

CAMPUSPLUS

Project Report Submitted In Partial  
Fulfilment of the Requirements for the Award of Degree of  
BSC COMPUTER SCIENCE of  
University of Calicut

By

MOHAMMED AJNAS M

AJMAL k

MUHAMMED RASHAL M



March 2024

Dept.of Computer Science  
Al Jamia Arts and Science College  
Poopalam, Valamboor(PO)  
Perinthalmanna  
679325



DEPARTMENT OF COMPUTER SCIENCE

AL JAMIA ARTS SCIENCE COLLEGE

POOPALAM, VALAMBUR (P.O) PERINTHALMANNA, 679325

(affiliated to university of Calicut )

### CERTIFICATE

This is to certify that the project work entitled CAMPUSPLUS is a bonafide record of the project done by Mohammed Ajnas M ( AJAVSCS006), Ajmal K (AJAVSCS004), Muhammed Rashal M (AJAVSCS007) under our supervision and guidance in partial fulfilment for the award Degree of BSC COMPUTER SCIENCE from the UNIVERSITY OF CALICUT during the year 2021-2024. The project report has been approved as it satisfied the academic requirements in respect of project work prescribed for the side degree.

PRINCIPAL

FARITHDA J

HOD

HISHAM

GUIDE

HISHAM

### External Viva

Name of Examiner

1.

2.

Signature with Date

### DECLARATION

We Mohammed Ajnas M (AJAVSCS006), Ajmal k (AJAVSCS004), Muhammed Rashal M (AJAVSCS007)

hereby declare that the project entitled Campusplus is submitted to the University of Calicut in partial fulfilment of the requirements for award of degree of Bachelor Degree in Computer Application, Is a record of original work done by during our period of study at Al Jamia Arts and Science College, poopalam under the supervision and guidance of HISHAM HOD in Department of Computer Science.

MOHAMMED AJNAS M  
(AJAVSCS006)

AJMAL K  
(AJAVSCS004)

MUHAMMED RASHAL M  
(AJAVSCS007)

DATE:

PLACE:

### ACKNOWLEDGEMENT

Let us take this opportunity to thank all those who have been directly or indirectly involved in making our thesis a success. First of all, we are grateful to God Almighty, for helping us to take the topic and giving us the interests to pursue this topic, without whose blessing, we could not have been able to complete the thesis. It is with great pleasure that we place on record our indebtedness and deepest senses of gratitude to Mr. HISHAM.CK, HOD of Computer Science for his sound counsel and endless encouragement from time to time.

We are extremely grateful to HISHAM, our project in charge, for providing valuable suggestions. We are extremely grateful to the officials of AL JAMIA ARTS AND SCIENCE COLLEGE who made all arrangements for smooth completion of the dissertation. We are also grateful to Ms FARITDHA J principal of AL JAMIA ARTS AND SCIENCE COLLEGE for providing library, internal and lab facilities. We express our sincere thanks to our family members and friends who helped us in overcoming all hurdles thus gearing us towards the fulfilment of the tasks that we had overtaken.

MOHAMMED AJNAS M  
(AJAVSCS006)

AJMAL K  
(AJAVSCS004)

MUHAMMED RASHAL M  
(AJAVSCS007)

DATE:

PLACE:

## ABSTRACT

In the modern educational landscape, colleges play a pivotal role in offering diverse learning opportunities to students, the project named Campusplus . To streamline and enhance this process, our project proposes the development of a comprehensive college website with a focus on three main aspects: Add-On Course Registration, Study Materials, and Program Information.

1. Add-On Course Registration: This feature aims to simplify the process of enrolling in additional courses for students across various departments. The website will provide an easy-to-navigate interface for students to browse, select, and register for add-on courses. It will include faculty information. This system will automate the course registration process, reducing administrative overhead and ensuring students can explore a wider range of academic interests.

2. Study Materials: The project also aims to provide students with a centralized platform to access study materials for their enrolled courses. These materials can include lecture notes, slides, video lectures ,reading materials, and assignments. The website will feature a secure and user-friendly repository for both faculty and students to upload and download study materials, fostering a collaborative and efficient learning environment.

3. Program Information: The second aspect of the project around providing detailed information about the programs conducted by the college. This includes undergraduate and postgraduate courses, extracurricular activities, scholarships, and any other relevant offerings.

The website will showcase program details, curriculum, faculty profiles, admission requirements, and application procedures. It will serve as a valuable resource for prospective students, parents, and anyone interested in understanding the educational opportunities the college provides.

## Contents

1 INTRODUCTION .....	5
1.1 Project Background.....	5
1.2 Existing System .....	5
1.3 Proposed System.....	6
1.4 Basic Design Principle of The Project .....	6
2 SYSTEM ANALYSIS.....	7
2.1 Identification of Need.....	7
2.2 Preliminary Investigation .....	7
2.3 Feasibility Study .....	7
2.3.1 Technical Feasibility .....	7
2.3.2 Economical Feasibility .....	8
2.3.3 Operational Feasibility .....	8
2.3.4 Social Feasibility.....	8
2.4 Project Planning .....	8
2.5 Development Environment .....	9
2.5.1 Python .....	9
2.5.2 Django Framework .....	9
2.5.3 Visual Studio 2023-IDE.....	9
2.5.4 HTML .....	10
2.5.5 CSS .....	10
2.5.6 JAVASCRIPT .....	11
2.5.7 AJAX.....	11
2.6 About the Back End .....	12
2.6.1 Database Servers .....	12
2.6.2 RDBMS .....	12
2.6.3 MYSQL.....	12
2.7 Requirement Specification.....	12

2.7.1 Software Requirement .....	12
2.7.2 Hardware Requirement .....	13
2.8 Software and Hardware Specification .....	13
2.8.1 Software Specification .....	13
2.8.2 Hardware Specification .....	14
3 SYSTEM MODELLING.....	15
3.1 Design Methodology .....	15
3.2 Use case diagram .....	15
3.3 UML Diagram.....	19
3.3.1 Activity Diagram.....	20
3.4 Table Description .....	21
4 SYSTEM DESIGN .....	23
4.1 Module Descriptions .....	23
4.2 Input Design.....	23
4.3 Database Design.....	23
4.4 Output Design .....	23
4.5 User Interface Design .....	23
4.6 Data Flow Diagram.....	23
5 CODING.....	24
5.1 Coding Standards Followed .....	24
5.2 Error Handling .....	24
6 CODE REVIEW AND TESTING .....	26
6.1 Code Review .....	26
6.2 Testing Process .....	27
7 SYSTEM SECURITY MEASURES.....	28
7.1 Database/Data Security .....	28
7.2 Creation of User Profiles And Access Rights .....	28
8 IMPLEMENTATION.....	29

8.1 New System Description .....	29
8.2 New System Implementation .....	29
9 APPENDIX .....	30
9.1 Screen Shots of Forms.....	30
9.2 SAMPLE CODE.....	35

## List of Figures

2.1	Project Planning .....	9
3.1	Use Case Diagram .....	16
3.2	Activity Diagram .....	17
3.3	feedback Table .....	18
3.4	organization Table .....	18
3.5	Donor Table .....	19
3.6	Donation Table .....	19
4.1	Above depicted are the major shapes used in DFD. ....	24
9.1	Home Page .....	44
9.2	Home Page .....	44
9.3	About Page .....	45
9.4	Organization List Page .....	45
9.5	Contact Page .....	45
9.6	Register Page .....	46
9.7	Donor,Organization Page .....	46
9.8	Donor Register Page .....	47
9.9	Organization Register Page .....	47
9.10	User Profile Page .....	48
9.11	Change Password Page .....	48
9.12	Organization Profile Page .....	49
9.13	Organization update Page .....	50
9.14	Notification donor Page .....	51
9.15	Notification Organization Page .....	51
9.16	Donation Page .....	52
9.17	Organization Single Page .....	53
9.18	Adding Organization multiple images Page .....	54
9.19	Deleting Organization Page .....	54



# 1 INTRODUCTION

## 1.1 Project Background

Campusplus is a dedicated project crafted to provide essential support and foster the development of non-profit organizations, specifically focusing on orphanages and old-age homes. The primary objective of this initiative is to create a platform that engages users, encouraging them to contribute funds to these organizations in order to fulfill their critical needs. The project revolves around the idea of empathy-driven philanthropy, aiming to bridge the gap between compassionate individuals and non-profit entities dedicated to making a positive impact on the lives of vulnerable populations. By leveraging technology, Campusplus offers a centralized online space where users can connect with and contribute to the noble causes championed by orphanages and old-age homes. The core emphasis lies in facilitating seamless and transparent interactions between the donating public and the non-profit organizations. Through the Campusplus platform, these organizations can present their unique stories, missions, and specific requirements, creating a compelling narrative that resonates with potential donors. This storytelling aspect is essential in cultivating a sense of empathy and understanding among users, fostering a connection that goes beyond mere financial contributions. In addition to providing a channel for financial support, Campusplus offers a dynamic space for organizations to articulate their needs comprehensively. Users can explore and choose causes that resonate with them, contributing directly to the betterment of those in need. This two-way interaction not only streamlines the donation process but also enhances the overall experience, transforming charitable giving into a personal and impactful journey. Campusplus's focus on transparency extends to a user-friendly interface where non-profit organizations can showcase their financial goals, progress, and the tangible outcomes of the contributions received. Simultaneously, users can track the impact of their donations, fostering a sense of accountability and trust in the charitable process. In essence, Campusplus stands as a testament to the power of collective empathy and purposeful giving. By fostering meaningful connections between the donating public and non-profit organizations, the project seeks to create a positive and sustainable ecosystem where compassion fuels positive change for those in need.

