

# **DIGITAL CAMPUS**

**A PROJECT REPORT**

*Submitted by*

**VEKARIA PRUTHA MUKESHBHAI**

**181210107060**

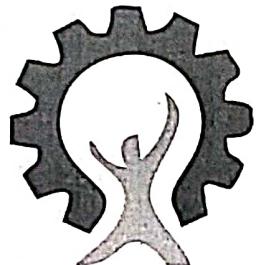
*In partial fulfilment for the award of the degree of*

**BACHELOR OF ENGINEERING**

*in*

**Computer Engineering**

**Apollo institute of engineering and technology,ahmedabad**



**Gujarat Technological University, Ahmedabad**

**April,2022**



**Apollo institute of engineering and technology**

**Enasan, ahmedabad**

**CERTIFICATE**

This is to certify that the Project entitled **DIGITAL CAMPUS** has been carried out by **VEKARIA PRUTHA MUKESHBHAI (181210107060)** under my guidance in fulfilment for the degree of **Bachelor of Engineering** in **Computer Engineering**, **8<sup>th</sup> semester** of **Gujarat Technological University**, Ahmedabad during the academic year **2021-22**.

Prof.Ravikant Vanjara

Internal Guide

prof. Naveen Kandwal

Head of Department

*for Vaishali'*



# GUJARAT TECHNOLOGICAL UNIVERSITY

CERTIFICATE FOR COMPLETION OF ALL ACTIVITIES AT ONLINE PROJECT PORTAL

B.E. SEMESTER VIII, ACADEMIC YEAR 2021-2022

Date of certificate generation : 02 May 2022 (21:02:56)

This is to certify that, *Vekaria Prutha Mukeshbhai* (Enrolment Number - 181210107060) working on project entitled with *Digital campus* from *Computer Engineering* department of *APOLLO INSTITUTE OF ENGINEERING & TECHNOLOGY, AHMEDABAD* had submitted following details at online project portal.

Internship Project Report	Completed
---------------------------	-----------

Name of Student : Vekaria Prutha  
Mukeshbhai

Name of Guide : Mr. VANJARA RAVIKANT  
THAKKARBHAI

Signature of Student :

\*Signature of Guide :

#### Disclaimer :

This is a computer generated copy and does not indicate that your data has been evaluated. This is the receipt that GTU has received a copy of the data that you have uploaded and submitted as your project work.

\*Guide has to sign the certificate, Only if all above activities has been Completed.

Date: 24/04/2022

## TO WHOM IT MAY CONCERN

This is to certify that Vekaria Prutha Mukeshbhai, a student of Apollo institute of engineering and technology has successfully completed his/her internship in the field of web developer from 10<sup>th</sup> January, 2022 to 10<sup>th</sup> April, 2022 (Total number of Weeks: 12) under the guidance of Sagar khatri.

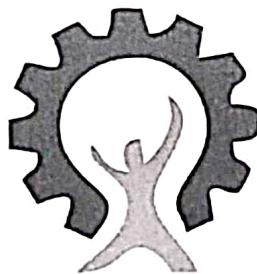
His internship activities include web development.

During the period of her/ his internship program with us, she had been exposed to different processes and was found diligent, hardworking and inquisitive.

We wish him every success in his life and career.

For BrainyBeam Pvt.Ltd

  
Authorised Signature with Industry Stamp



**Apollo institute of engineering and technology**

**Enasan, ahmedabad**

**DECLARATION**

We hereby declare that the Internship report submitted along with the Internship entitled Digital campus submitted in partial fulfillment for the degree of Bachelor of Engineering in Computer engineering to Gujarat Technological University, Ahmedabad, is a bonafide record of original project work carried out by me at BrainyBeams Pvt. Ltd. under the supervision of Sagar Khatri and that no part of this report has been directly copied from any students' reports or taken from any other source, without providing due reference.

Vekaria Prutha Mukeshbhai

Name of the Student

Sign of Student

## **ACKNOWLEDGEMENT**

First I would like to thank Mr.Sagar jasani, HR, Head of BrainyBeam Pvt.Ltd,Ahmedabad for giving me the opportunity to do an internship within the organization.I also would like all the people that worked along with me at BrainyBeam Pvt.Ltd, Ahmedabad with their patience and openness they created an enjoyable Working environment. It is indeed with a great sense of pleasure and immense sense of gratitude that I acknowledge the help of these individuals. I would like to thank my Head of the Department Prof. Naveen Kandwal for his constructive criticism throughout my internship. I would like to thank Prof.Ravikant Vanjara, College internship coordinator Department of Computer.

