

**DIUCREW**

**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

Supervised By

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**DAFFODIL INTERNATIONAL UNIVERSITY**

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## **APPROVAL**

This Project titled “**DIUCREW**”, submitted by Arif-Uz-Zaman, ID: 161-15-870, Deepro Bhattacharjee ID:161-15-900 and Sumaiya Akter Hanan ID: 161-15-901 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 26-11-2019.

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## DECLARATION

We hereby declare that this project has been done by us under the supervision of **Amit Chakraborty Chhoton, Lecturer, Department of CSE** Daffodil International University. We also declare that neither this Internship nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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

## **ABSTRACT**

DIUCREW is a web-based and android application system that can be used by the students, teachers, and alumni. They can easily operate it. Basically, the university lecture slide, books, topics wise best Youtube video lectures, books are provided on this website and android application. The main objectives of the system are to reduce the complexity of the study, to get the lecture slides and to properly understand. Moreover, the system can provide the flexibility of generating all of the lecture slides, books and youtube video for easy to understand the topic which is mentioned in the syllabus.

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# CHAPTER 1

## Introduction

### 1.1 Introduction

The project “DIUCREW” is an online web-based & android application management system that provides a simple and beautiful interface for handling the daffodil University students. Basically, the university lecture slide, books, topics wise best Youtube video lectures, books are provided on this website.

Manually get those things are quite difficult and search in many ways. And students enrolled in course after finishing the course and don't get the slides for using the job sector or extra curriculums. The “DIUCREW” project removes these difficulties and time-consuming.

### 1.2 Objectives

The objectives of the “DIUCREW”

1. The complexity of the institution's works reduced and easily handles.
2. Searching users (students, teachers) records and find information.
3. Improve Management reporting and maintaining capabilities of the institute.
4. Easy and advanced event management.
5. Provide the flexibility of generating the required documents on-screen as well as on printer when it is required.

### 1.3 Expected Outcome:

1. The Admin panel and the CR can easily put off the slides, books and lecture videos link on Youtube( topics related).
2. It's also helpful to the student who is prepared for the job.
3. Bring effective and efficient outcome of the educational process by systematic.

4. Make easy on everyone's works and also the whole activities of the education process.

5. DIUCREW helps the Charming and standard of the study will improve

## **CHAPTER 2**

### **Background**

#### **2.1 Introduction**

To develop any country it is important to make the people well-educated and active. Because education is one of the most powerful things that can reduce poverty and inequality and the laws of foundation for sustained economic growth. So the education system of a country is important and need to keep pace with the world. For improving study and recovery the obstacles it is important to have that makes operations of the in the “DIUCREW” for student learning website efficient and faster. Then education and learning will be more comfortable, easy and faster.

For the inefficiency, time wastage, working complexity, and other disadvantages of the manual system or “Google Classroom” the need for “DIUCREW”.

#### **2.2 Comparative Studies**

Sometimes there could be needed to send email to the teachers or individual teacher for that principal or admin need to login in email account entry recipients email and more things, but this system have good features than others to send email from the system’s interface and option.

There are some “DIUCREW”, related project.

Example:

1. Google Classroom

## **2.3 Scope of the Problem**

Technology is being modernized day by day. The crimes using technology are also increasing day by day with the update of technology.

As the “DIUCREW” is online and web-based there could be problems like a website. If the security can be to break or because of users fault or somehow unauthorized user access the account of the valid users then there could be data loss, privacy loss, and many problems depending on accessed account type.

If the accountant’s account is accessed by hacker then the accounts section may face great problems like discrepancy of money and payment.

If the admin account is accessed then that will be a great risk for the system and institute. Then all accounts can be accessed by resetting the password.

## **2.5 Challenge**

**2.5.1 Email & Bulk email:** If the admin needs to mail a teacher or class-representative they should do it from the system. Otherwise, there is the complexity of copying email id, logging in to email account and then send. There can be a mistake and if the mistake then the teacher will not find it. This requirement is fulfilled by the system.

## CHAPTER 3 Requirement Specification

### 3.1 Activity diagrams

Activity diagrams of DIUCREW are manually used for business process modeling. The graphical representations of work stepwise activities are used in activity diagrams.