## 1.2 Existing System

Organizations like, while instrumental in promoting philanthropy, are not without drawbacks. Heavy reliance on online platforms may exclude individuals without internet access, and transaction fees could reduce the actual funds reaching non-profits. The impersonal nature of digital interactions may diminish the personal touch inherent in traditional fundraising methods. Security concerns over online transactions, coupled with the digital divide and potential for misuse, may deter potential

donors. Overhead costs, sustainability challenges, and the difficulty in conveying real-world impact might hinder the long-term success of these organizations. Additionally, the intense online competition for attention poses a significant challenge in ensuring the visibility and support of charitable causes. Addressing these drawbacks is essential to creating a more inclusive, transparent, and effective charitable ecosystem.

### 1.3 Proposed System

Campusplus seeks to address the drawbacks associated with online philanthropy platforms. By implementing strategies to reach individuals without internet access, minimizing transaction fees, and enhancing the online experience to foster a more personal connection, the proposed model aims to overcome the limitations of digital interactions. Robust security measures will be implemented to allay concerns, and efforts will be directed towards bridging the digital divide. Transparent financial structures and clear communication of impact will be prioritized to build donor trust. Sustainability will be addressed through innovative fundraising approaches and meticulous management of overhead costs. Moreover, the proposed model will actively engage in strategic marketing to stand out in the digital landscape, ensuring visibility and support for charitable causes. By proactively mitigating these challenges, the proposed initiative envisions a more inclusive, secure, and impactful platform for supporting non-profit organizations.

### 1.4 Basic Design Principle of The Project

The basic design principles of the project revolve around three main user roles: Donor, Organization, and Admin. For Donors, the system ensures a seamless experience with features such as secure login, donation options, and varied payment methods. Donors have the ability to provide feedback on administrative services, access organization details, stories, and news, communicate with the admin, and view their payment history. The Organization module focuses on providing essential details like location and address, updating organizational needs, and presenting its goals, vision, and mission. Meanwhile, the Admin module includes functionalities for managing feedback, overseeing organization details, stories, and news, facilitating communication with users, maintaining payment histories, and accessing comprehensive user and donor information from the database. This design aims to create a user-friendly and comprehensive platform that effectively connects donors with organizations, streamlining communication and transparency across all levels.

## 2 SYSTEM ANALYSIS

### 2.1 Identification of Need

Project Campusplus is designed to meet the needs of both non-profit organizations (NPOs) and donors by providing a streamlined platform for transparent and efficient fundraising. Recognizing the necessity for improved communication and collaboration between donors and NPOs, the system focuses on creating a user-friendly interface to encourage charitable activities, enhance user experience, and promote social engagement. The goal is to establish a supportive ecosystem where donors find fulfillment through contributing to the goals of organizations, ultimately fostering a sense of balance and satisfaction in their lives.

### 2.2 Preliminary Investigation

The preliminary investigation for Project Campusplus involves a thorough analysis of economic, market, industry, and social trends that influence the success of charitable endeavors. This examination ensures the viability of the concept, guiding the project toward its intended objectives. Continuous preliminary analyses will be conducted to adapt to changing circumstances and ensure alignment with the evolving needs of both donors and organizations.

### 2.3 Feasibility Study

The feasibility study assesses the system's viability, impact on the organization, and its ability to meet user needs while making effective use of resources. The technical feasibility is established by leveraging technologies such as Django, which are deemed easily understandable and implementable. Economic feasibility is achieved by minimizing costs through a unified platform catering to various users. Operational feasibility is confirmed by ensuring the proposed solution aligns seamlessly with existing operations, providing a user-friendly system that requires minimal training. Social feasibility is assured through the creation of an efficient platform that fosters interaction without the need for multiple software applications.

#### 2.3.1 Technical Feasibility

Project Campusplus's technical feasibility is anchored in the robust adoption of Python Django, a dynamic web framework. Python's readability and simplicity, coupled with Django's organized structure and "batteries-included" philosophy, form a solid foundation. The ObjectRelational Mapping (ORM) system streamlines database interactions, promoting effective data management, while adhering to the "Don't Repeat Yourself" (DRY) principle enhances code maintainability. The platform's

scalability and cross-platform compatibility ensure adaptability for future enhancements. With extensive documentation and a supportive community, Python Django serves as a reliable and accessible technology, affirming the project's technical viability and successful realization of the Campusplus platform.

### 2.3.2 Economical Feasibility

Economic feasibility is validated through cost-benefit analysis, highlighting the system's cost-effectiveness by catering to multiple users and avoiding the need for switching between different software applications.

### 2.3.3 Operational Feasibility

Operational feasibility is ensured by aligning the proposed solution with current operations, satisfying objectives, and addressing user acceptance concerns. The system is found to be userfriendly, requiring minimal training, and contributing positively to the working environment

### 2.3.4 Social Feasibility

The project's acceptance by users, including students and event creators, is confirmed through social feasibility analysis. The platform's efficiency in providing an effective interaction environment without the need for multiple software applications ensures its societal acceptance. Users' involvement and cooperation are secured, addressing concerns related to workforce adaptation and changes in user services. The project is deemed socially feasible as it aligns with user expectations and needs.

## 2.4 Project Planning

The project will go through the following stages of development in its Software Development Life Cycle.

Figure 2.1: Project Planning

## 2.5 Development Environment

### 2.5.1 Python

Python is a general purpose and high level programming language. You can use Python for developing desktop GUI applications, websites and web applications. Also, Python, as a high level programming language, allows you to focus on core functionality of the application by taking care of common programming tasks. The simple syntax rules of the programming language further makes it easier for you to keep the code base readable and application maintainable. There are also a number of reasons why you should prefer Python to other programming languages

### 2.5.2 Django Framework

.Django is a high-level Python Web framework that encourages rapid development and clean pragmatic design. A Web framework is a set of components that provide a standard way to develop websites fast and easily. Django's primary goal is to ease the creation of complex database-driven websites.

### 2.5.3 Visual Studio 2023-IDE

Visual Studio Code features a lightning fast source code editor, perfect for day-to-day use. With support for hundreds of languages, VS Code helps you be instantly productive with syntax highlighting, bracket-matching, auto-indentation, box-selection, snippets, and more. Intuitive keyboard shortcuts, easy customization and community-contributed keyboard shortcut mappings let you navigate your code with ease. For serious coding, you'll often benefit from tools with more code understanding than just blocks of text. Visual Studio Code includes built-in support for IntelliSense code completion, rich semantic code understanding and navigation, and code refactoring. And when the coding gets tough, the tough get debugging. Debugging is often the one feature that developers miss most in a leaner coding experience, so we made it happen. Visual Studio Code includes an interactive debugger, so you can step through source code, inspect variables, view call stacks, and execute commands in the console. Here are more details:

- Coding assistance

Regardless of the programming language being used, Visual Studio IDE offers users with a real-time coding assistant. Its built-in IntelliSense provides descriptions and hints about the API. It also helps in expediting the process through its auto-complete feature. Moreover, Visual Studio IDE makes sure that developers don't lose the last modification they made as they go through the rest of the code.

- Testing platform

The IDE has a host of tools, which are available to all languages, for easily finding and diagnosing bugs. The debugging process can also be done remotely, locally, or even in the middle of production. Aside from that, Visual Studio IDE is equipped with an application testing platform which empowers developers in making sure that the products they will deploy are of high quality. Thanks to this, programmers can shift their energies on other aspects of development instead of spending too much time debugging errors.

- Collaboration support

Visual Studio IDE's makers believe that more set of eyes can do better than just one which is why the platform is equipped with collaborative capabilities, thus increasing the productivity of the team. All these tools are natively integrated within the development lifecycle.

- High customizability

Every user is provided with various customization options by the IDE in different forms, one of which is extending functionalities by using add-ons and extensions are available from Visual Studio Marketplace. On top of that, developers can also publish their very own extensions or add-ons.

#### 2.5.4 HTML

HTML (Hypertext Markup Language) is the fundamental language for creating web pages. It utilizes tags to structure content, defining elements like headings, paragraphs, and links. HTML is crucial for web development, serving as the backbone of websites, enabling the presentation and organization of information. As a key component of the web, it works in conjunction with other technologies to deliver a seamless online experience.

#### 2.5.5 CSS

CSS, or Cascading Style Sheets, is a crucial web development language that enhances the presentation and layout of HTML documents. It allows designers to control the visual aspects of a website, including colors, fonts, spacing, and responsiveness. CSS employs a cascading hierarchy to apply styles, providing flexibility and consistency across web pages for a seamless user experience.

#### 2.5.6 JAVASCRIPT

JavaScript is a versatile, client-side scripting language used in web development. It enables dynamic, interactive features on websites, enhancing user experience. As an essential component of the web ecosystem, JavaScript allows developers to create responsive and engaging web applications. Its widespread adoption and compatibility make it a cornerstone for modern web development.

#### 2.5.7 AJAX

AJAX (Asynchronous JavaScript and XML) is a web development technique enhancing user experience by allowing asynchronous data retrieval from a server without refreshing the entire page. Utilizing a combination of JavaScript, XML, HTML, and CSS, AJAX enables seamless, dynamic content updates, leading to faster and more interactive web applications.

## 2.6 About the Back End

### 2.6.1 Database Servers

A database server is used to store data in a database. Users can access the data and manipulate it. There are many types of databases. The most popular among them is the SQL Server and online SQL IDE.

### 2.6.2 RDBMS

RDBMS is a type of database management system that stores data in the form of related tables. Relational database are powerful because they require few assumptions about how data is related or how it will be extracted from the database. As a result, the same database can be viewed in many different ways. An important feature of relational systems is that a single database can be spread across several tables. This differs from flat file database, in which each database is self-contained in a single table.

