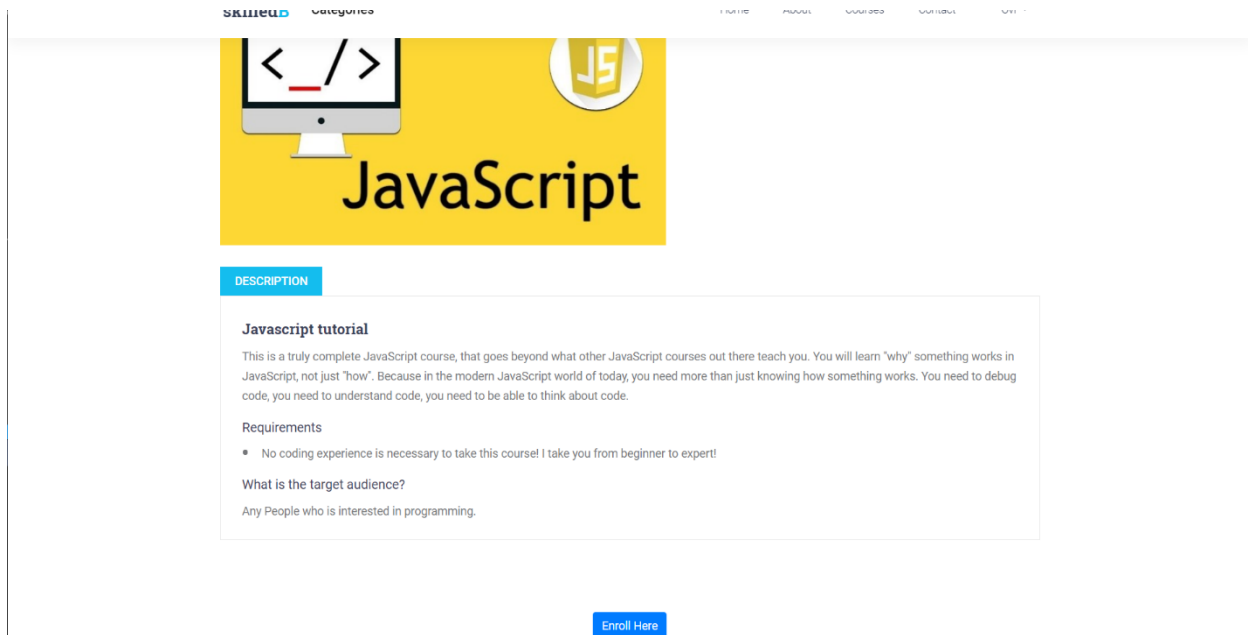


Figure 5.2.4: Course enrolment view

5.2.5 Enrolled course list for user

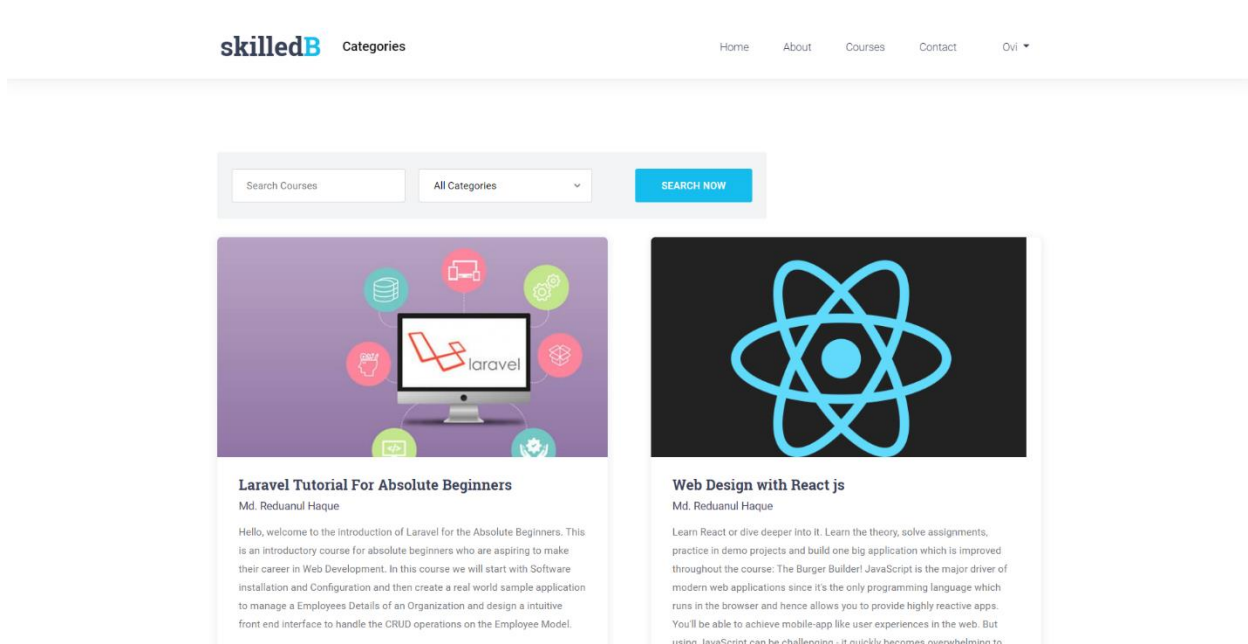


Figure 5.2.5: Enrolled course list

5.2.6 Quiz view for user

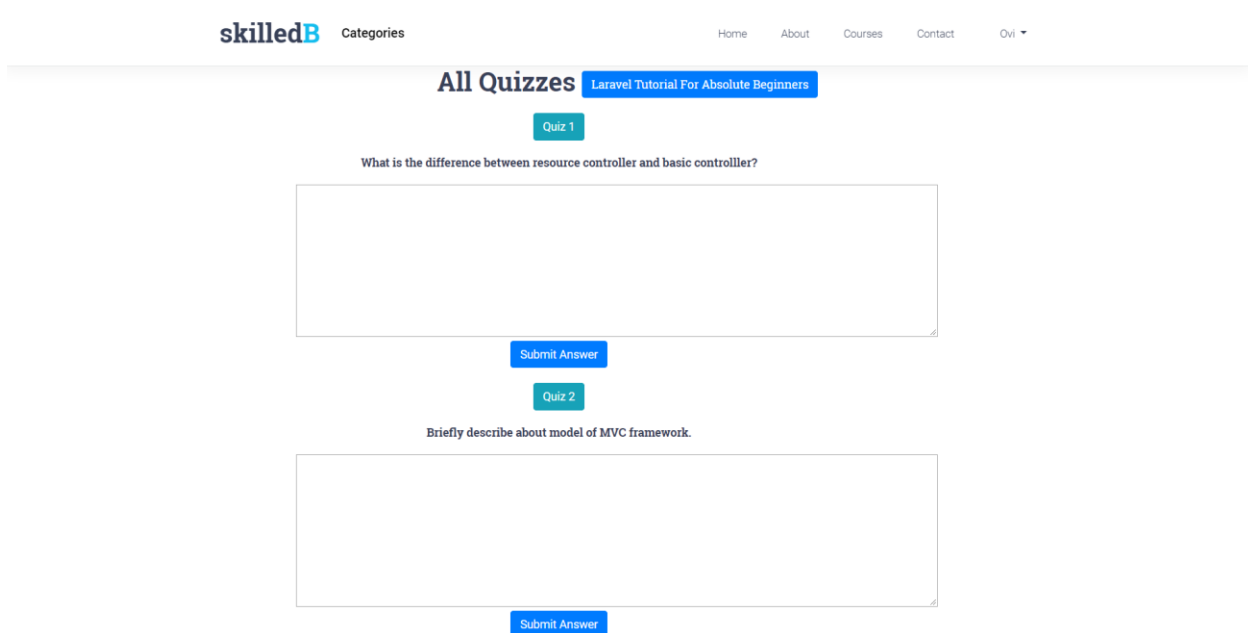


Figure 5.2.6: Quiz view

5.2.7 Profile of user

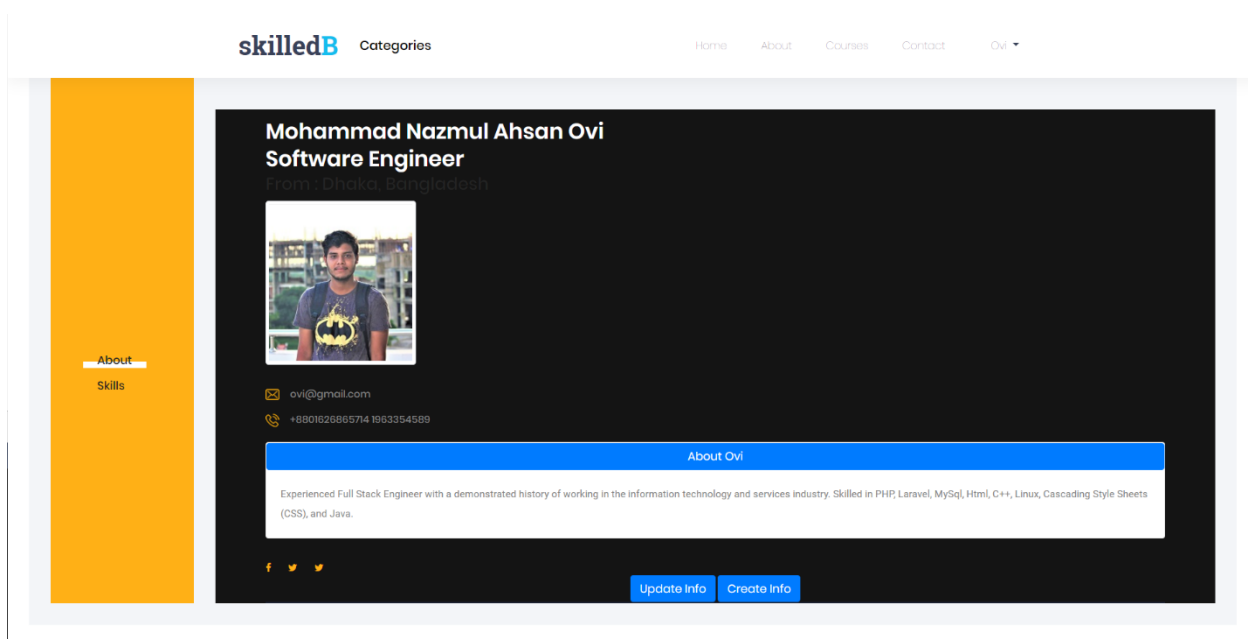


Figure 5.2.7: User profile

5.2.8 Adding course by Instructor

The screenshot shows the SkilledB web application interface. On the left is a dark sidebar with navigation options: Add New Course, Manage Courses, Add New Video, Manage Videos, Add New Quiz, and Manage Quizzes. The main content area is titled "SkilledB Future of education technology" and contains a form for adding a new course. The form fields are: Title (text input), SubTitle (text input), Description (text input), Requirement (text input), Targeted Audience (text input), and Course Photo (file upload button labeled "Choose File" with "No file chosen" text). Below these are three dropdown menus for selecting Category, SubCategory, and SubSubCategory. At the bottom of the form are "Add" and "Back" buttons. The top navigation bar includes the SkilledB logo, a menu icon, and the user name "Md. Reduanul Haque" with a dropdown arrow. The breadcrumb trail shows "Instructor" and "Course".

Figure 5.2.8: Adding course by instructor

5.2.9 Adding Course Materials by Instructor

The screenshot shows the SkilledB web application interface for adding course materials. The sidebar and top navigation bar are identical to the previous screenshot. The main content area is titled "SkilledB Future of education technology" and contains a form for adding course materials. The form fields are: Course Name (dropdown menu with "Laravel Tutorial For Absolute Beginners" selected), Video Title (text input), and Insert Video (file upload button labeled "Choose File" with "No file chosen" text). At the bottom of the form are "Add" and "Back" buttons. The breadcrumb trail shows "Instructor" and "Video".

Figure 5.2.9: Adding course materials by instructor

5.2.10 Managing Course by Instructor

SkilledB Future of education Technology

your Instructed Course

course That are already exist

Show 10 entries Search:

S No	Course Title	Course Instructor	Edit	Delete
1	Laravel Tutorial For Absolute Beginners	2	Edit	Delete
2	Javascript tutorial	2	Edit	Delete
3	Web Design with React js	2	Edit	Delete
4	C++ Programming for Beginner	2	Edit	Delete
5	Quiz 1	2	Edit	Delete

Showing 1 to 5 of 5 entries

Previous 1 Next

Figure 5.2.10: Managing course by instructor

5.2.11 Managing Course materials by Instructor

SkilledB Future of education Technology

Add New Course Video

Videos that are already exist

Show 10 entries Search:

S No	Video Title	Video Link	Edit	Delete
1	laravel 1	SampleVideo_1280x720_1mb.mp4	Edit	Delete
2	Laravel 2	SampleVideo_1280x720_1mb - Copy (2).mp4	Edit	Delete
3	Laravel 3	SampleVideo_1280x720_1mb - Copy (3).mp4	Edit	Delete
4	Laravel 4	SampleVideo_1280x720_1mb - Copy (4).mp4	Edit	Delete
5	Laravel 5	SampleVideo_1280x720_1mb - Copy (5).mp4	Edit	Delete

Showing 1 to 5 of 5 entries

Previous 1 Next

Figure 5.2.11: Managing course materials by instructor

5.2.12 Adding Quiz

The screenshot shows the 'Add Quiz' form in the SkilledB application. The form is located in the main content area, and the course name is pre-filled as 'Laravel Tutorial For Absolute Beginners'. The form includes fields for the quiz title and three individual questions. At the bottom of the form, there are two buttons: 'Add Quiz' (in blue) and 'Back' (in red).

Figure 5.2.12: Adding quiz by instructor

5.2.13 Managing quiz

The screenshot shows the 'Manage Quiz' page in the SkilledB application. At the top, there is a 'Set New Quiz' button. Below it, the text 'Quizzes that are already exist' is displayed. A search bar is present on the right. The main content is a table with the following data:

S No	Quiz Title	Quiz Question	Edit	Delete
1	Quiz 1	What is the difference between resource controller and basic controller?	Edit	Delete
2	Quiz 2	Briefly describe about model of MVC framework.	Edit	Delete

Below the table, it says 'Showing 1 to 2 of 2 entries'. At the bottom right, there are 'Previous', '1', and 'Next' buttons.

Figure 5.2.13: Managing quiz by instructor

5.2.14 Profile view of instructor

Figure 5.2.14: Instructor profile view

5.2.15 Admin dashboard

S No	User Name	User email	Edit	Delete
1	Ovi	ovi@gmail.com	Edit	Delete
2	skilledB	skilledb@gmail.com	Edit	Delete
3	Sakib	sakib@gmail.com	Edit	Delete
4	Shariful Islam	soboz321@gmail.com	Edit	Delete
5	Soboz Ahmed	shariful.cse583@gmail.com	Edit	Delete

S No	Instructor Name	Instructor email	Edit	Delete
1	Md. Tanvir Rahman	tanvir.cse@diu.edu.bd	Edit	Delete
2	Md. Reduanul Haque	reduanul.cse@diu.edu.bd	Edit	Delete
3	Md. Mahfujur Rahman	mahfujur.cse@diu.edu.bd	Edit	Delete
4	nobir ali	nobirali99999@gmail.com	Edit	Delete
5	Shariful Islam	soboz321@gmail.com	Edit	Delete

Figure 5.2.15: Admin Dashboard

5.2.16 Adding Category by Admin

The screenshot shows the SkilledB admin interface. On the left is a dark sidebar with a search bar and a menu containing: Category, Event, Course, Skill, User List, and Instructor List. The main content area has a header with 'SkilledB' and 'Furute of education technology'. Below the header is a form with two input fields: 'Category' and 'Parent Category' (with a dropdown menu currently set to 'None'). At the bottom of the form are two buttons: 'Add' (blue) and 'Back' (red).

Figure 5.2.16: Adding category by admin

5.2.17 Managing Category by Admin

The screenshot shows the SkilledB admin interface for managing categories. At the top right, there is a blue button labeled 'Add New Category'. Below it, the text 'Categories That are already exist' is displayed. A search bar is located on the right side of the table. The table has columns for 'S No', 'Parent Category', 'Category Name', 'Edit', and 'Delete'. The table contains 10 rows of data. At the bottom left, it says 'Showing 1 to 10 of 88 entries'. At the bottom right, there is a pagination control with buttons for 'Previous', '1', '2', '3', '4', '5', '...', '9', and 'Next'.