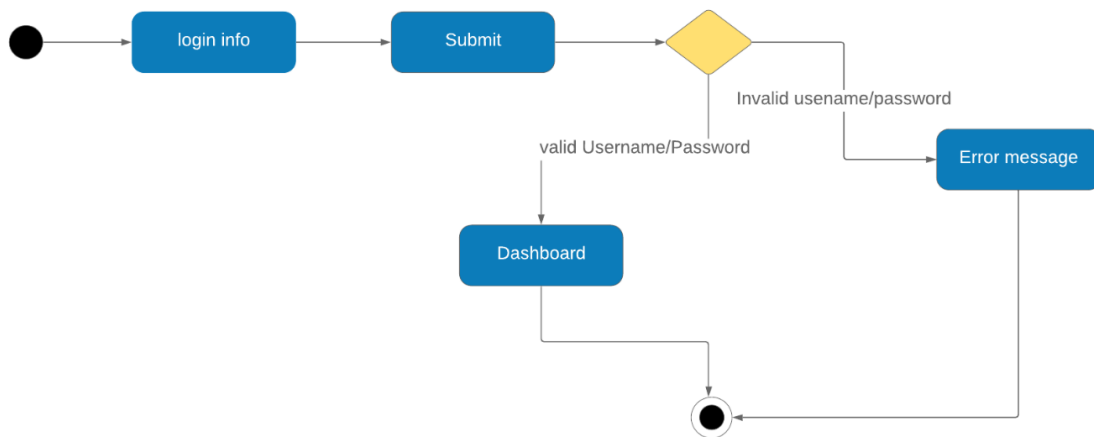


Figure 3.2.1: DIUCREW Login diagram

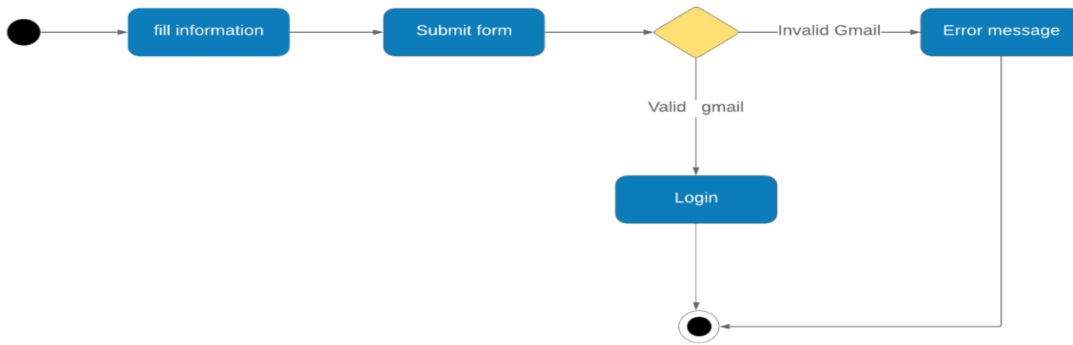


Figure 3.1.2: Activity diagram\_of\_DIUCREW for user signup

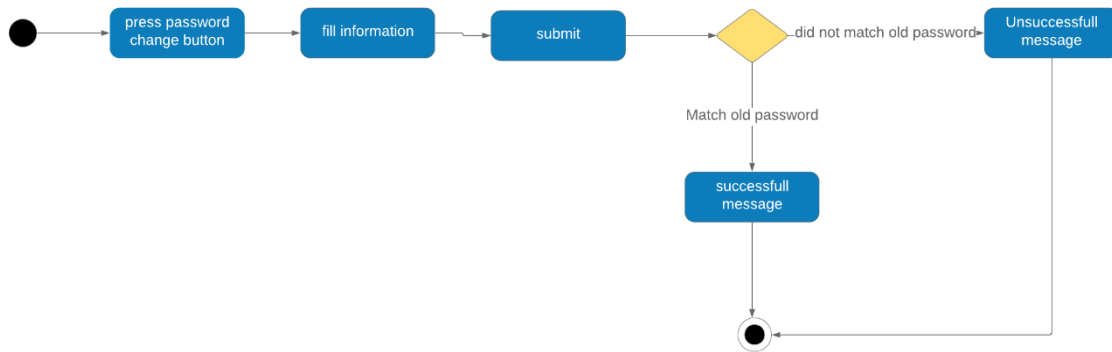


Figure 3.1.3 Activity diagram for changing password



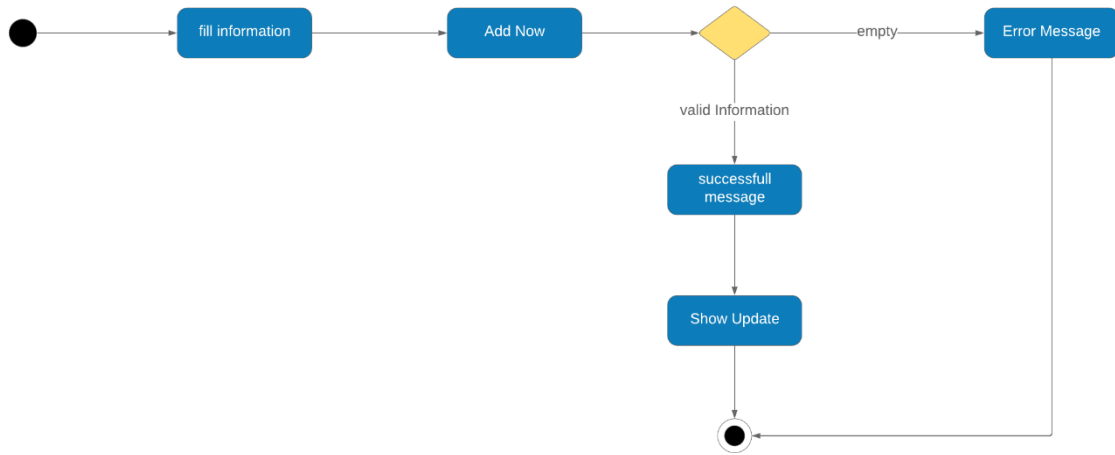


Figure: 3.1.4:add faculty

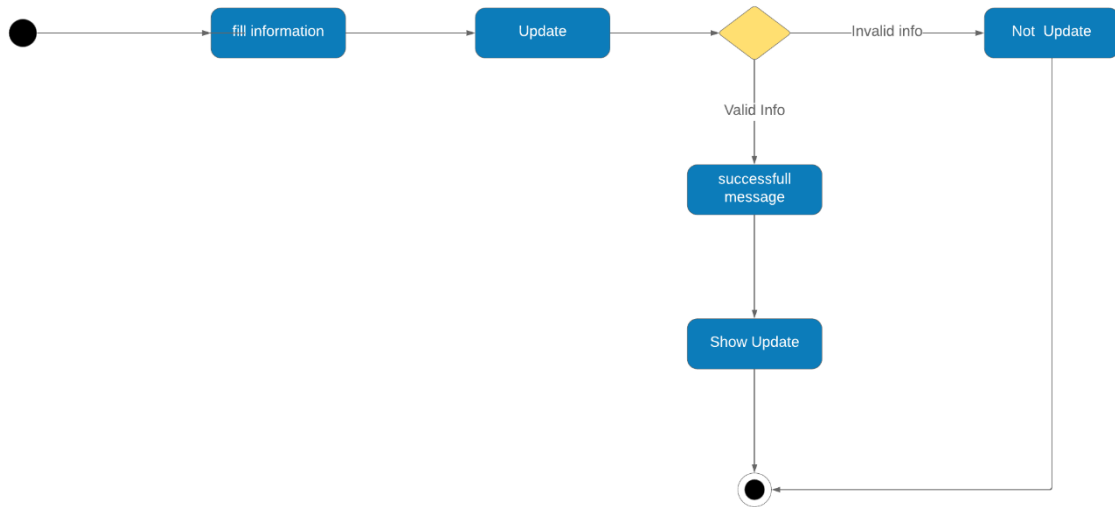


Figure 3.1.5:Update faculty



Figure 3.1.6: Add department

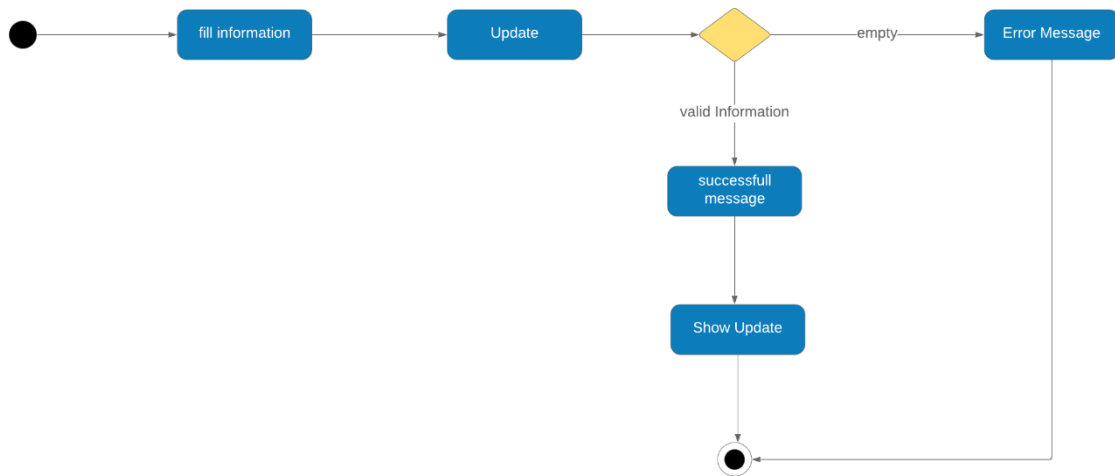


Figure:Update department

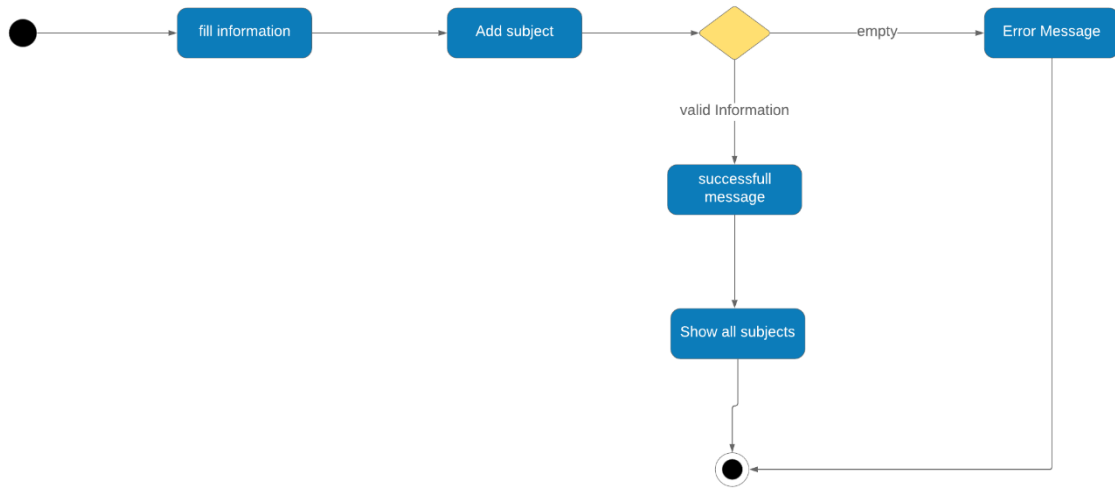


Figure 3.1.8: Add subject

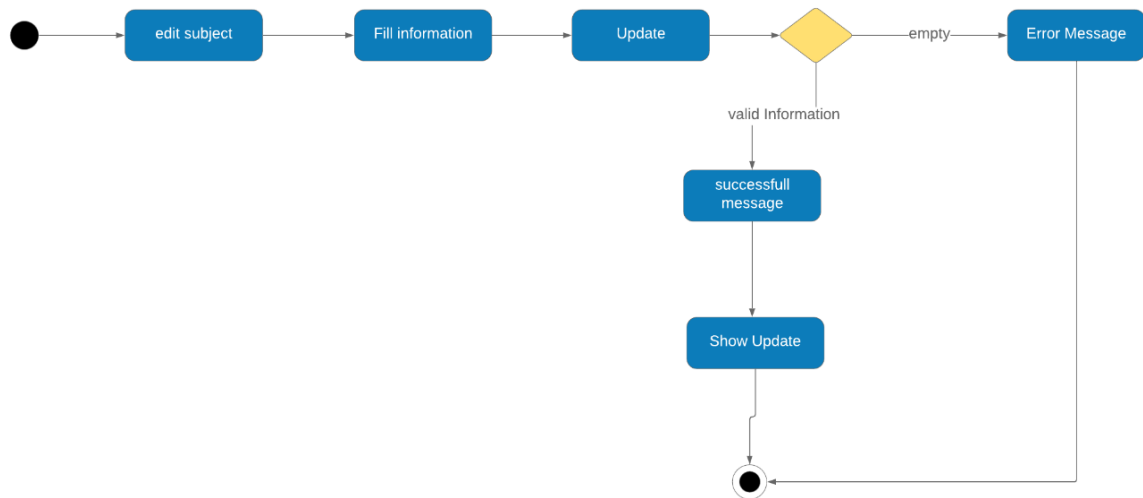


Figure 3.1.9: Update subject

### 3.2 Use Case Modeling and Description

### 3.3 Use case diagram

### 3.4 Flow diagram

Figure shows a different kind of Actors

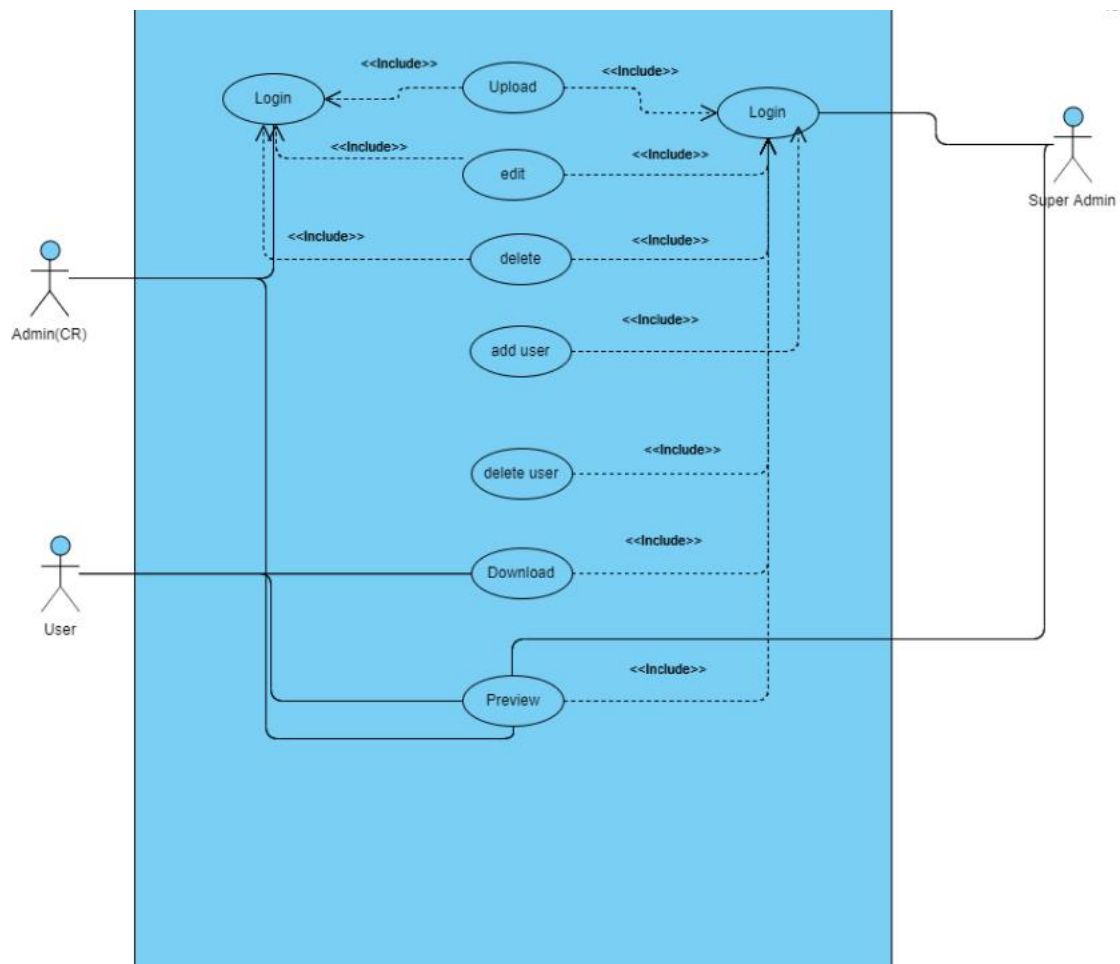


Figure 3.1.10: the use case Diagram

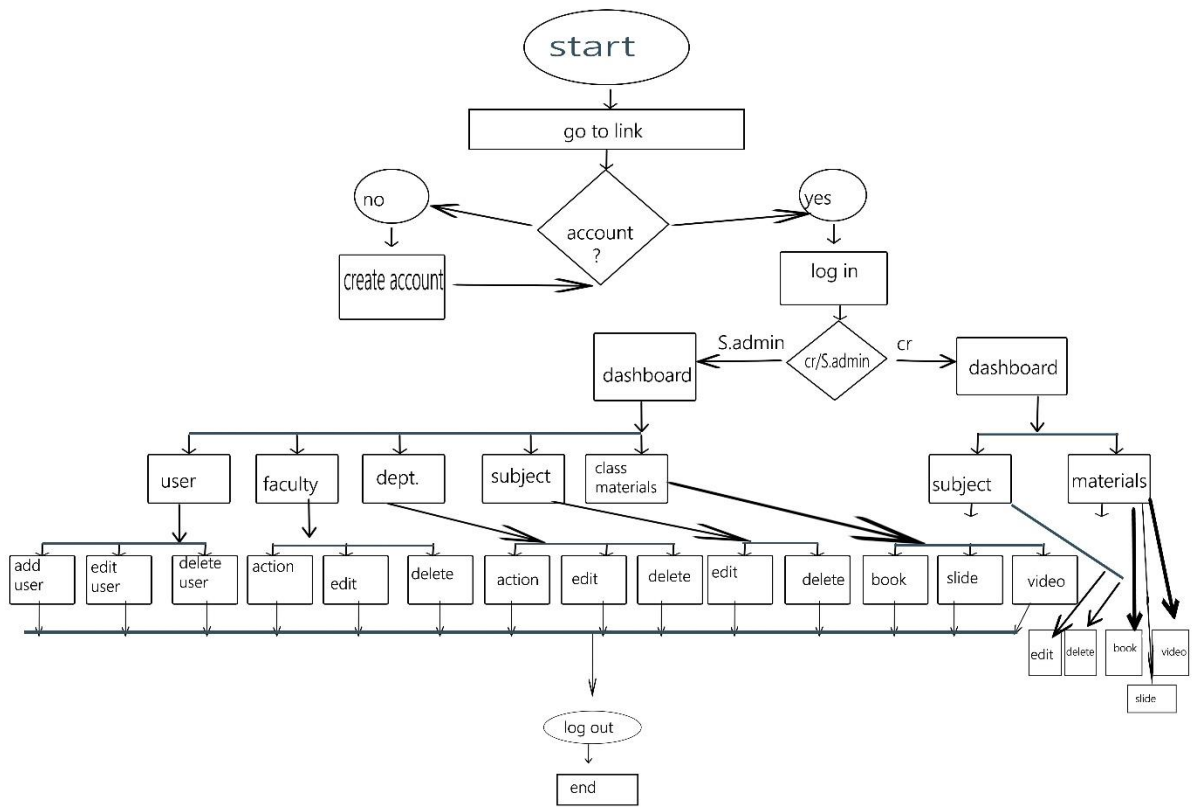


Figure 3.1.11:Flow diagram

### 3.3 Use case description

In the use case description, there are many key things and needed to be described. The key points are the name of the use case, actors on the case, flow the events, pre-condition, and postcondition. A dialog was written on the website “You may get a bird-eye view from a use case”.Some of the use cases are described below some of the key points.

<b>Use Case Name</b>	Download & preview
<b>Actors</b>	User
<b>Flow of Events</b>	1. 2.Select image & user name 2.Select faculty 3.Select Semester or subject name.
<b>Alternative Flows</b>	1. No need to create the shift 2. No need to create for the class 3. Choose the limited size of the image.