### 2.6.3 MYSQL

MySQL is a widely-used open-source relational database management system (RDBMS). Developed by Oracle, it empowers diverse applications by efficiently managing and organizing data. Known for its speed, reliability, and scalability, MySQL is a go-to choice for businesses and developers seeking a robust and flexible database solution. Its user-friendly interface and extensive community support make it a popular option in the software development landscape.

## 2.7 Requirement Specification

### 2.7.1 Software Requirement

The software requirements specification (SRS) is a means of translating the ideas in the minds of clients into a formal documentation. This document forms the development and software validation. The basic reason for the difficulty in software requirement specification comes from the fact that there are three interested parties—the client, the end users and the software developer. The requirements document has to be such that the client and the user can understand easily and the developers can use it as a basis for software development. Due to the diverse parties involved in software requirement specification, a communication gap exists. This gap arises when the client does not understand software or the software development processor when the developer does not understand the client's problem and application area. SRS bridges this communication gap.



Problem analysis is done to obtain a clear understanding of the needs of the clients and the users, and what exactly is desired from the software. Analysis leads to the actual specification. People performing the analysis called analysts, are also responsible for specifying the requirements. The software project is initiated by the client's needs. In the beginning these needs are in the minds of various people in the client organization. The requirement analyst has to identify their requirements by talking to these people and understanding their needs. These people and the existing documents about the current mode of operation are the basic source of information for the analyst.

### 2.7.2 Hardware Requirement

Requirements analysis is the process of determining user expectations for a new or modified product. These features, called requirements, must be quantifiable, relevant and detailed. This step acquiring all the facts problem specification such as identifying the desired result determining what information is needed to produce these results and figuring out what process must be carried out to proceed to get the accurate result.

## 2.8 Software and Hardware Specification

### 2.8.1 Software Specification

<b>Operating System</b>	<b>WINDOWS 8 or above for better performance</b>
<b>Front end</b>	<b>HTML,CSS,JavaScript</b>
<b>Back end</b>	<b>MySql(XAMPP)</b>
<b>Software</b>	<b>Visual studio code</b>
<b>Web browser</b>	<b>Internet explorer,google chrome,firefox</b>

### 2.8.2 Hardware Specification

<b>Processor</b>	<b>Intel Pentoum or above</b>
<b>Hard disc</b>	<b>PC display</b>
<b>Keyboard</b>	<b>PCIAT Enhanced PS/2 Keybord 110/10key</b>
<b>Mouse</b>	<b>First Pict Mouse Seral/c48)</b>
<b>Input Device</b>	<b>Mouse Keyboard</b>
<b>Output Device</b>	<b>Monitor</b>

### 3 SYSTEM MODELLING

#### 3.1 Design Methodology

Design methodology refers to the development of a system or method for a unique situation . Today the term is most often applied to technological fields in reference to web design, software or information system design. The key design methodology is finding the best solution for each design situation, whether it be in industrial design, architecture or technology. Design methodology stresses the use of brainstorming to encourage innovative ideas and collaborative thinking to work through each proposed idea and arrive at the best solution. Meeting the needs and wants of the end user is the most critical concern. Design methodology also employs basic research methods, such as analysis and testing.