Vekaria Prutha

## ABSTRACT

This report is a detailed overview of my internship journey at BrainyBeam Pvt.Ltd. During my Internship I have learned a lot about how the industry of web development is actually work, what are the parameters, how to work on an actual project, how to work in a flow of team work. I have known about the work flow of full stack developers roles and responsibilities. I have learned to work in a corporate space which not only enriched me professionally but also helped me grow personally as well. My contribution was appreciated by my supervisor and other members of the department. The career path I would be selecting for myself is quite influenced from my internship as I have had a great opportunity to practically see how web development sector is working and evolving in the entire Globe. Also, I have summarized my overall experience, with my learning and challenges faced as an intern.

## CHAPTER 1

# INTRODUCTION

### 1.0 OVERVIEW OF THE COMPANY

#### 1.1 ABOUT COMPANY

At BrainyBeam, we see Innovation as a clear differentiator. Innovation, along with focus on deep, long-lasting client relationships and strong domain expertise, drives every facet of our day-to-day operations.

BrainyBeam Technologies was founded with a vision to address growing businesses' needs of reducing the time to market and cost effectiveness required to develop and maintain unique and customised web and mobile solutions. We are uniquely and strategically positioned to partner with startups and leading brands to help them expand their business and offer the most effective and cost efficient solutions that provide revenues and value to their business needs.

All processes are well documented, that enable us to deliver more effective and innovative solutions with each project we work on. We provide services that conform to customers' requirements, at a satisfactory overall cost, having regard to functionality, reliability, durability, usability, appearance and safety.

#### 1.2 DIFFERENT PRODUCT/SCOPE OF WORK

We have worked on several domains for Android Apps, iOS Apps, Windows Apps, Cross platform Apps. We have also worked different web development platforms.

#### 1.3 COMPANY SERVICES

Android app development

iOS development

Windows development

Web development

## CHAPTER 2

# INTERNSHIP AND PROJECT

### 2.0 OVERVIEW OF DIFFERENT DEPARTMENT PROCESS BEING CARRIED OUT IN COMPANY

At our company we follow the complete method of Software Engineering process. All the methods and steps are completely of Agile methodology and steps. It will helps our organization to complete the task and project in the given time and months. We used to follow the software development life cycle process for the project we are working on and when we need some other task, we used to involve more number of employees.

#### 2.1 PROCESS OF TASK EXECUTION:

Started in the year 2014 our company is use our creative potential in numerous challenging processes - from generating new ideas of improvements to integrating them by means of business plans. Year by Year company's growth is increasing in a such a good way. While each of our projects is based on deep market study, we apply our knowledge about it to improve ourselves to produce better ideas for other companies.

#### 2.2 STEPS TO COMPLETE A PROJECT:

Most of the time company is using waterfall model for the small size of the project, but when the project is at large scale, company use Agile methodology. At the Company they also work on the other software development model like Spiral Model, V Model, Big Bang Model and other. Company is mainly focus on the deadline achievement. Our first priority when a project is assigned is that to complete the task in a given time and weeks.

#### 2.3 SEQUENCE OF OPERATION:

Requirement analysis is the most important and fundamental stage in SDLC. It is performed by the senior members of the team with inputs from the customer, the sales department, market surveys and domain experts in the industry. This information is then used to plan the basic project approach and to conduct product feasibility study in the m

economical, operational and technical areas. Planning for the quality assurance requirements and identification of the risks associated with the project is also done in the planning stage. The outcome of the technical feasibility study is to define the various technical approaches that can be followed to implement the project successfully with minimum risks. Once the requirement analysis is done the next step is to clearly define and document the product requirements and get them approved from the customer or the market analysts.

This is done through an SRS (Software Requirement Specification) document which consists of all the product requirements to be designed and developed during the project life cycle.

SRS is the reference for product architects to come out with the best architecture for the product to be developed. Based on the requirements specified in SRS, usually more than one design approach for the product architecture is proposed and documented in a DDS - Design Document Specification.

This DDS is reviewed by all the important stakeholders and based on various parameters as risk assessment, product robustness, design modularity, budget and time constraints, the best design approach is selected for the product.

A design approach clearly defines all the architectural modules of the product along with its communication and data flow representation with the external and third party modules (if any). The internal design of all the modules of the proposed architecture should be clearly defined with the minutest of the details in DDS.

## **2.4 EXECUTION OF A PROJECT:**

In this stage of SDLC the actual development starts and the product is built. The programming code is generated as per DDS during this stage. If the design is performed in a detailed and organized manner, code generation can be accomplished without much hassle.

Developers must follow the coding guidelines defined by their organization and programming tools like compilers, interpreters, debuggers, etc. are used to generate the code. Different high level programming languages such as C, C++, Pascal, Java and PHP are used for coding. The programming language is chosen with respect to the type of software being developed.