<b>Pre-condition</b>	Proper Login & authentication(By admin)
<b>Post Condition</b>	Enroll new the students, update the information of the student.

TABLE 3.3.2.1: The Use case description-of DIUCREW for manage download & preview

<b>Use Case Name</b>	Login(CR)
<b>Actors</b>	Admin(CR)
<b>Flow of Events</b>	1. Update, delete, edit the class content like slide, books, related youtube video.
<b>Alternative Flows</b>	1.previe and download the class materials.
<b>Pre-condition</b>	Login & proper authentications
<b>Post Condition</b>	View, update, delete and add the class materials.

TABLE 3.3.2.2: Use case description of Login(CR)

<b>Use Case Name</b>	Login(super-admin)
<b>Actors</b>	Super-admin
<b>Flow of Events</b>	Upload, edit, delete, add-user, delete-user, Download & preview
<b>Alternative Flows</b>	1. No need to create the shift 2. No need to create for the class 3. Choose the limited size of the image.
<b>Pre-condition</b>	Proper Login & authentication
<b>Post Condition</b>	Full control of the website.

TABLE 3.3.2.1: Use case description of login(super-admin)

## CHAPTER 4

### Design Specification

#### 1Front End Design

This project has very good featured and user interfaces. Users can easily and exes the interfaces. In this project, we used for designing purposes some markup language like html5, css3 and programming language like javascript & Bootstrap 4. Using plugins also enriches the design and interface.

The DIUCREW project has many user interfaces to add the report will be lengthy, so here some screenshot of the user interfaces