#### 3.2 Use case diagram

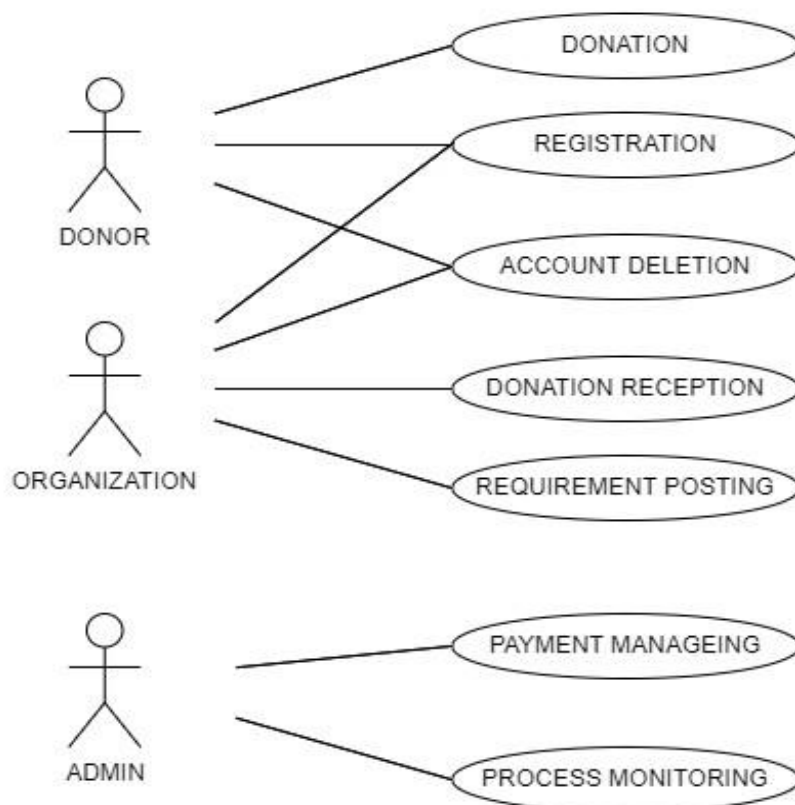


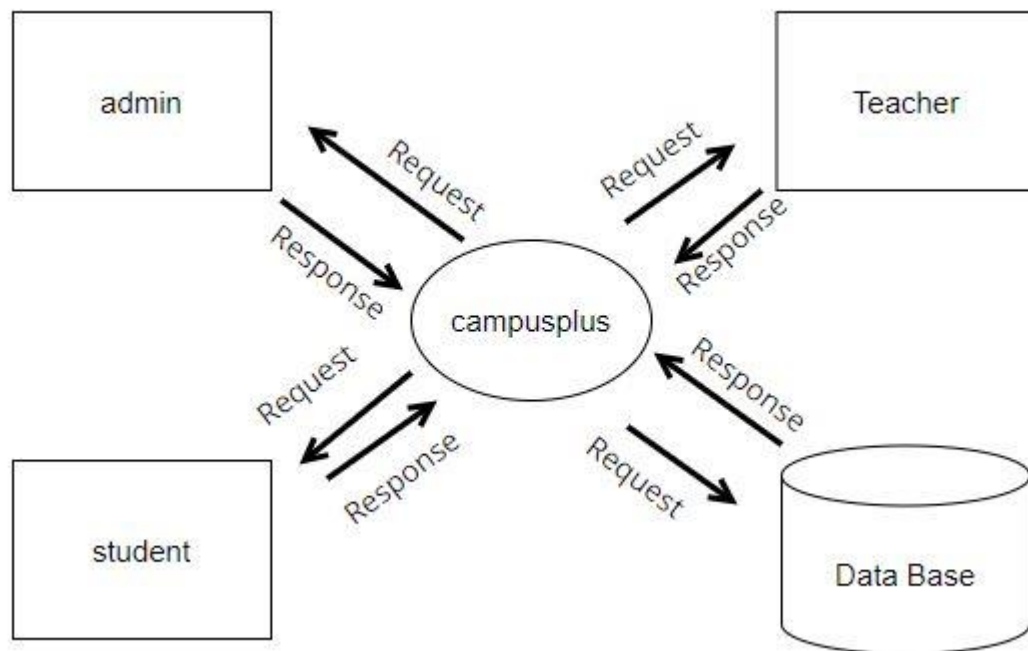
Figure 3.1: Use Case Diagram

### 3.3 DFD

#### LEVEL 0

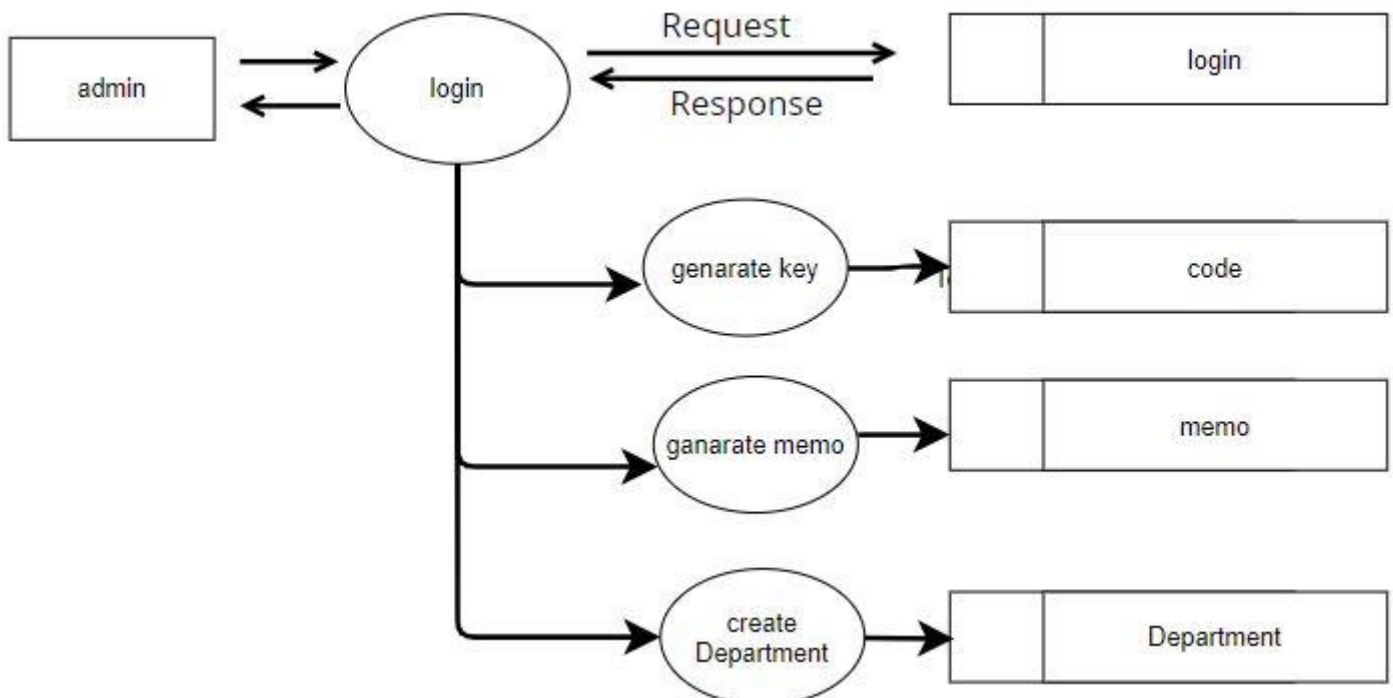


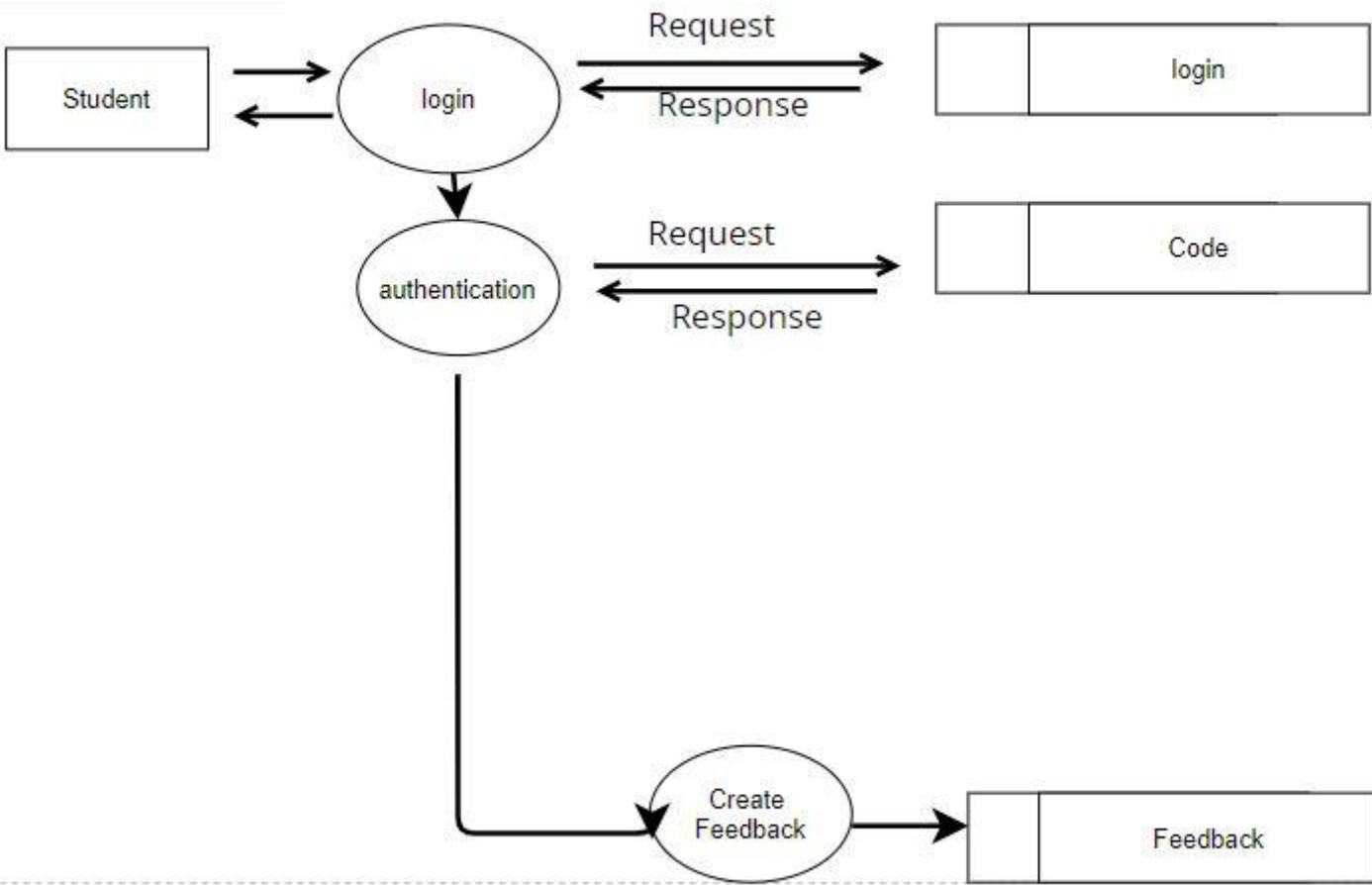
#### LEVEL 1

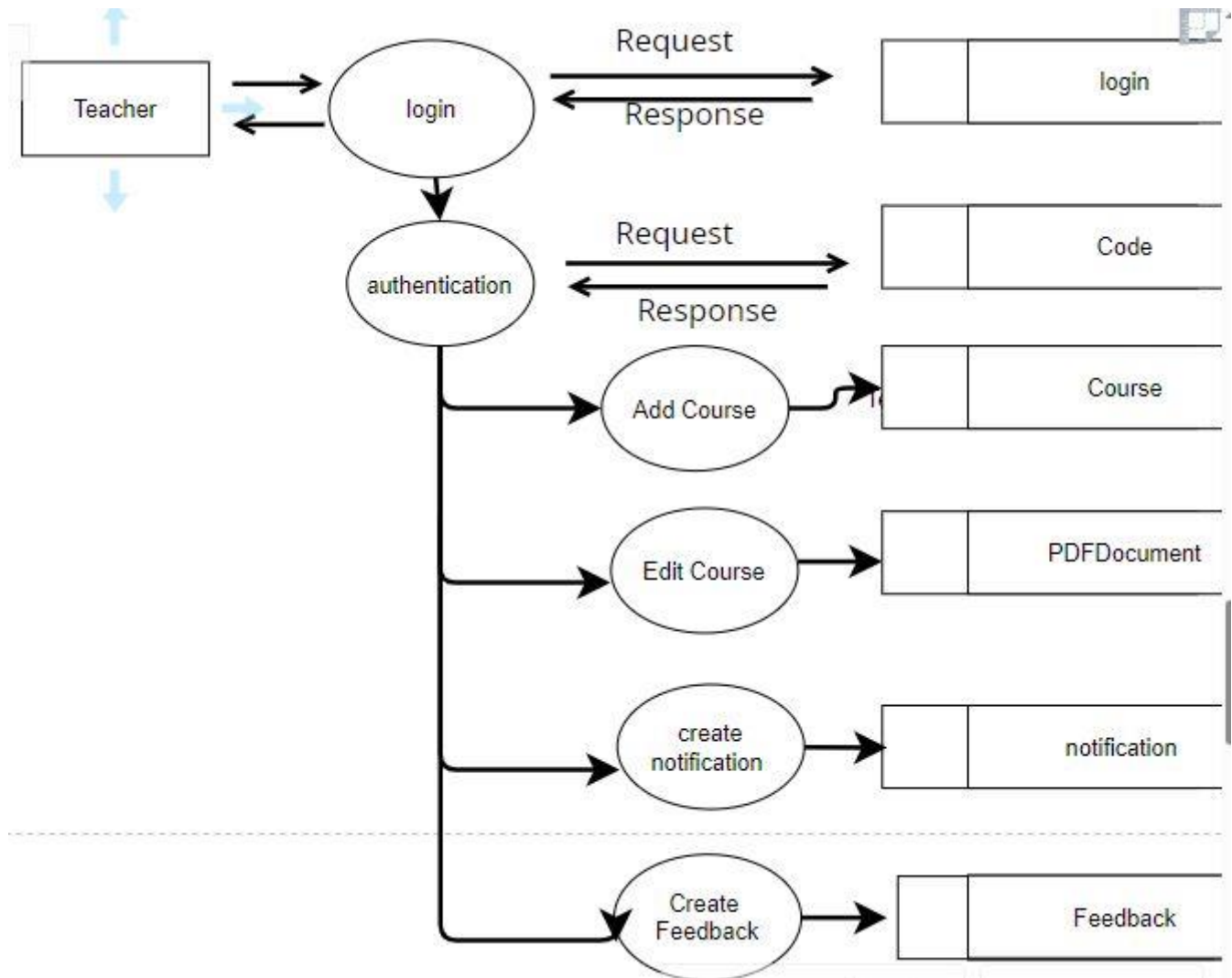


#### LEVEL 1.1

LEVEL 1.2







### 3.4 UML Diagram

### 3.4.1 Activity Diagram

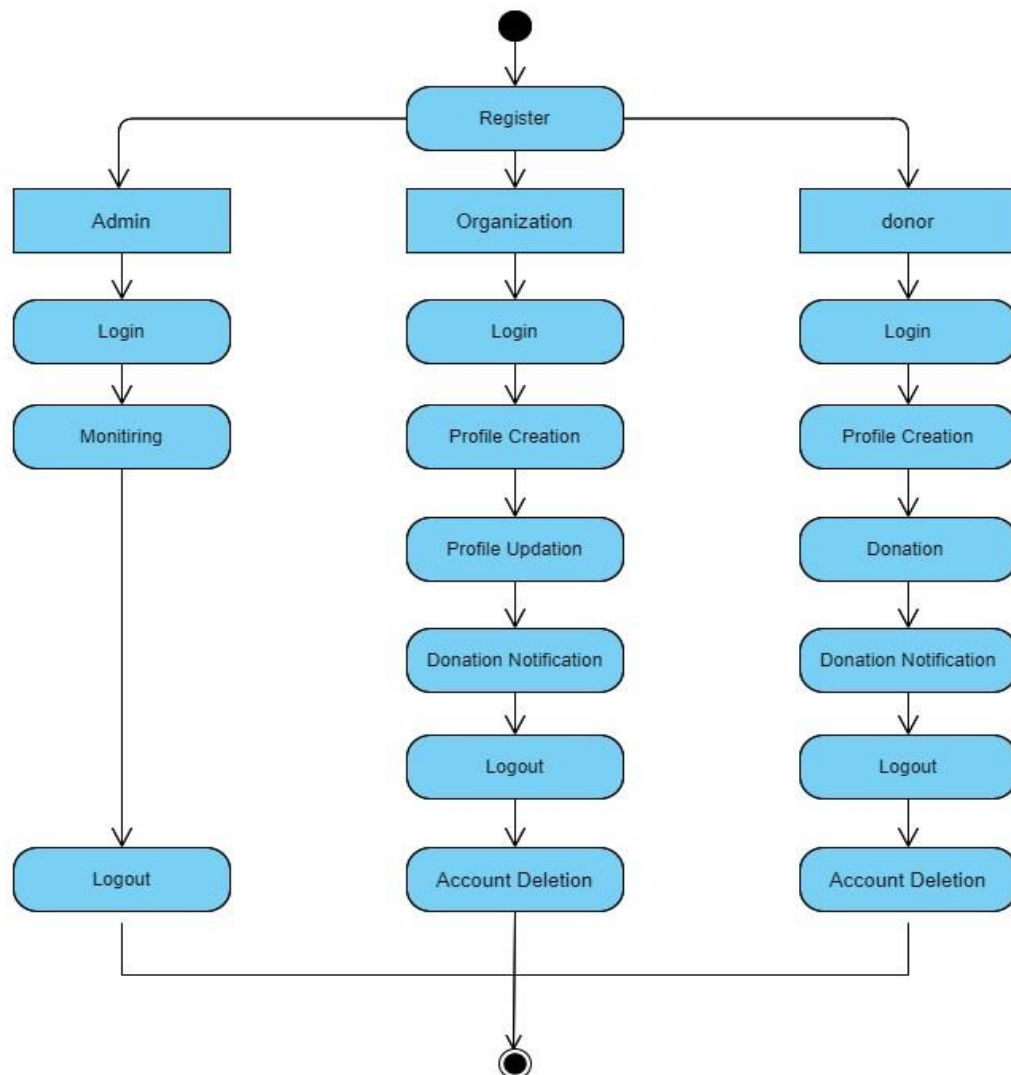


Figure 3.2: Activity Diagram



### 3.5 Table DescriptionN

This project consists of following tables:

Figure 3.3: feedback Table

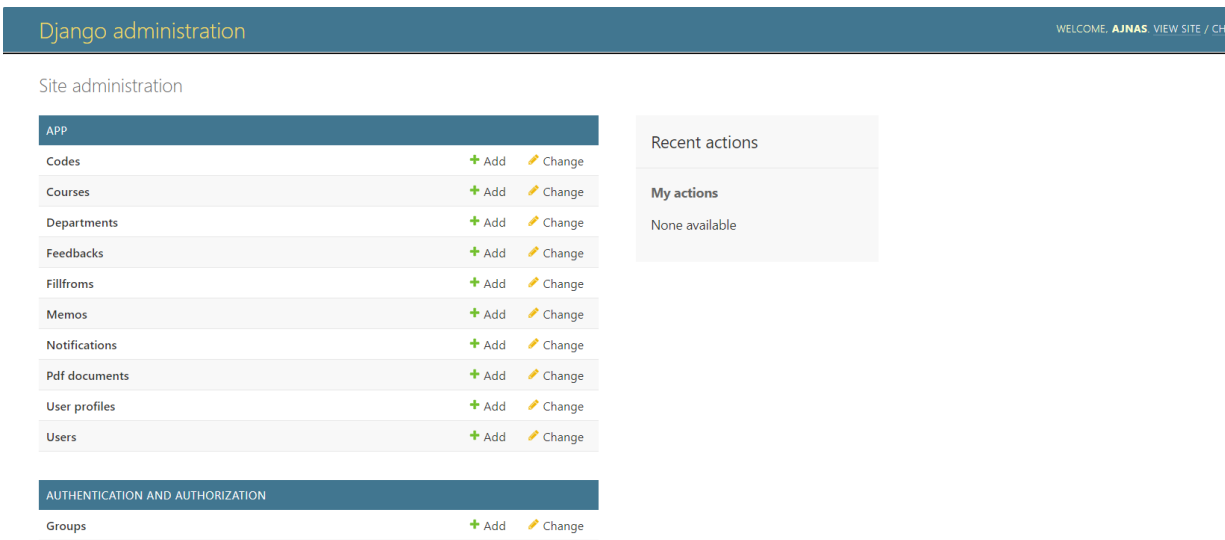


Figure 3.4: organization Table

Django administration

WELCOME, AJNAS. VIEW SITE / CH

Home > App > Departments

Start typing to filter...

APP

Codes + Add

Courses + Add

Departments + Add

Feedbacks + Add

Fillfroms + Add

Memos + Add

Notifications + Add

Pdf documents + Add

User profiles + Add

Users + Add

AUTHENTICATION AND AUTHORIZATION

Groups + Add

Select department to change

Action: 