S No	Parent Category	Category Name	Edit	Delete
1		Development	Edit	Delete
2	1	Web Development	Edit	Delete
3	2	Javascript	Edit	Delete
4	2	Angular	Edit	Delete
5	2	Php	Edit	Delete
6	8	React	Edit	Delete
7	2	laravel	Edit	Delete
8	1	Mobile Apps	Edit	Delete
9	8	android	Edit	Delete
10	1	Programming Languages	Edit	Delete

Figure 5.2.17: Managing category by admin

5.2.18 Adding and Managing Event by Admin

The screenshot displays the SkilledB admin interface. The top navigation bar is blue with the 'SkilledB' logo and the user name 'Ovi'. Below the navigation bar, there is a search bar and a list of menu items: 'Category', 'Event', 'Course', 'Skill', 'User List', and 'Instructor List'. The main content area is titled 'Blank page' with the subtitle 'it all starts here'. A blue button labeled 'Add New Event' is positioned at the top right of the main content area. Below this, there is a section titled 'Events That are already exist'. This section includes a 'Show 10 entries' dropdown, a search bar, and a table of events. The table has four columns: 'S No', 'Event Name', 'Edit', and 'Delete'. One event is listed with 'S No' 1 and 'Event Name' 'Event About Career Counselling'. Below the table, there is a 'Showing 1 to 1 of 1 entries' message and pagination controls with 'Previous', '1', and 'Next' buttons.

S No	Event Name	Edit	Delete
1	Event About Career Counselling	Edit	Delete

Figure 5.2.18: Adding and managing event by

5.3 Implementation of Interactions

Interaction implementation is very important for developing a system. Here interaction can be implemented to code. Implementation of interaction is the development phase of application and code are written. How user, instructor and admin interact with the system and its background system develop in this implementation.

5.4 Testing Implementation

Testing implementation is a process of this implementation. We have tested system testing, usability testing and database testing for our project.

5.4.1 System Testing

System testing is a series of different test. It is an internal work of this application. We have got output results from this system that we desired. If we input some wrong data, system can detect and message to user and if we input correct data, system can interact with database and show data to user.

5.4.2 Usability Testing

Usability testing is a test how interact this application with the user and focuses users ease of use this application and flexibility in handling controls.

5.4.3 Database Testing

Database testing is need for a system to perform data integrity and data consistency. Backend system access database for multiple reason. Then harmful or incorrect data can be stored in database system. As our project is based on web application data comes it through internet and incorrect data stored in database. This incorrect data stored can be stop Schema or mapping testing.

5.5 Test Results and Reports

The result of this test was close what we have desired. Every function is executed and tested through different types of system test. Every test was working well and the result was ok. But at the future we will add some functionality and then system will be again test and then results can be different.

Chapter 6

Conclusion and Future Scope

6.1 Discussion and Conclusion

This project is a web application focused on developing skilled manpower through appropriate career development suggestion. Instructors and users are co-operating with each other to reach their goal. Instructors will share their knowledge and get experience. We are having lots of positive outcome from this application. Appropriate concept of this generation like e-Learning and career counselling that's implemented here. Skilled manpower will be directly involved in the economy of our country. Satisfaction from both learner and instructor is our motivation and inspiration to add features and functionalities for future development of our application. This application is under development, we are trying to improve user experience and effectiveness in already implemented features, functionalities.

6.2 Scope for Further Developments

Web is a place where anyone can access information from any computing device using internet. Implementing Artificial Intelligence in web will be a great investment for the future. We want to add features in our system generated with AI to fulfill users need more practically and efficiently. Initially we are focusing on Bangladeshi users and instructors. But in near future, we have a plan to introduce this application with effective features and functionalities to globally. Representing Bangladesh is always a matter of proud for us.

Reference:

- [1] Learn about PHP, available at <https://www.php.net/docs.php>, last accessed on 04-08-2019 at 01:00pm.
- [2] Learn about Laravel, available at <https://laravel.com/docs/5.8>, last accessed on 04-08-2019 at 04:00pm.
- [3] Learn about HTML, available at <https://www.w3schools.com/html/default.asp>, last accessed on 03-08-2019 at 09:00pm.
- [4] Learn about CSS, available at <https://www.w3schools.com/css/default.asp>, last accessed on 03-08-2019 at 08:00pm.
- [5] Learn about Bootstrap available at <https://getbootstrap.com/docs/4.3/>, last accessed on 05-08-2019 at 10:00pm.
- [6] Learn about MySQL available at <https://dev.mysql.com/doc/>, last accessed on 05-08-2019 at 07:00pm.
- [7] Learn about AJAX available at https://www.w3schools.com/xml/ajax_intro.asp, last accessed on 05-08-2019 at 10:00pm.