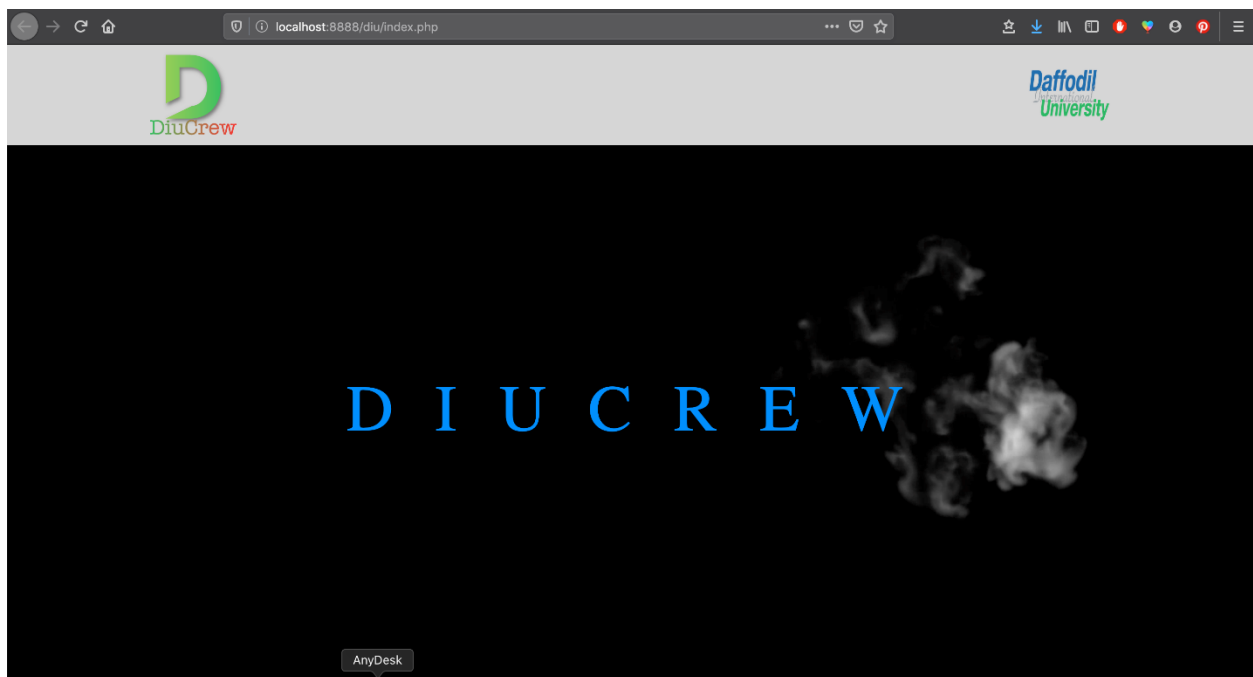


Figure 4.1.1 The home page



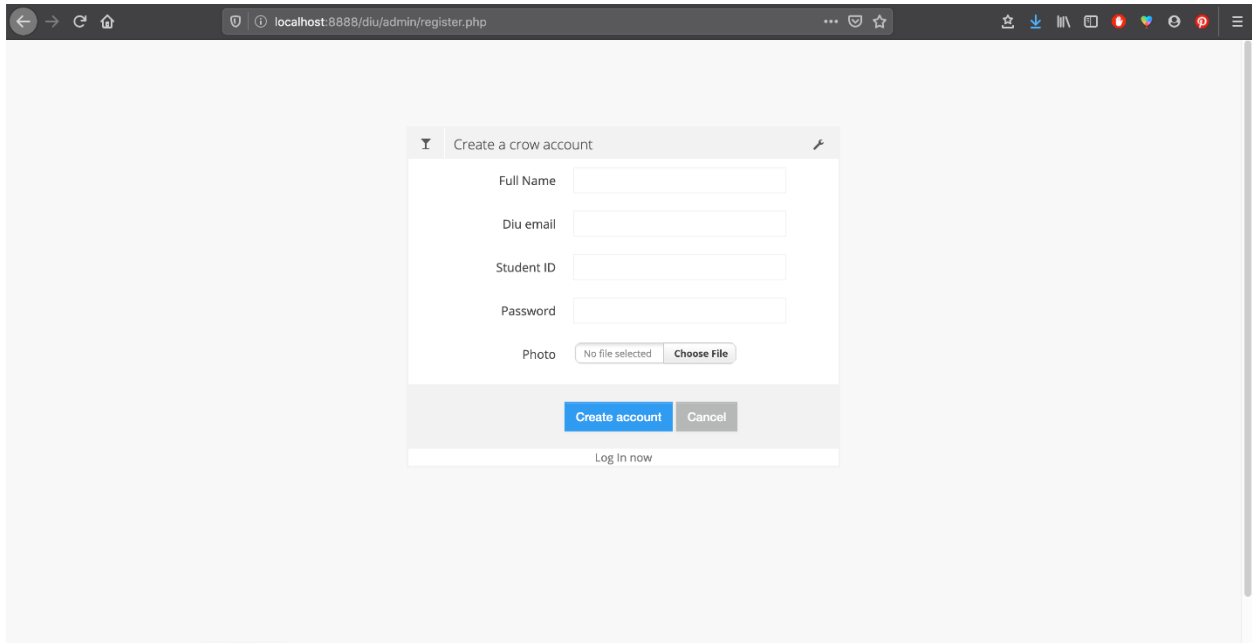


Figure 4.1.1: create Account of the system

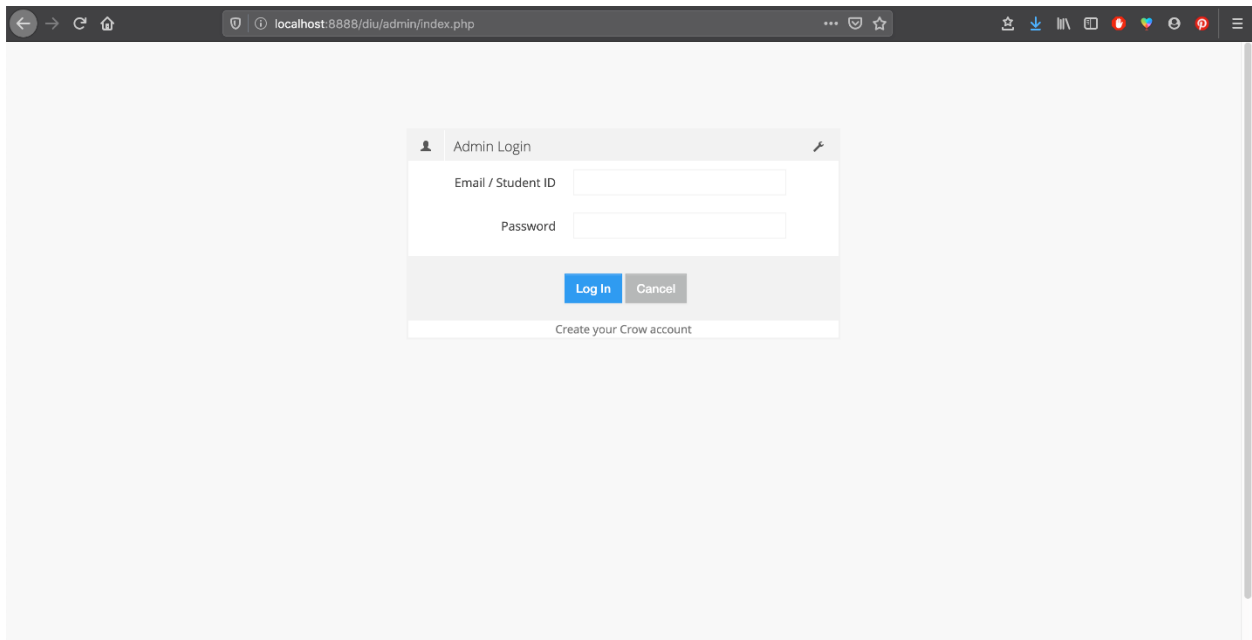


Figure 4.1.1: Login page

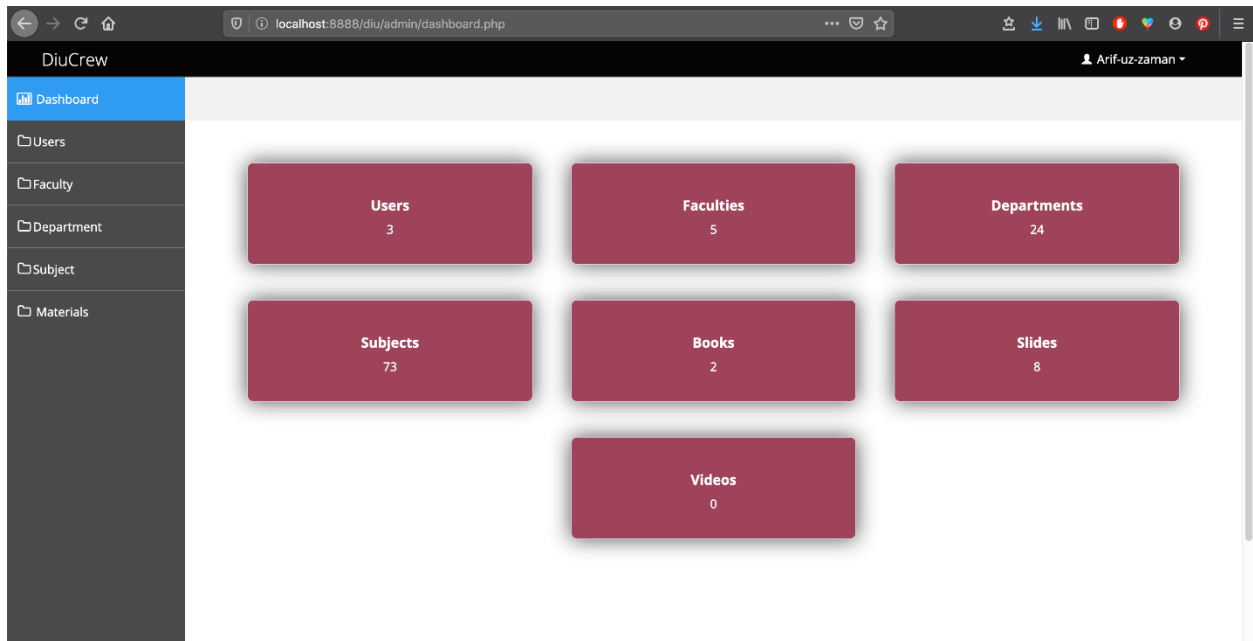


Figure 4.1.2: dashboard

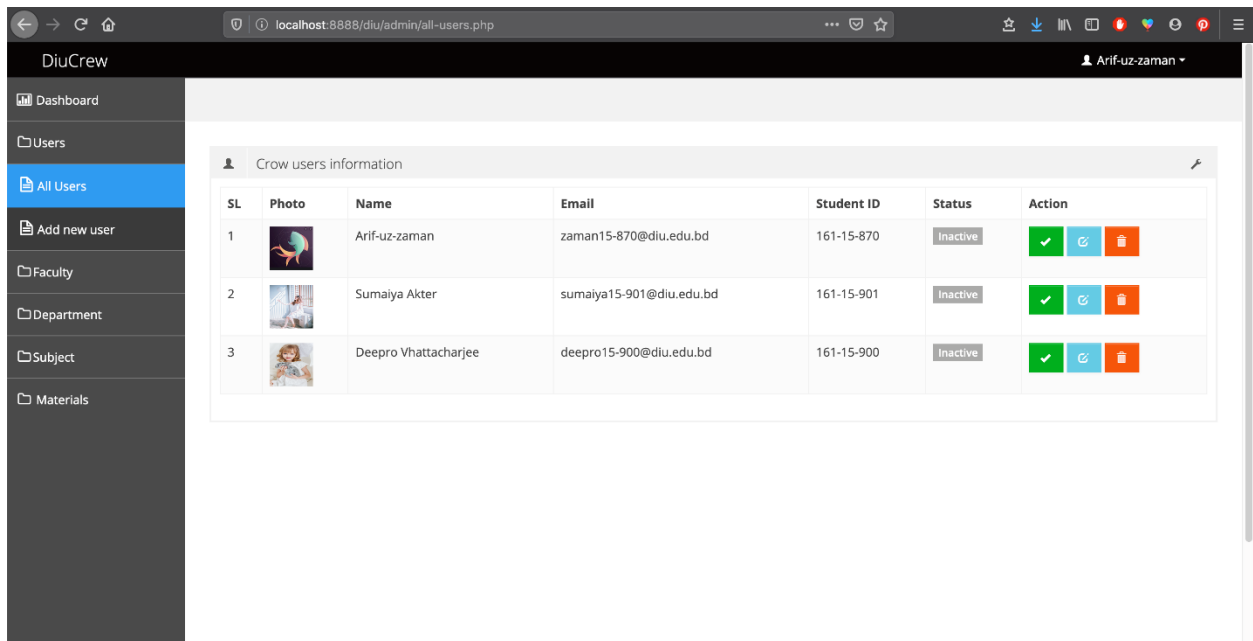


Figure 4.1.3:All users

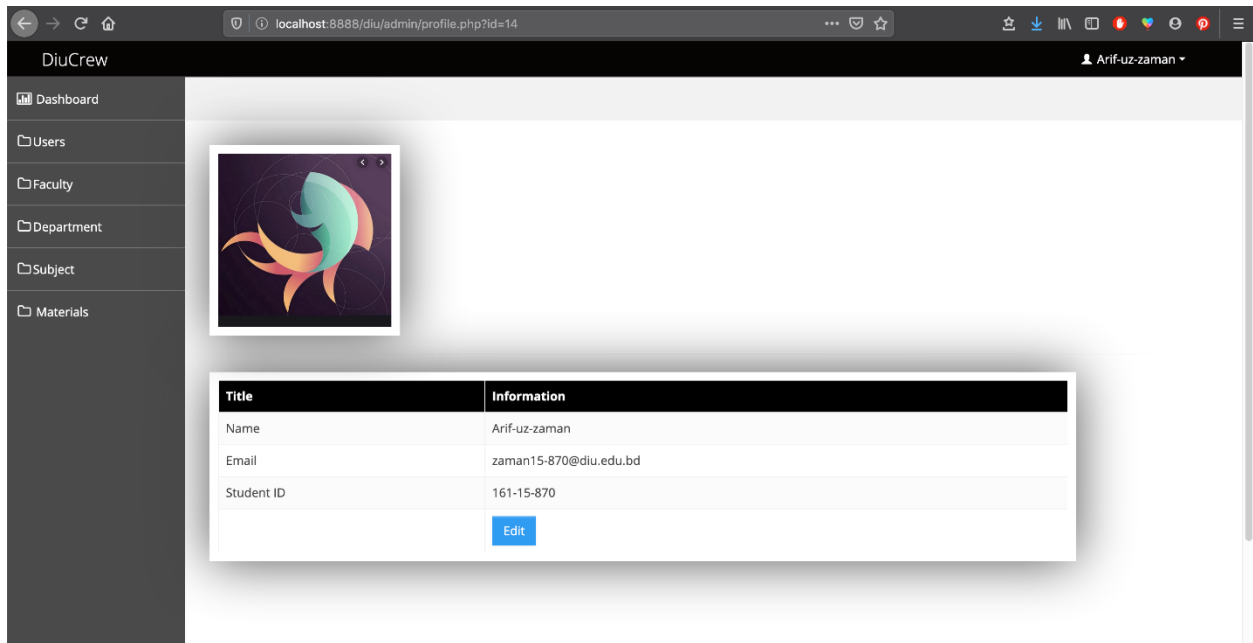


Figure 4.1.4: All user Informaton

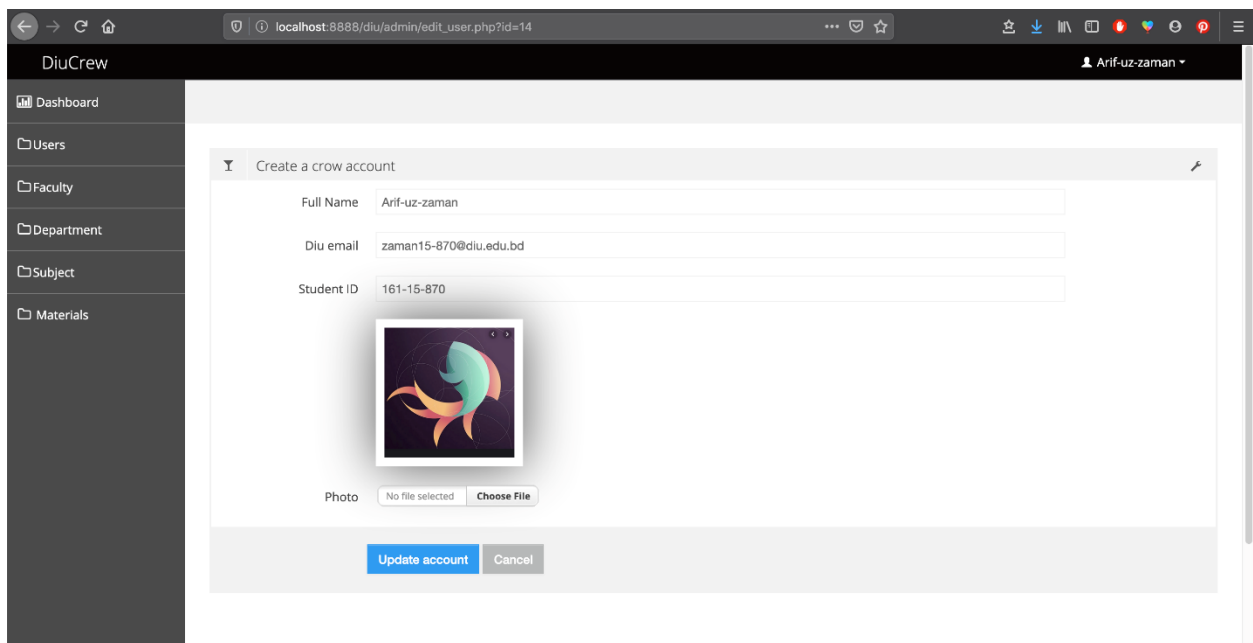


Figure 4.1.4: update information

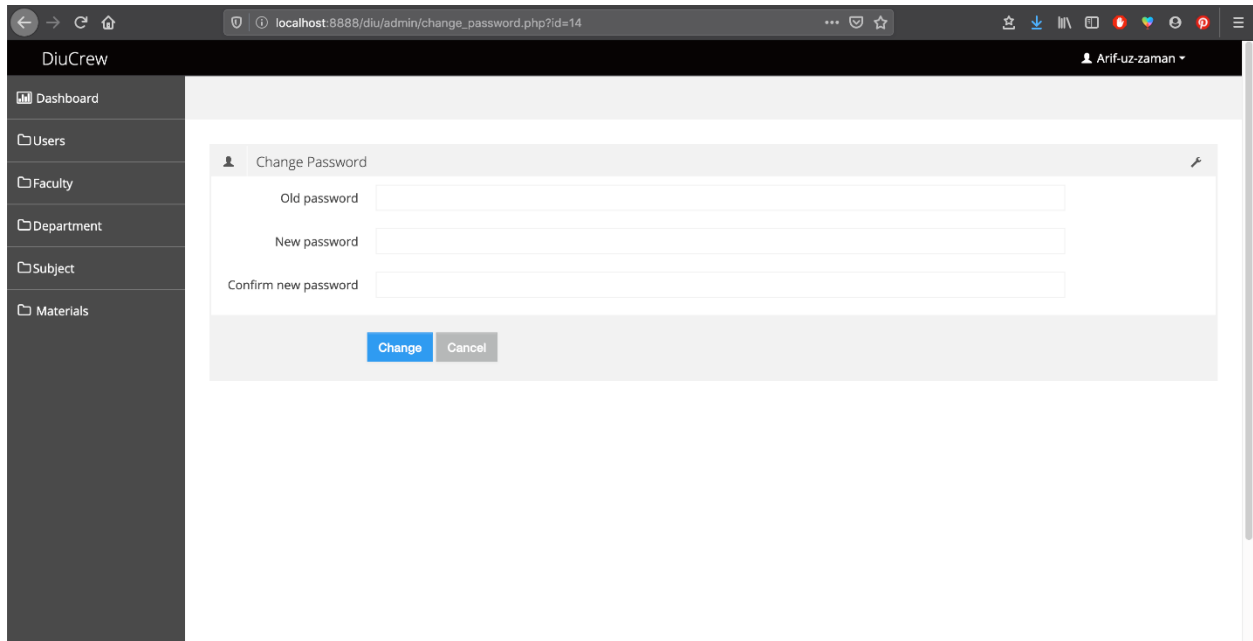