-----

 Go 0 of 4 selected

☐ DEPARTMENT

☐ FOOD TECHNOLOGY

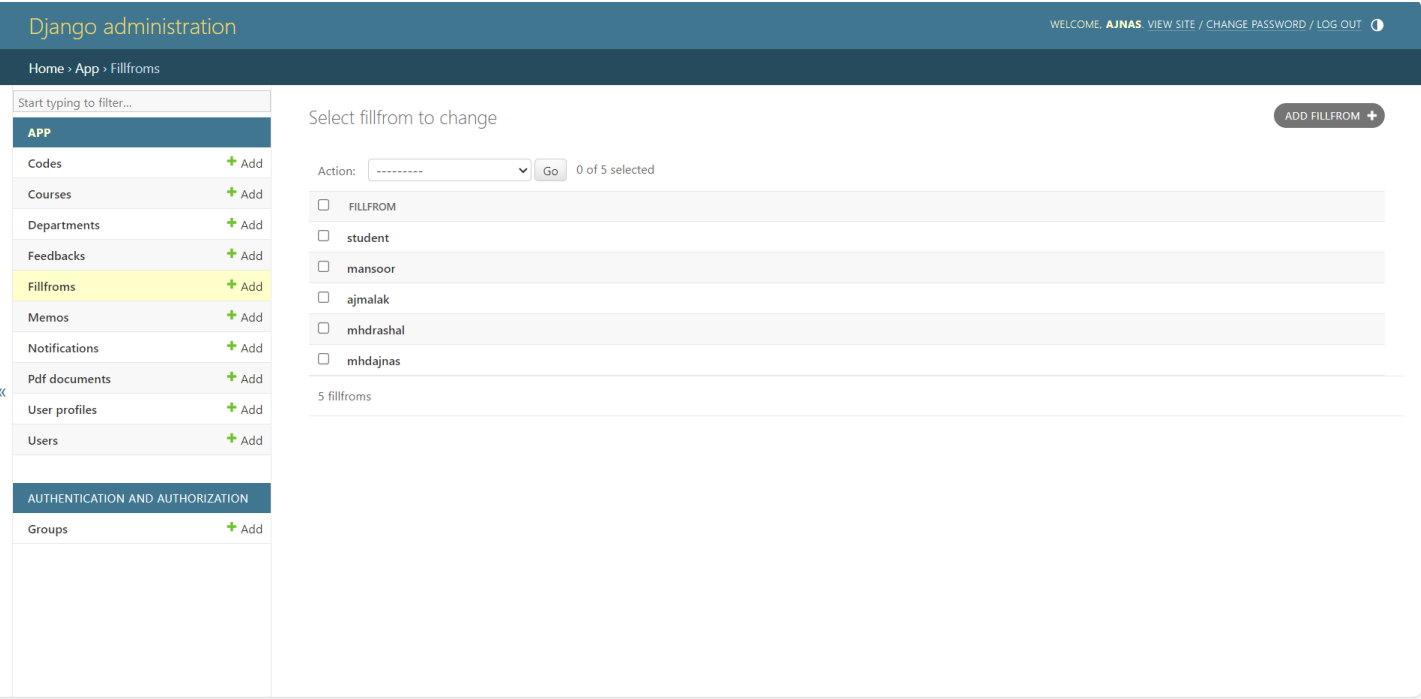
☐ BCOM

☐ CS

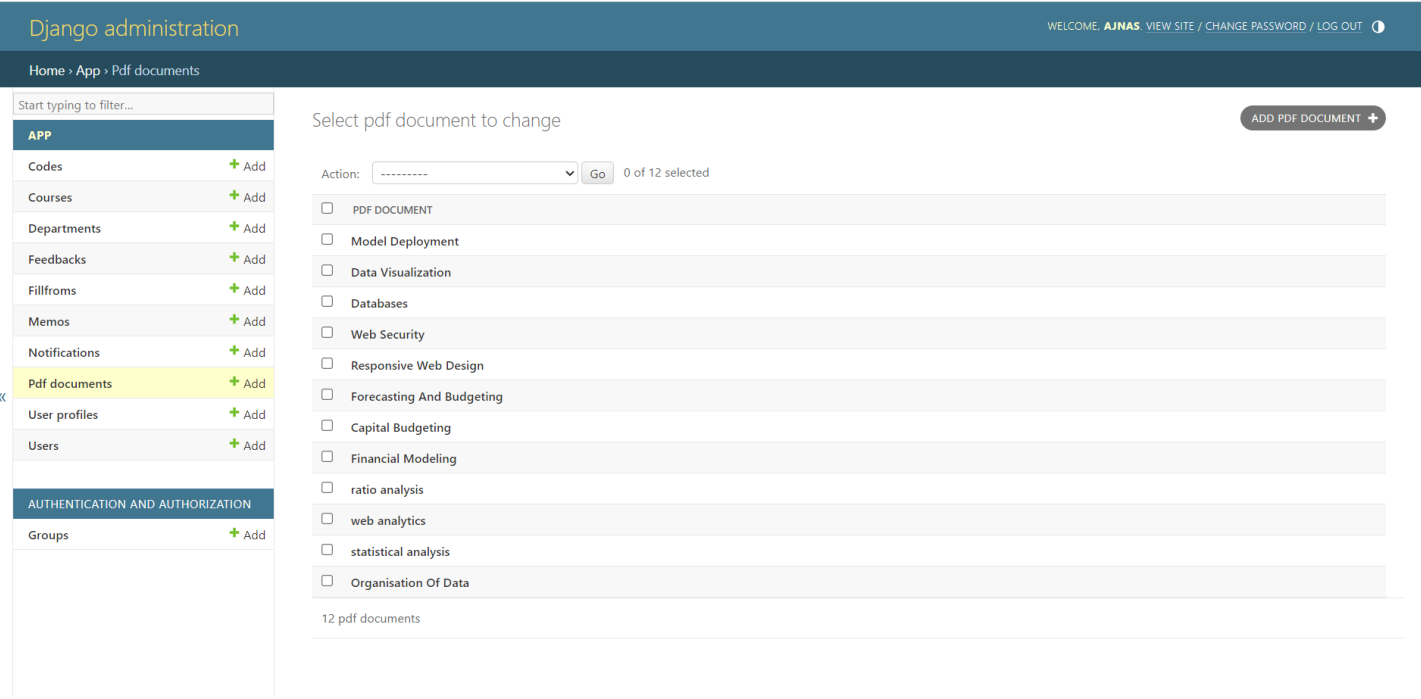
☐ BCA

4 departments

figure



Fig



4    SYSTEM DESIGN

## 5 CODING

### 5.1 Coding Standards Followed

Coding standards in software development encompass a set of guidelines and practices that developers adhere to ensure uniformity, consistency, readability, and maintainability of the codebase. One fundamental aspect involves following a consistent style throughout the project. This entails adopting a common coding style for naming conventions, indentation, formatting, and commenting, contributing to a cohesive and easily understandable codebase. The following are some python coding standards used in this project.

**Comments:** Comments are used for in code documentation in Csharp. They add to the understanding of the code. There are lots of tools that you can use to generate documentation, such as comments and doc-strings, for your own module. Comments should be more verbose so that when someone reads the code, the person would get the proper understanding of the code and how it is being used with other pieces of the code. Comments start with the symbol. Anything written after the hashtag does not get executed by the interpreter. You write documentation strings or doc-strings at the start of public modules, files, classes and methods. These type of comments start with `"""` and end with `"""`.

**Maximum Line Length:** Generally, it's good to aim for a line length of 79 characters in your Python code. It is possible to open files side by side to compare. You can view the whole expression without scrolling horizontally which adds to better readability and understanding of the code.

### 5.2 Error Handling

An exception is an event, which occurs during the execution of a program that disrupts the normal flow of the program's instructions. In general, when a Python script encounters a situation that it cannot cope with, it raises an exception. An exception is a Python object that represents an error. When a Python script raises an exception, it must either handle the exception immediately otherwise it terminates and quits. The try and except block in Python is used to catch and handle exceptions. Python executes code following the try statement as a "normal" part of the program. The code that follows the except statement is the program's response to any exceptions in the preceding try clause. If you have some suspicious code that may raise an exception, you can defend your program by placing the suspicious code in a try: block. After the try: block, include an except: statement, followed by a block of code which handles the problem as elegantly as possible.

Syntax: Here is simple syntax of try and except block try :

```
// Code  
except :  
// Code
```

Here are few important points about the above-mentioned syntax:

- A single try statement can have multiple except statements. This is useful when the try block contains statements that may throw different types of exceptions.
- You can also provide a generic except clause, which handles any exception.
- After the except clause(s), you can include an else-clause. The code in the else-block executes if the code in the try: block does not raise an exception.
- The else-block is a good place for code that does not need the try: block's protection.

## 6 CODE REVIEW AND TESTING

### 6.1 Code Review

Software Testing is the process of executing a program or system with the intent of finding errors. Testing involves any activity aimed at evaluating an attribute or capability of a program or system and determining that it meets its required results. The scope of software testing includes examination of code as well as execution of that code in various environments and conditions as well as examining the quality aspects of code: does it do what it is supposed to Do and do what it needs to do. Testing helps not only to uncover errors introduced during coding, but also locates errors committed during the previous phases.

Testing Objectives include:

- Testing is a process of executing a program with the intent of finding an error.
- A good test case is one that has a probability of finding an as yet undiscovered error.
- A successful test is one that uncovers an undiscovered error.

Testing Principles are:

- All tests should be traceable to end user requirements
- Tests should be planned long before testing begins
- Testing should begin on a small scale and progress towards testing in large
- Exhaustive testing is not possible
- To be most effective testing should be conducted by an independent third party.

Implementation is the stage of the project where the theoretical design is turned into a working system. At this stage the main workload, the greatest upheaval and the major impact on the existing system shifts to the user department. If the implementation is not carefully planned and controlled it can cause chaos and confusion. The implementation stage involves the following tasks :

- Careful planning.
- Investigation of system and constraints. of methods to achieve the changeover.
- Training of staff in the changeover phase.

- Evaluation of the changeover method.

The method of implementation and the time scale to be adopted are found out initially. Next the system is tested properly and the same time users are trained in the new procedures.

## 6.2 Testing Process

Testing helps not only to uncover errors introduced during coding, but also locates errors committed during the previous phases. Thus the aim of testing is to uncover requirements, design or coding errors in the program. Software Testing is a critical element of software quality assurance and represents the ultimate review of specification, design and coding, Testing present interesting anomaly for the software engineer.

### Unit testing

This is the first of testing. In this different modules are tested against the specification produces during the design of the modules. It refers to the verification of single program module in an isolated environment. Unit testing focuses on the modules independently of one another to locate errors.

In our project we test each module and each forms individually. Each forms may tested using appropriate values. The input screens need to be designed very carefully and logically. While entering data in the input forms, proper validation checks are done and messages will be generated by the system if incorrect data has been entered.

### Validation Checks

As a web application developer, form validation is a crucial part of your work, and it should not be underrated as it could lead to security flaws in your application. You should consider it a must if you're striving to provide a professional end user experience.

- Basic form validation
- Custom error messages

I always prefer to load common libraries and helpers in the constructor of the controller itself as it's a nice habit to avoid code duplication elsewhere in controller methods. We load the form and url helpers so that we can use the utility methods provided by those helpers throughout the rest of the

application. The form validation library in the constructor, you can access it using the form validation convention.

## 7 SYSTEM SECURITY MEASURES

### 7.1 Database/Data Security

Nowadays, databases any web based application by enabling websites to provide varying dynamic content. Since very sensitive or secret information can be stored in a database, you should strongly consider protecting your databases. Database security refers to the collective measures used to protect and secure a database or database management software from illegitimate use and malicious threats and attacks. It is a broad term that includes a multitude of processes, tools and methodologies that ensure security within a database environment.

To retrieve or to store any information you need to connect to the database, send a legitimate query, fetch the result, and close the connection. Nowadays, the commonly used query language in this interaction is the Structured Query Language (SQL). In this project we use sqlite 3 for database storage. By default, a SQLite database does not require user authentication (noauthentication-required database). After you created a user, the database will be marked as requiring authentication (authentication- required database). Then, user need to provide username and password when connecting to the database file.

### 7.2 Creation of User Profiles And Access Rights

Profile Learning Model starts with identifying the user status; if the user uses the system for the first time, he enters his personal data and this data is registered in the User Id List. after user login to the system successfully, he should enter a query that describes his preference. Then, a domain thesaurus is employed for mapping the domain keywords found in the query to the corresponding domain concepts. terms of the proposed domain thesaurus are arranged into separate clusters; each cluster consists of a set of synonyms and represents a specific concept. For each cluster, one preferred term is chosen to represent the underlying concept; the other terms are non-preferred terms . The proposed domain thesaurus considers only the Synonym relation, which specify terms that express the same concept.

Therefore, a Preference List is constructed. This list contains the extracted domain concept from Virtual Document entered by the user. The Multi-class Classifier is then used to classify the query into one of the domain hypotheses. Therefore, the user profile database will be constructed. Document classification has a good impact in the overall system performance as it simplifies the matchmaking



among the users preferences and those multi classified documents stored in the systems database during the recommendation process. If the user accepts the recommendation results the process is then completed. Otherwise, the system merges the user feedback with those in the Preference List and then updates the user profile data table.