This stage is usually a subset of all the stages as in the modern SDLC models, the testing activities are mostly involved in all the stages of SDLC. However, this stage refers to the testing only stage of the product where product defects are reported, tracked, fixed and retested, until the product reaches the quality standards defined in the SRS.

Once the product is tested and ready to be deployed it is released formally in the appropriate market. Sometimes product deployment happens in stages as per the business strategy of that organization. The product may first be released in a limited segment and tested in the real business environment (UAT- User acceptance testing).

Then based on the feedback, the product may be released as it is or with suggested enhancements in the targeting market segment. After the product is released in the market, its maintenance is done for the existing customer base.

## CHAPTER 3

# PROJECT PLANNING AND SCHEDULING

### **3.1 PROJECT SUMMARY**

In this project we are going to develop python based software which involve attendance of students. We will develop the web portal for this Attend Pay.

There are mainly three Modules College, faculties, and students.

It includes various functionalities such as perfect UI interactions, Attendance Record, Material sharing.

There is much functionality like notifications and security integration etc.

### **3.2 PURPOSE /PROJECT PERSPECTIVE**

To reduce the amount of time taken while taking the attendance.

To keep track of attendance ratio according to lectures & maintain a proper record of student attendance.

Share every study related material at one place.

Online Fees Payment.

### **3.3 OBJECTIVE/AIM OF PROJECT**

**Attendances:** Faculty will take attendance

**Manage Reports:** After attendance of student a monthly report is greeted of each student.

**Sharing Materials:** Department will share material which useful to student.

### **3.4 SCOPE**

In now a day an attendance taking is very time consuming.

Student making of noise while taking an attendance.

## 3.5 TECHNOLOGY & LITERATURE SURVEY/ TOOLS & TECHNOLOGY TOOLS

Vs Code  
Django Framework  
SQLite 3

### 3.5.1 Technology

#### Python

Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together. Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity and code reuse. The Python interpreter and the extensive VS

Often, programmers fall in love with Python because of the increased productivity it provides. Since there is no compilation step, the edit-test-debug cycle is incredibly fast. Debugging Python programs is easy: a bug or bad input will never cause a segmentation fault. Instead, when the interpreter discovers an error, it raises an exception. When the program doesn't catch the exception, the interpreter prints a stack trace. A source level debugger allows inspection of local and global variables, evaluation of arbitrary expressions, setting breakpoints, stepping through the code a line at a time, and so on. The debugger is written in Python itself, testifying to Python's introspective power. On the other hand, often the quickest way to debug a program is to add a few print statements to the source: the fast edit-test-debug cycle makes this simple approach very effective.

#### Django:

Django is a high-level Python web framework that encourages rapid development and clean, pragmatic design. Django makes it easier to build better web apps quickly and with less code.

**Note –** Django is a registered trademark of the Django Software Foundation, and is licensed under BSD License.

#### History of Django

**2003** – Started by Adrian Holovaty and Simon Willison as an internal project at the Lawrence Journal-World newspaper.

**2005** – Released July 2005 and named it Django, after the jazz guitarist Django Reinhardt.

**2005** – Mature enough to handle several high-traffic sites.

**Current** – Django is now an open source project with contributors across the world.

#### Django – Design Philosophies

Django comes with the following design philosophies –

**Loosely Coupled** – Django aims to make each element of its stack independent of the others.

**Less Coding** – Less code so in turn a quick development.

**Don't Repeat Yourself (DRY)** – Everything should be developed only in exactly one place instead of repeating it again and again.

**Fast Development** – Django's philosophy is to do all it can to facilitate hyper-fast development.

**Clean Design** – Django strictly maintains a clean design throughout its own code and makes it easy to follow best web-development practices.

#### SQLite:

SQLite is a C library that provides a lightweight disk-based database that doesn't require a separate server process and allows accessing the database using a nonstandard variant of the SQL query language. Some applications can use SQLite for internal data storage. It's also possible to prototype an application using SQLite and then port the code to a larger database such as PostgreSQL or Oracle.

The `sqlite3` module was written by Gerhard Häring. It provides an SQL interface compliant with the DB-API 2.0 specification described by [PEP 249](#), and requires SQLite 3.7.15 or newer. As described before, SQLite supports only a limited set of types natively.

To use other Python types with SQLite, you must **adapt** them to one of the sqlite3 module's supported types for SQLite: one of NoneType, int, float, str, bytes.

There are two ways to enable the sqlite3 module to adapt a custom Python type to one of the supported ones.

Letting your object adapt itself

Registering an adapter callable

MyClassCampus

### 3.5.2 Literature Survey

This application has both mobile and web platforms. You can easily use it for colleges, schools, and universities to manage various records about teachers and students as well as access the needed data fast. Manage your institution in just a couple of clicks! But it's too expensive.

eSchoolApp

It is a management system for a school that helps to control all the educational processes like exams, grades, transport, fees, schedules, etc. Parents can use a mobile version to be informed about their kids' results. Nothing can be easier to manage a school without nerves! but it is school level app so, we cannot add more department.