Figure 4.1.5: Change password

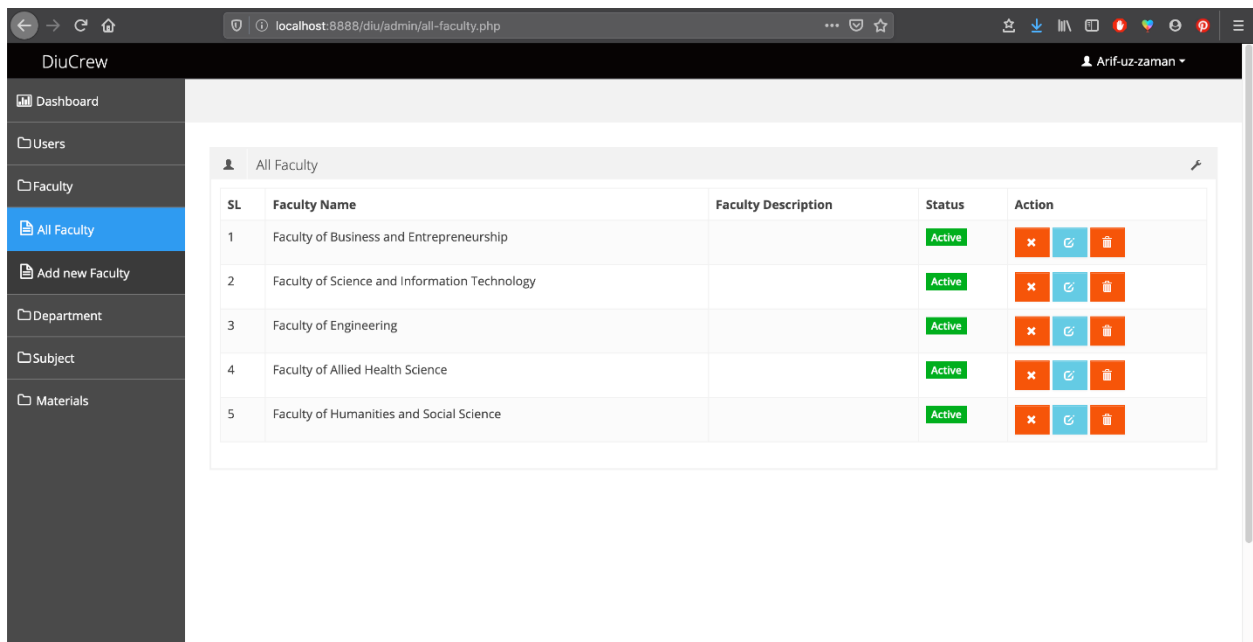


Figure 4.1.5: All-faculty

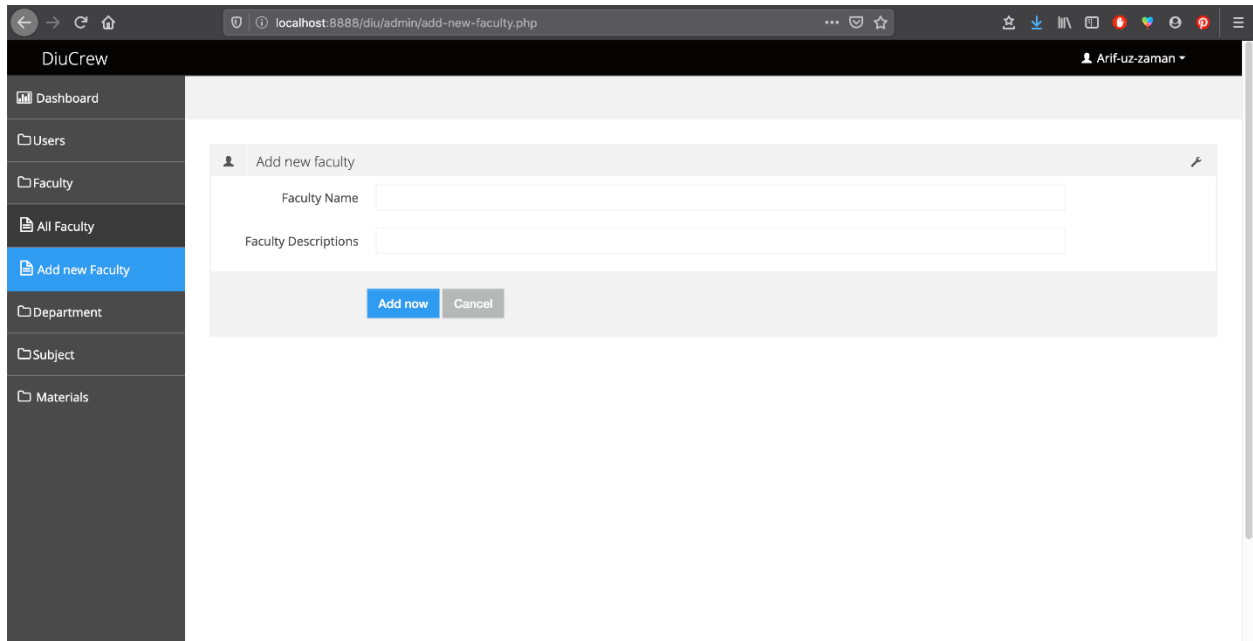


Figure 4.1.5: Add new-faculty

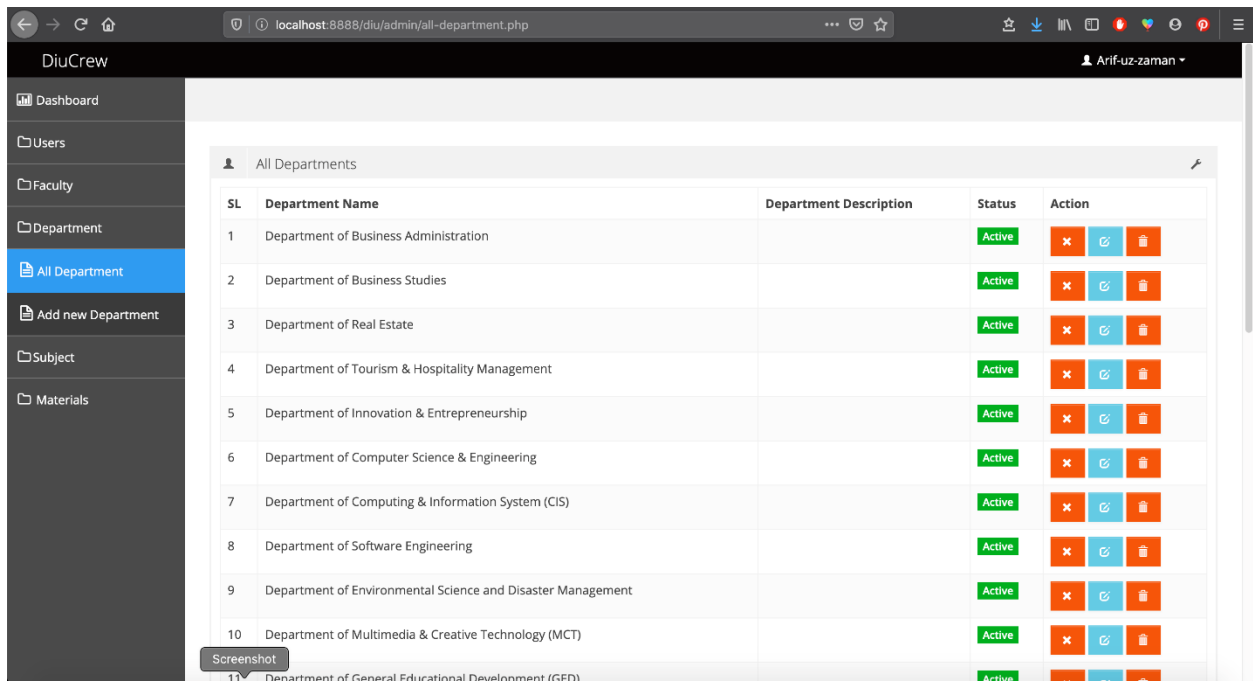


Figure 4.1.5: All department

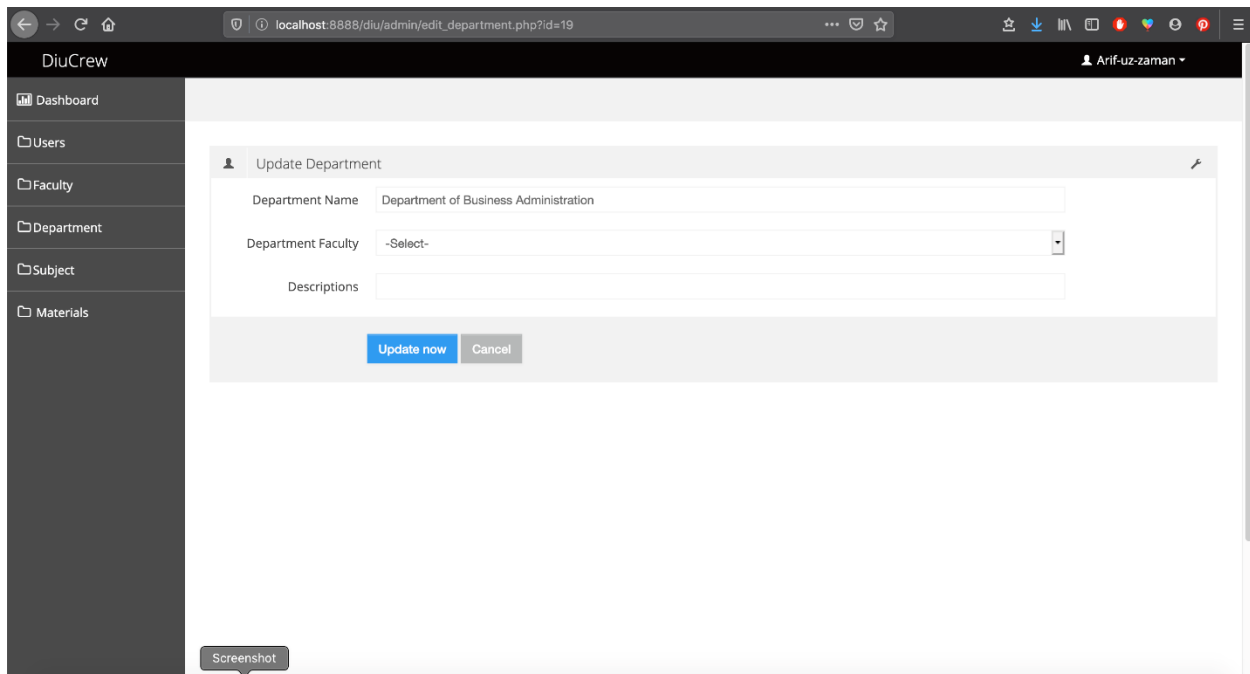


Figure 4.1.7: update department

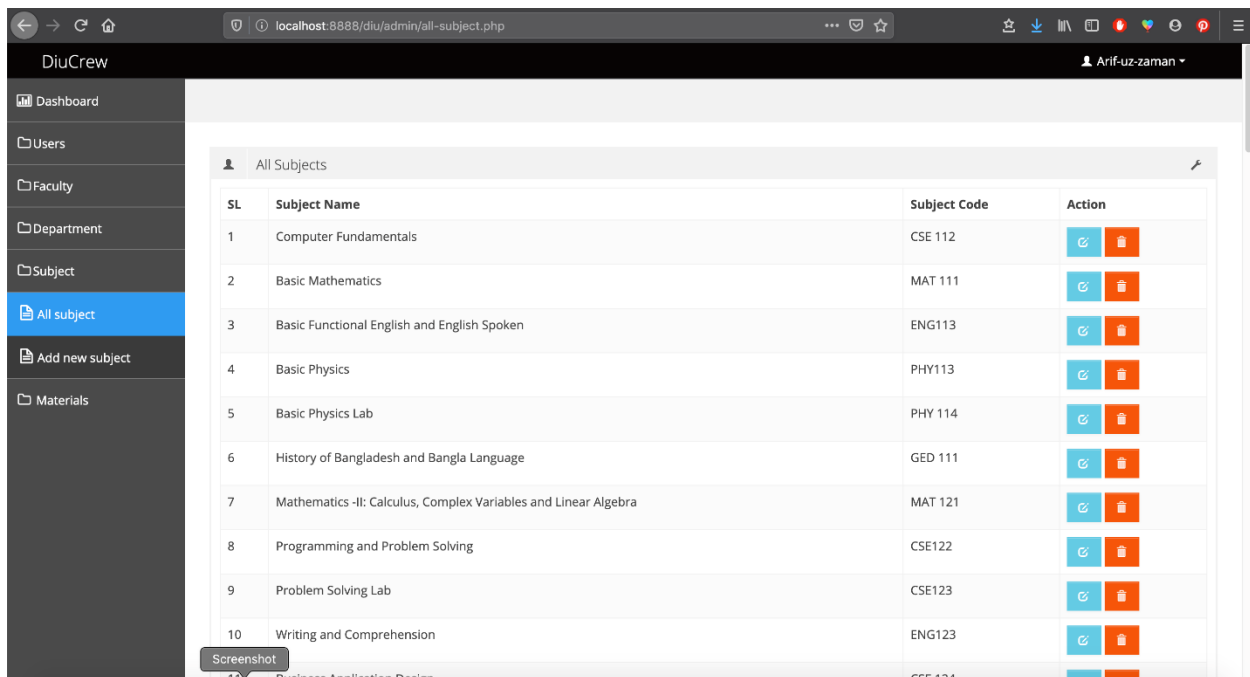


Figure 4.1.8: All subject

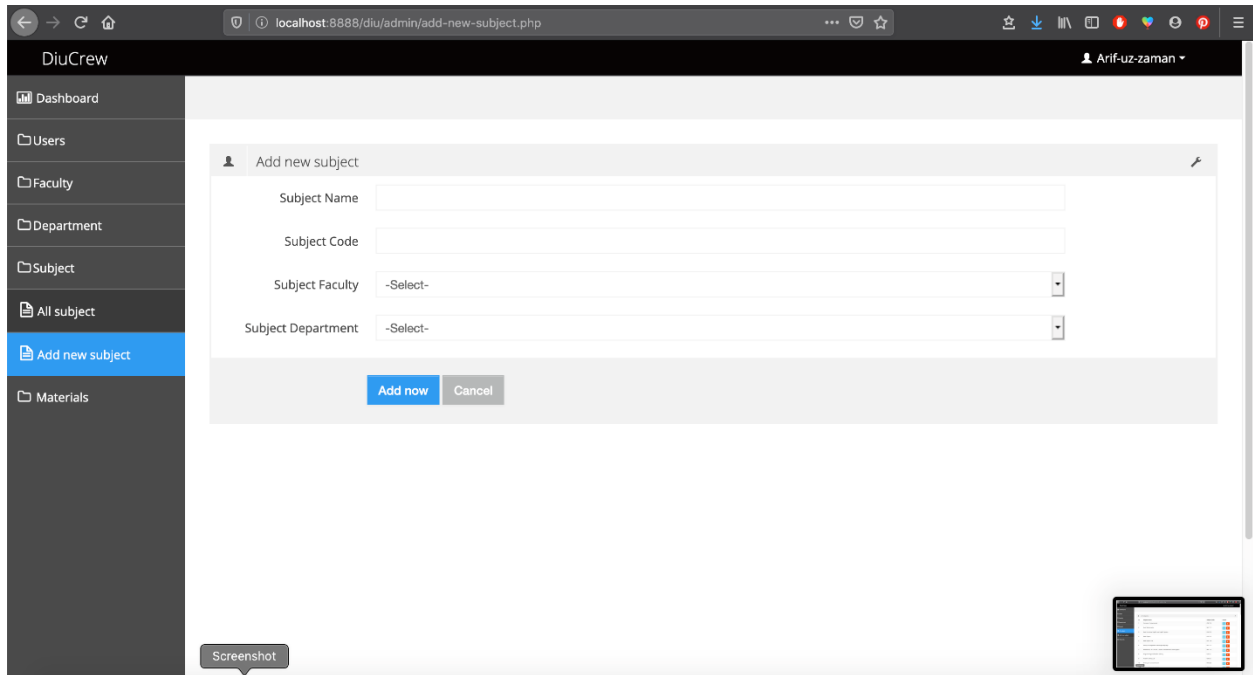


Figure 4.1.5: Add new subject

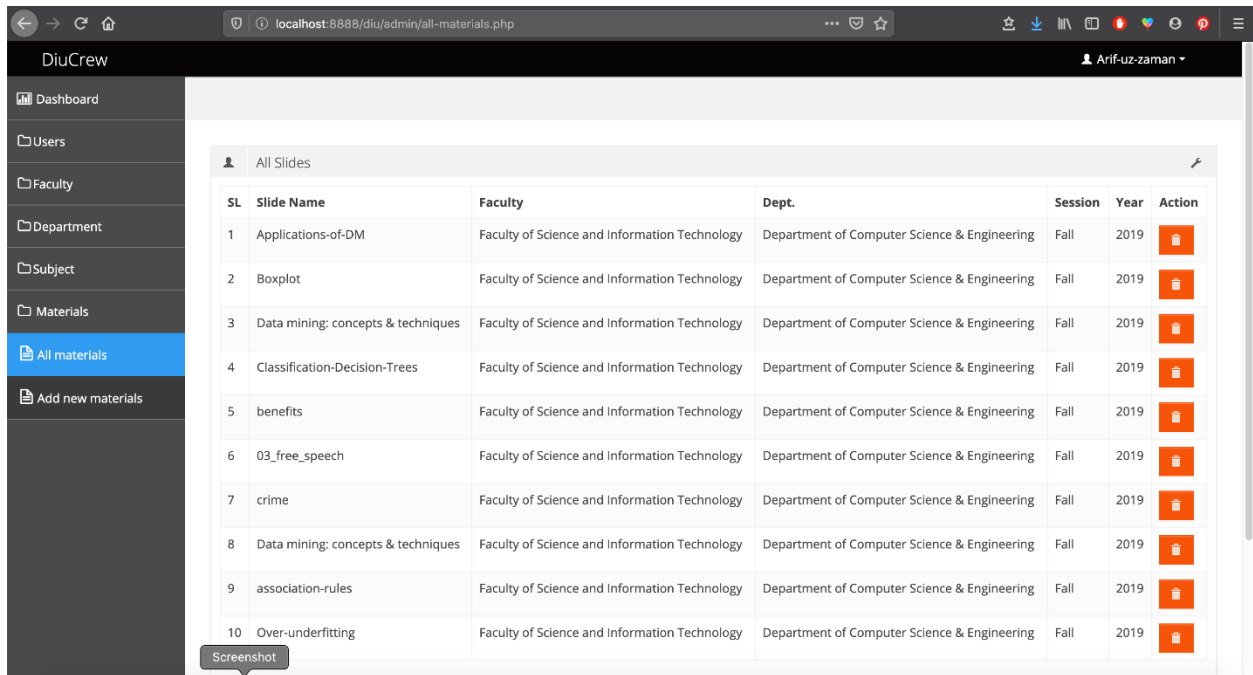