## 8 IMPLEMENTATION

After the system has been tested, the implementation type or the change over technique from the existing system to the new system is a step-by-step process. In the system at first only a module of the system is implemented and checked for suitability and efficiency. When the end user related to the particular module is satisfied with the performance, the next step of implementation is preceded.

Implementation to some extent is also parallel. For instance, modules which are not linked, with other modules are implemented parallel and the training is the step-by -step process. Backups are necessary since any time unexpected events may happen. And so during the program execution, the records are stored in the workspace. This helps to recover the original status of the records from any accidental updating or intentional deletion of records

### 8.1 New System Description

The Donors can manage their profile for their company and engage in charity tasks which make them more dedicated to society. Donors who are registered in the site can ensure their social service by engaging through charitable tasks. The Admin can manage all the users and can track record of every actions. Doctors can add patient details who is need for the blood and doctor verifies the donor-patient match. The donor has a profile in which all his or her blood donation history is available. The Company employees who are the donors can earn their rewards in their profiles and can engage in more healthy activities

### 8.2 New System Implementation

An Implementation plan is a management tool for a specific policy measure, or package of measures, designed to assist agencies to manage and monitor implementation effectively. Implementation plans are intended to be scalable and flexible; reflecting the degree of urgency, innovation, complexity or sensitivity associated with the particular policy measure. The implementation stage involves following tasks:

- Careful planning

- Investigation of system and constraints
- Design of method to achieve the changeover phase

## 9 APPENDIX

### 9.1 Screen Shots of Forms



Figure 9.1: Home Page

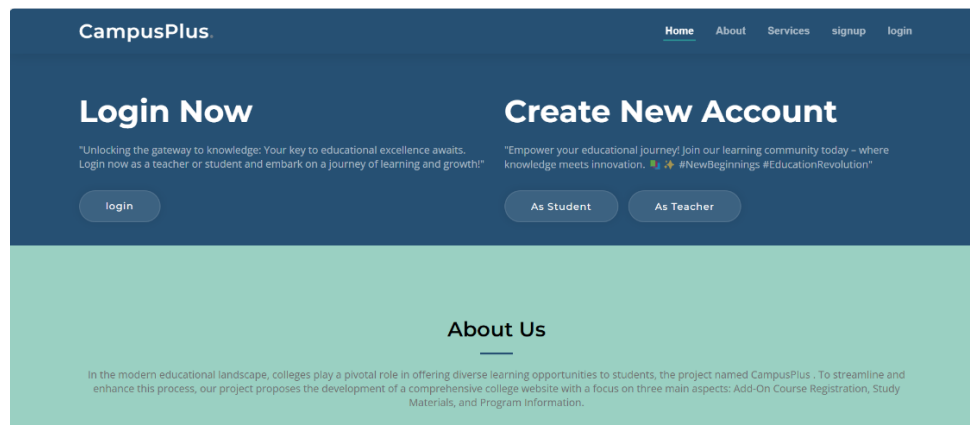


Figure 9.2: login page

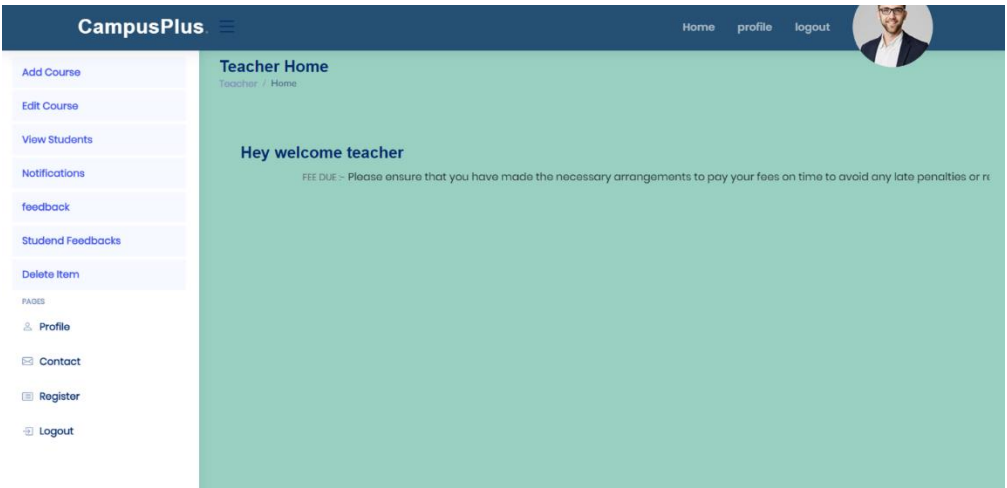


Figure 9.3: teacher home page

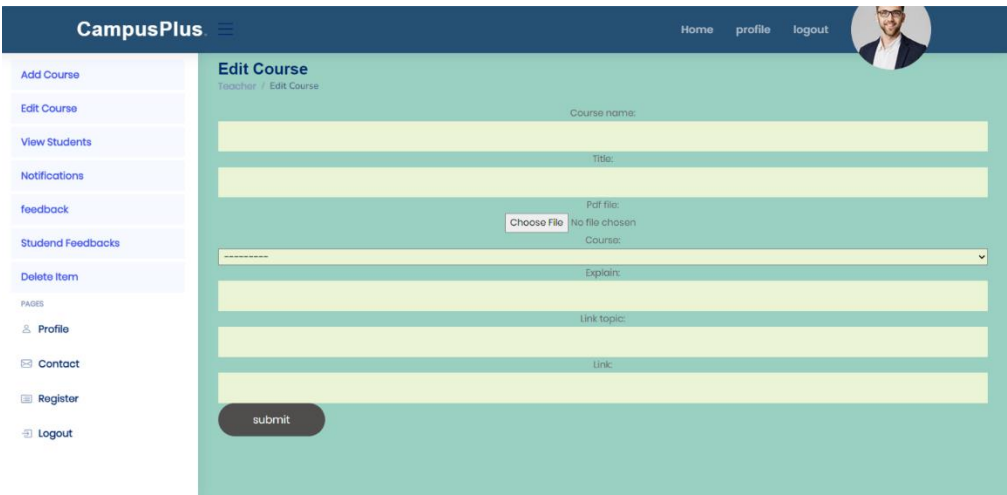


Figure 9.4:Teacher course editing page

The screenshot shows the 'Logged Student' interface. On the left is a sidebar with navigation links: Add Course, Edit Course, View Students, Notifications, feedback, Student Feedbacks, Delete Item, and a 'PAGES' section with Profile, Contact, Register, and Logout. The main content area is titled 'Logged Student' and includes a 'Recent Sales | Today' section with a table of student data.

full name	guardian name	contact number	email	department	course
mohammed ajnas m	navas	9539753146	ajnas312@gmail.com	CS	Data Science
mohammed rashal	basheer	9947435483	kunjippa775@gmail.com	BCA	Web Development
ajmal k	jamaludheen	8138828949	ajnas312@gmail.com	BCOM	Financial Analysis Certificate
mansoor ali pk	ali	9945652356	udayip.design@gmail.com	BCA	Data Analytics

Figure 9.5: student data info

The screenshot shows the 'Student Home' interface. The sidebar on the left includes links: choice Course, Feedback, Complete registration, and a 'PAGES' section with Profile, Contact, and Logout. The main content area is titled 'Student Home' and displays a welcome message for 'ajmalak BCOM'. Below the message are two notification boxes: 'CLASS SCHEDULE' and 'EXAM SCHEDULE', both providing information about online class meetings and exam schedules.

Figure 9.6: Student home page

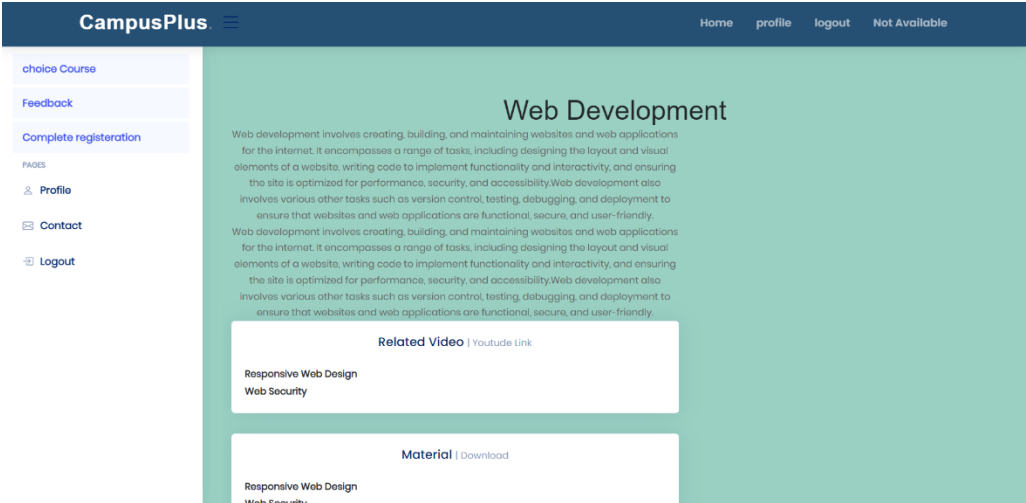


Figure 9.7: Material Page

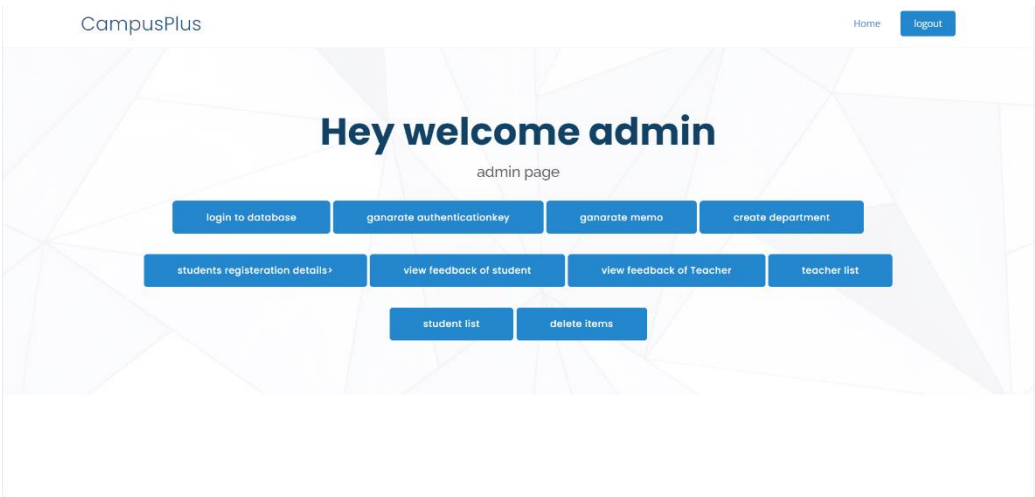


Figure 9.8: Admin home Page

CampusPlus back logout

## Create secret code

Studentcode:

Teachercode:

## Database tables

	id	name	description1	department_id
	Filter	Filter	Filter	Filter
1	10	Data Analytics	Analyze and interpret data to make ...	10
2	11	Web Development	Learn coding languages and design ...	10
3	12	Data Science	Learn analytics, machine learning, an...	11
4	13	Cybersecurity	Master techniques to safeguard digit...	11
5	14	Financial Analysis Certificate	Learn advanced financial analysis ...	12
6	15	Food Safety Management	Learn protocols ensuring food safety i...	13

Figure 9.11: addon course

	id	name	description
	Filter	Filter	Filter
.	10	BCA	Bachelor of Computer Applications ...
!	11	CS	Computer Science, a field of innovati...
!	12	BCOM	A Bachelor of Commerce (BCom) ...
!	13	FOOD TECHNOLOGY	Food technology enhances productio...

Figure 9.12: Deparment

	id	password	last_login	is_superuser	username	first_name	last_name	email	is_staff	is_active	date_joined	is_ad
	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
1	1	pbkdf2_sha256\$720000\$MDzK6eha3f...	2024-02-09 02:45:18.119352	0	student			rafidkpkdg@gmail.com	0	1	2023-11-28 13:02:40.516321	0
2	2	pbkdf2_sha256\$720000\$C0zbrVPCxar...	2024-02-09 03:02:54.974230	0	teacher			muhammedrashalm@gamil.com	0	1	2023-11-28 13:37:54.167452	0
3	3	pbkdf2_sha256\$720000\$IQm9Wnduq...	2024-02-08 21:51:01.760105	0	admin			rafidkpkdg@gmail.com	0	1	2023-11-28 13:38:26.442320	1
4	46	pbkdf2_sha256\$720000\$beFPoJy5y0v...	2024-02-09 01:30:26.025632	1	rashal				1	1	2024-02-09 01:29:19.942703	0
5	47	pbkdf2_sha256\$720000\$ZiwsU58p8g...	NULL	1	ajnas				1	1	2024-02-09 01:29:39.253230	0
6	48	pbkdf2_sha256\$720000\$bMth9M03jg...	2024-02-09 02:33:01.466217	1	ajmal				1	1	2024-02-09 01:29:55.645907	0
7	49	pbkdf2_sha256\$720000\$b5oE8WJBF...	2024-02-09 03:22:21.534453	0	mhdajnas			ajnas312@gmail.com	0	1	2024-02-09 02:08:08.431390	0
8	50	pbkdf2_sha256\$720000\$cVxApp4nJh...	2024-02-09 03:25:12.558825	0	mhdrashal			kunjippa775@gmail.com	0	1	2024-02-09 02:23:41.192166	0
9	51	pbkdf2_sha256\$720000\$5O6X6xLOcs...	2024-02-09 03:23:01.656867	0	ajmalak			ajnas312@gmail.com	0	1	2024-02-09 02:28:25.365575	0
10	52	pbkdf2_sha256\$720000\$sisDjpVOjvwq...	2024-02-09 03:24:22.611619	0	mansoor			udayip.design@gmail.com	0	1	2024-02-09 02:47:45.519916	0

Figure 9.13: pdf file

	id	title	course_id	explain	link	link_topic	course_name	
	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
1	57	Organisation Of Data	10	Data analytics involves the process o...	https://youtu.be/37x5dKW-X5U7...	Organisation Of Data (part-1)	Data Analytics	pdf_document
2	58	statistical analysis	10		https://youtu.be/dcXqhMqhZUo?...	Organisation of data(part-2)		pdf_document
3	59	web analytics	10					pdf_document
4	60	ratio analysis	14	A financial analysis certificate progra...	https://youtu.be/vT9fkAqW_R4?...	ratio analysis (part-1)	Financial Analysis Certificate	pdf_document
5	61	Financial Modeling	14		https://youtu.be/lc0wF8u1hbk?...	ratio analysis (part-2)		pdf_document
6	62	Capital Budgeting	14					pdf_document
7	63	Forecasting And Budgeting	14					pdf_document
8	64	Responsive Web Design	11	Web development involves creating, ...	https://youtu.be/NWnBxQjssvQ?si=-...	Responsive Web Design	Web Development	pdf_document
9	65	Web Security	11		https://youtu.be/WR1ydljTX5E?...	Web Security		pdf_document
10	66	Databases	11					pdf_document
11	67	Data Visualization	12	Data science is a multidisciplinary fiel...	https://youtu.be/RBSUwFGa6Fk?...	Data Visualization	Data Science	pdf_document
12	68	Model Deployment	12		https://youtu.be/xC-c7E5PK0Y?...	Model Deployment		pdf_document

Figure 9.14: Material info

	id	full_name	guardian_name	contact_number	email	user_id	course_id	submitted	de
	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
1	30	mohammed ajnas m	navas	9539753146	ajnas312@gmail.com	49	12	1	
2	31	mohammed rashal	basheer	9947435483	kunjippa775@gmail.com	50	11	1	
3	32	ajmal k	jamaludheen	8138828949	ajnas312@gmail.com	51	14	1	
4	33	manssor ali pk	ali	9945652356	udayip.design@gmail.com	52	10	1	

Figure 9.17: User info

## 9.2 SAMPLE CODE

### 1.LOGIN CODE:

```
def login(request):
    msg = None
```

```
if request.method == 'POST':
    username = request.POST['username']
    password = request.POST['password']
    user = authenticate(username=username, password=password)
    if user is not None and user.is_admin:
        auth.login(request,user)
        return redirect('adminpage')
    elif user is not None and user.is_student:
        auth.login(request,user)
        return redirect('checkstudent')
    elif user is not None and user.is_teacher:
        auth.login(request,user)
        return redirect('checkteacher')
    else:
        msg = 'invalid '
else:
    msg = ' '
return render(request, 'login.html',{'msg':msg})
```

## 2.COURSE EDIT PAGE FORMS

```
class PDFDocumentForm(forms.ModelForm):
    course_name= forms.CharField(
        widget=forms.TextInput(
            attrs={
                "class":"input100"
            }
        ),
        required=False
    )
    title= forms.CharField(
        widget=forms.TextInput(
            attrs={
                "class":"input100"
            }
        ),
        required=False
    )
```



```
)
course= forms.ModelChoiceField(
    queryset=Course.objects.all(),
    widget=forms.Select(attrs={"class": "input100"})
)
explain= forms.CharField(
    widget=forms.TextInput(
        attrs={
            "class":"input100"
        }
    ),
    required=False
)
link_topic= forms.CharField(
    widget=forms.TextInput(
        attrs={
            "class":"input100"
        }
    ),
    required=False
)
link= forms.CharField(
    widget=forms.TextInput(
        attrs={
            "class":"input100"
        }
    ),
    required=False
)

class Meta:
    model = PDFDocument
    fields = ['course_name','title',
'pdf_file','course','explain','link_topic','link']
```

### 3.STUDENT REGISTRATION

```
<main id="main" class="main">
  <div class="pagetitle">
    <h1>Edit Course</h1>
    <nav>
      <ol class="breadcrumb">
        <li class="breadcrumb-item"><a href="index.html">Teacher</a></li>
        <li class="breadcrumb-item active">Edit Course</li>
      </ol>
    </nav>
  </div><!-- End Page Title -->

  <div>

    <form method="post" class="login100-form validate-form">

      <div class="wrap-input100 validate-input m-b-26" data-
validate="Username is required">
        {% csrf_token %}
        {{ form.as_p }}
        <span class="focus-input100"></span>
      </div>

      <div class="container-login100-form-btn">
        <button type="submit" class="login100-form-btn">
          Create
        </button>
      </div>

    </form>

  </div>
</script>
```

```
<!-- Add this script to handle dynamic filtering -->
<script>
    $(document).ready(function () {
        // Change 'id_department' to the actual ID of your department field
        $('#id_department').change(function () {
            var departmentId = $(this).val();
            $.ajax({
                url: '/get_filtered_courses/',
                data: {
                    'department_id': departmentId
                },
                dataType: 'json',
                success: function (data) {
                    var courseField = $('#id_course');
                    courseField.empty(); // Clear existing options

                    $.each(data.courses, function (key, value) {
                        courseField.append($('</option>').attr('value',
value.id).text(value.name));
                    });
                }
            });
        });
    });
</script>
```