Figure 4.1.6: All meterials

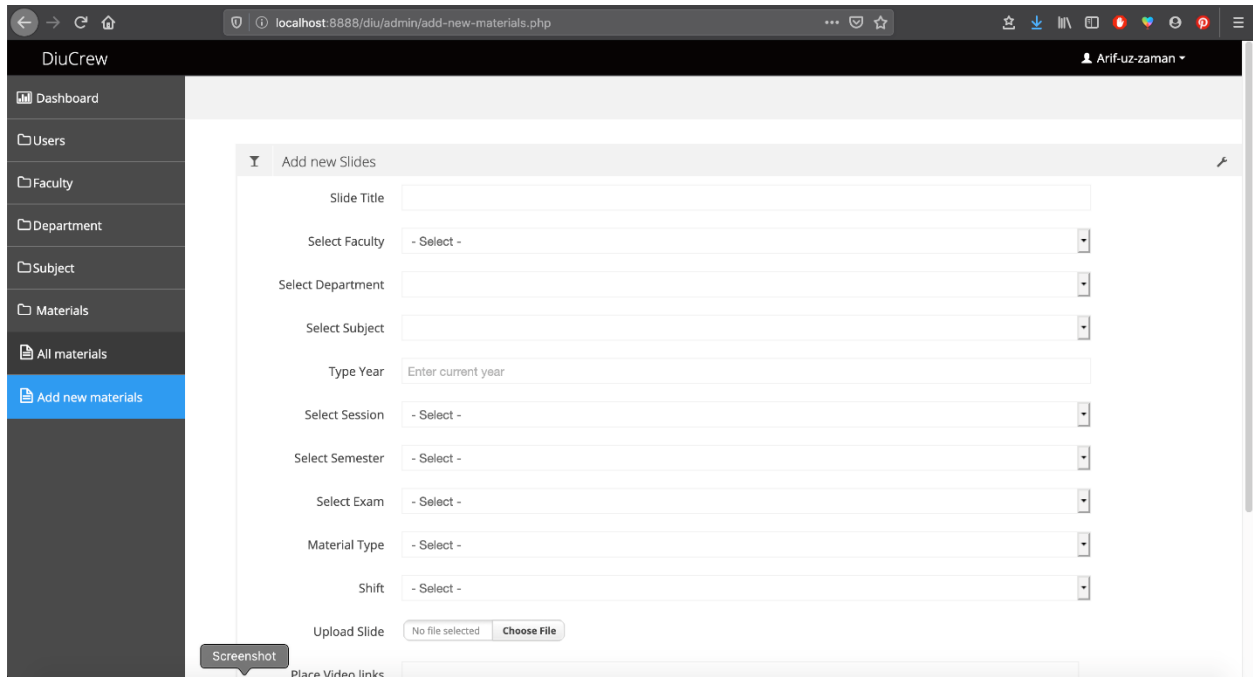


Figure 4.1.6: Add new Materials

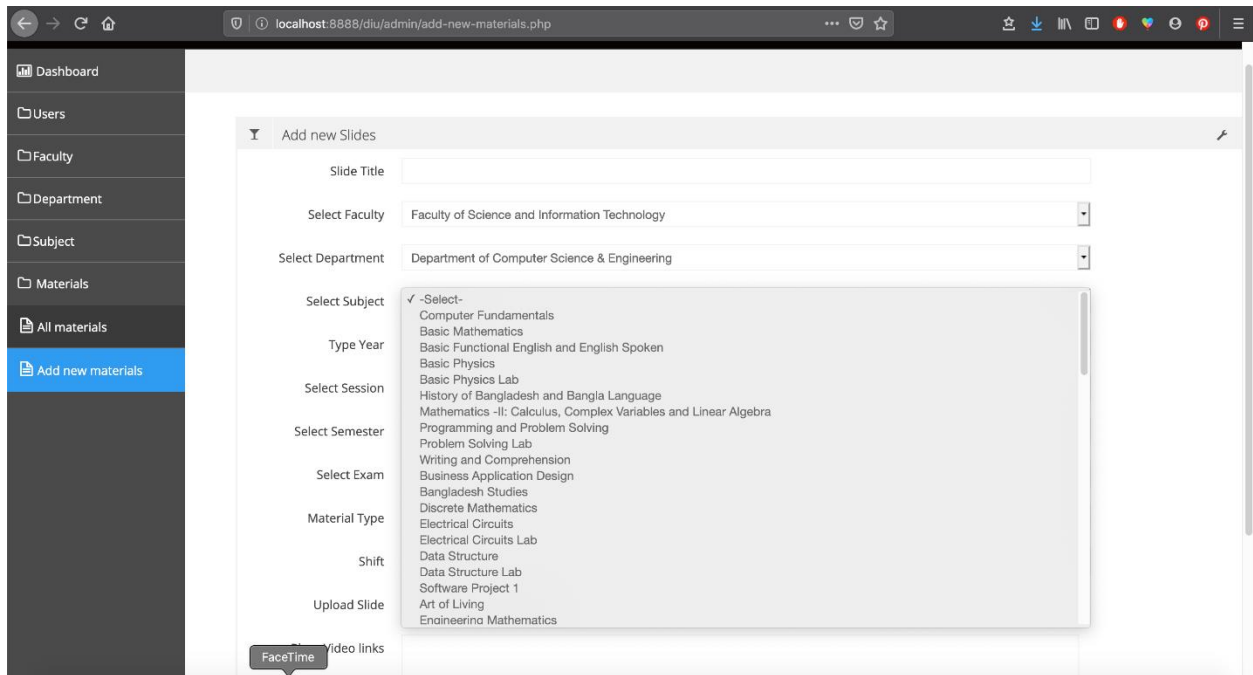


Figure 4.1.6: Select the new-Materials



## 4.2 Backend Design

### 4.2.1 Backend technology

The backend of a web-based online system is related to a server, database, and programming language work perfectly.

In the system, designing is done by HTML and CSS3 and for interaction design here used JavaScript and some plugins of JavaScript and CSS3.

On the other hands bootstrap, jquery, monthly, data tables are also used.

For the responsive view in mobile and tablet device bootstrap used mostly.

The full control panel PHP programming language is used and data retrieved from the MySQL database.

The main framework is the PHP framework.

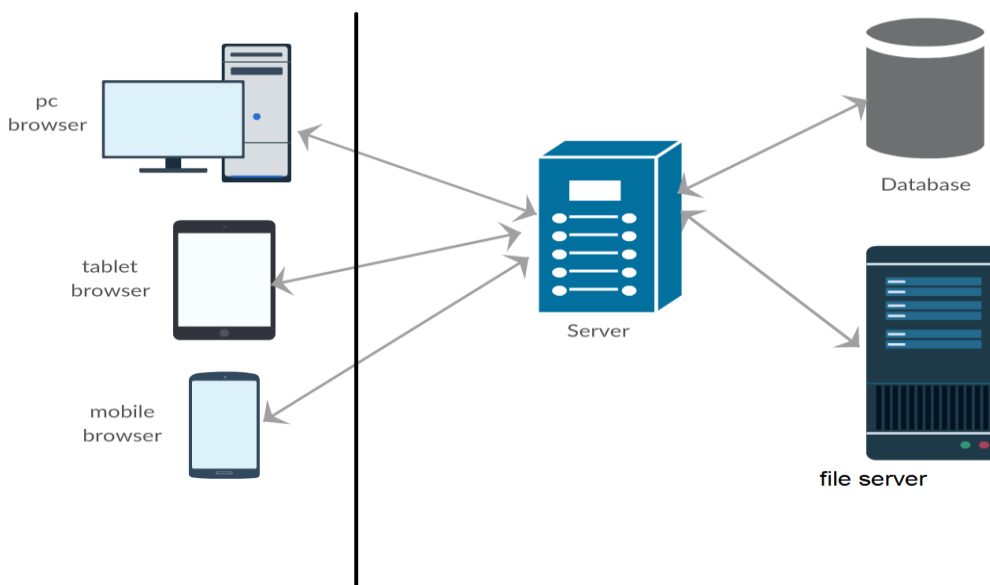


Figure Fig 4.2.1 shows the communication of backend to frontend

## CHAPTER 5 Implementation and Testing

### 5.1 Implementation of Database

The database used in the system is Mysql. The database query is made by the query class builder of the framework.

The database contains a table with a connection to each other with foreign key and information purposes.

<b>Table Name</b>		diu_department				
<b>Table Description</b>		This table will hold all the departments and faculties				
<b>Field Name</b>	<b>Data Type</b>	<b>Size</b>	<b>Not Null</b>	<b>PK</b>	<b>FK</b>	<b>Description</b>
department_id	Int	10	Ö	Ö		Store all the department by serial
department_name	Varchar	100	Ö			Store all the department's name
department_desc	Text		Ö			Hold the department description
department_faculty	Varchar	100	Ö			Store the faculty parents of this departments
Status	Varchar	10	Ö			Store the active and inactive status

<b>Table Name</b>		diu_faculty				
<b>Table Description</b>		This table will hold all the faculties of Diu and status				

Field Name	Data Type	Size	Not Null	PK	FK	Description
faculty_id	Int	10	Ö	Ö		Store all the faculties id
faculty_name	Varchar	100	Ö			Store all the faculty name
faculty_desc	Text		Ö			Store the faculty description
Status	Varchar	10	Ö			Store the active and inactive status

<b>Table Name</b>		diu_slides				
<b>Table Description</b>		This table will store all the class materials slides, video, Books				
Field Name	Data Type	Size	Not Null	PK	FK	Description
slide_id	Int	10	Ö	Ö		Store the serial id of the slides

slide_title	Varchar	200	Ö			Store title of the class materials
Faculty	Varchar	100	Ö			Store all the faculty of Diu
Dept	Varchar	100				Store all the department under the faculty of Diu
Sub	Varchar	100	Ö			Store all the subject under the department
Year	Int	5	Ö			Store the material upload year
Session	Varchar	100	Ö			Store the Session
Semester	Varchar	100	Ö			Store all the semester of Diu
Exam	Varchar	100	Ö			Store the exam type midterm or final
slide_name	Varchar	200	Ö			Store the class materials name
material_type	Varchar	100	Ö			Store the material type like books, video or slides
Shift	Varchar	10	Ö			Hold the day or evening shift
Status	Varchar	10	Ö			Hold the status

<b>Table Name</b>		diu_subject				
<b>Table Description</b>		This table will hold all the subjects of Diu				
<b>Field Name</b>	<b>Data Type</b>	<b>Size</b>	<b>Not Null</b>	<b>PK</b>	<b>FK</b>	<b>Description</b>
subject_id	Int	10	Ö	Ö		Store all the subject id
subject_name	Varchar	100	Ö			Store all the subject name
subject_code	Text		Ö			Store the subject code
subject_faculty	Varchar	100	Ö			Store the subject under a specific faculty
subject_dept	Varchar	100	Ö			Store the subject under the specific department
Status	Varchar	10	Ö			Store the staus

<b>Table Name</b>	diu_users
-------------------	-----------

Table Description		This table will store all the user information				
Field Name	Data Type	Size	Not Null	PK	FK	Description
user_id	Int	10	Ö	Ö		Store all the user's id
full_name	Varchar	100	Ö			Store user full name
diu_email	Varchar		Ö			Store user Diu Gmail id
student_id	Varchar	100	Ö			Store student id provided by daffodil international university
Password	Varchar	100	Ö			Store the password of the user
Photo	Varchar	200	Ö			Store user profile picture
user_role	Varchar	10	Ö			Store user role of the user
Status	Varchar	20	Ö			Store status

The test case of Login Page

Sl No	Input/Action	Expected Result	Actual Result	Remark
1	Leave each field empty.	An error message will occur "Field must not be empty"	Error message "Field must not be empty"	Passed

2	Filled wrong password	An error message will occur “ Incorrect Password”	Error message “Incorrect Password”	Passed
3	Filled Invalid Email format and the right password	An error will occur “ Email or student id is wrong”	Error message “ Email or student id is wrong”	Passed
4	Filled valid email and wrong password	An error will occur “Incorrect Password”	Error message “Incorrect Password”	Passed
5	Filled with valid username and password	Values will be accepted and access to dashboard.	Success message “Login Successful”	Passed

#### Test case for Signup Page

Sl No	Input/Action	Expected Result	Actual Result	Remark
1	Leave every field empty.	An error message will occur “Field must not be empty”	Error message “Field must not be empty”	Passed
2	Filled Invalid email format	An error message will occur “Invalid image formate”	Error message “Invalid image formate”	Passed
3	Filled without Diu Gmail	An error will occur “only Diu Gmail is allowed”	Error message “only Diu message is allowed”	Passed
4	Filled password too short	An error will occur “Password is too short”	Error message “Password is too short”	Passed
5	Filled all the information correctly	An success full message will occur “SignUp successful”	Success message “Signup Successful”	Passed

Test case for user account update

Sl No	Input/Action	Expected Result	Actual Result	Remark
1	each field is empty.	An error message will occur “Field must not be empty”	Error message “Field must not be empty”	Passed
2	Filled Invalid email format	An error message will occur “Invalid image formate”	Error message “Invalid image formate”	Passed
3	Filled without Diu Gmail	An error will occur “only Diu Gmail allows”	Error message “only Diu message is allowed”	Passed
4	Filled password too short	An error will occur “Password is too short”	Error message “Password is too short”	Passed
5	Uploaded large image	An error will occur “Image size is too large”	Error message “Image size is too large”	Passed
6	Filled all the information correctly	An success full message will occur “Information updated successfully”	Success message “Information updated successfully”	Passed

Test case for change password

Sl No	Input/Action	Expected Result	Actual Result	Remark
1	Leave each filed empty	An error message will occur “Field must not be empty”	Error message “Field must not be empty”	Passed
2	Filled invalid old password	An error message will occur “Password not match! ”	Error message “Password not match! ”	Passed
3	Filled invalid confirm password	An error will occur “Password not match !”	Error message “Password not match !”	Passed
4	Filled password too short	An error will occur “Password is too short”	Error message “Password is too short”	Passed



5	Filled all the information correctly	Successful message will occur "Password changed successful ! "	Successful message "Password changed successful ! "	Passed
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Test case for add new faculty

Sl No	Input/Action	Expected Result	Actual Result	Remark
1	Leave each filed empty	An error message will occur "Field must not be empty"	Error message "Field must not be empty"	Passed
2	Filled all inputs correctly	Successful message will appear "Faculty added Successfully"	Success message "Faculty added Successfully"	Passed

Test case for update faculty

Sl No	Input/Action	Expected Result	Actual Result	Remark
1	Leave each filed empty	An error message will occur "Field must not be empty"	Error message "Field must not be empty"	Passed
2	Filled all inputs correctly	Successful message will appear "Faculty updated successfully"	Success message "Faculty updated successfully"	Passed

Test case for update faculty

Sl No	Input/Action	Expected Result	Actual Result	Remark
1	Leave each filed empty	An error message will occur "Field must not be empty"	Error message "Field must not be empty"	Passed

2	Filled all inputs correctly	Successful message will appear “Department added successfully”	Success message “Department added successfully”	Passed
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Test case for update department

SI No	Input/Action	Expected Result	Actual Result	Remark
1	Leave each filed empty	An error message will occur “Field must not be empty”	Error message “Field must not be empty”	Passed
2	Filled all inputs correctly	Successfully message will appear “department updated successfully”	Success message “department updated successfully”	Passed

Test case for add Subject

SI No	Input/Action	Expected Result	Actual Result	Remark
1	Leave each filed empty	An error message will occur “Field must not be empty”	Error message “Field must not be empty”	Passed
2	Filled all inputs correctly	Successful message will appear “Subject added successfully”	Success message “Subject added successfully”	Passed

Test case for update subject

SI No	Input/Action	Expected Result	Actual Result	Remark
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1	Leave each filed empty	An error message will occur “Field must not be empty”	Error message “Field must not be empty”	Passed
2	Filled all inputs correctly	Successfully message will appear “subject updated successfully”	Success message “subject updated successfully”	Passed

Test case for add materials

Sl No	Input/Action	Expected Result	Actual Result	Remark
1	Leave each filed empty	An error message will occur “Field must not be empty”	Error message “Field must not be empty”	Passed
2	Filled an invalid video links	An error will occur “Invalid video links ”	Error message “Invalid video links”	Passed
2	Filled all inputs correctly	Successfully message will appear “Class materials added successfully”	Success message “Class materials added successfully”	Passed

## **CHAPTER 6**

### **Conclusion and Future Scope**

#### **6.1 Conclusion**

The project easily handles by DIU students, teachers & Alumni and all of the managerial works and different kind of faculty, and department. This project totally maintain the rule of DIU. In the website is mainly developed for the all of the DIU members .

All over this project can be a helpful, and reduce the complexity of the DIU teaching process. It can be beneficial all of the student.

#### **6.2 Limitations**

There are some limitations of the system that could be improved. The system stores slide, books & youtube video content. That's why It's become slower when a lot of users use this website at a time. Some webpages may be needed more time for 2G or poor internet connection.

#### **6.3 Scope for Further Development**

There are a lot of plans for the next version of the systems and more attractive of the features.

And the features are implemented that

1. Implement the open chat-box and with the expertise of the many other sectors like programming, databases, networking, competitive programming or web-developing.
2. In this website, we create a freelancing job to improve the student extra-curriculum Activity for helping their job sector.

## REFERENCE

[1] Thesis paper MRPA, [https://mpa.ub.unimuenchen.de/45492/1/MPRA\\_paper\\_45492.pdf](https://mpa.ub.unimuenchen.de/45492/1/MPRA_paper_45492.pdf) last access time and the date 11-12-17 8:30 PM

. Digital age school management system related article <https://www.fedena.com/blog/2017/12/enhance-parents-engagement-in-digital-age-with-school-management-system.html> last access time and date 11-12-17 6:30 PM

[3] [Http://www.businessweek.com/articles/2013-07-10/click-to-brick-why-onlineretailers-want-stores-in-real-life](http://www.businessweek.com/articles/2013-07-10/click-to-brick-why-onlineretailers-want-stores-in-real-life) last accessed on 13-09-17 at 10.00pm.

5. <http://www.lucidchart.com/pages/use-case-description-example-and-template-UML> 8:30 PM last access time and the date 11-12-17 8:30 PM

[6]. Paul Sancandi, Article: "9 steps to define design requirements on your project" last accessed on 14-10-17 01:22 PM

[7]. *Learning, Teaching, and Scholarship in a Digital Age: Web 2.0 and Classroom Research*

[8].