## 3.6 PROJECT PLAN/PROJECT PLANNING

Project planning is part of project management, which relates to the use of schedules such as Gantt charts to plan and subsequently report progress within the project environment.

Initially, the project scope is defined and the appropriate methods for completing the project are determined. Following this step, the durations for the various tasks necessary to complete the work are listed and grouped into a work breakdown structure.

Project planning is often used to organize different areas of a project, including project plans, workloads and the management of teams and individuals.

### 3.6.1 Project Plan

Planning before any activity is very much important. And if it is planned nicely, then success is guaranteed.

Project Management System has six major modules of Admin, Manage Application, Test Management, Process Management, Manage Comment, Reports. We analyzed the overall complexity of each of these modules and it was found that the project will require approximately 14 weeks completing, so we planned accordingly.

We decided to follow the SDLC i.e. Software Development Life Cycle while planning various phases of our project. This method consists of following activities:

Determination of system requirements

System Analysis

Design of system

Development of software

System Testing

Implementation and Evaluation

### 3.6.2 Project Scheduling

Project Scheduling is the culmination of a planning activity that is primary component of software project management.

When combined with estimation methods and risk analysis, scheduling, establishes a road map for the project management.

Scheduling begins with the process composition. The characteristics of the project are used to adapt an appropriate task set for the work to be done.

The task network is used to compute the critical project path, a time line chart and a variety of project information.

When creating a software project schedule, the planner begins with a set of tasks. If automated tools are used, the work breakdown is input as a task network or task

outline. Effort, duration, and start date are then input for each task. In addition, tasks may be assigned to specific individuals.

As a consequence of this input, a timeline chart, also called a Gantt chart is generating.

A Timeline Chart can be developed for the entire project. Timeline Charts depict a part of a software project schedule

All project tasks are listed in the left-hand column. The horizontal bars indicate the duration of each task. When multiple bars occur at the same time on the calendar, task concurrency is implied. The diamonds indicate milestones, which indicate the place where our project reach.

### 3.6.3 Project Development Approach

#### Incremental Model design

The incremental build model is a method of software development where the model is designed, implemented and tested incrementally (a little more is added each time) until the product is finished. It involves both development and maintenance. The product is defined as finished when it satisfies all of its requirements. This model combines the elements of the waterfall model with the iterative philosophy of prototyping.

Following is the pictorial representation of Iterative and Incremental model:

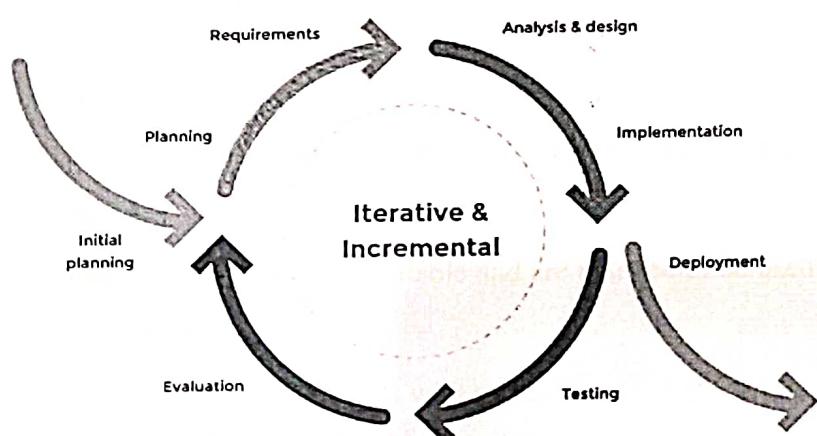


Fig.3.6.3.1 Incremental Modal

Iterative and Incremental development is a combination of both iterative design or iterative method and incremental build model for development. "During software

development, more than one iteration of the software development cycle may be in progress at the same time." and "This process may be described as an "evolutionary acquisition" or "incremental build" approach."

In incremental model the whole requirement is divided into various builds. During each iteration, the development module goes through the requirements, design, implementation and testing phases. Each subsequent release of the module adds function to the previous release. The process continues till the complete system is ready as per the requirement.

The key to successful use of an iterative software development life-cycle is rigorous validation of requirements, and verification & testing of each version of the software against those requirements within each cycle of the model. As the software evolves through successive cycles, tests have to be repeated and extended to verify each version of the software

#### Iterative Model Application

Like other SDLC models, Iterative and incremental development has some specific applications in the software industry. This model is most often used in the following scenarios:

Requirements of the complete system are clearly defined and understood.

Major requirements must be defined; however, some functionalities or requested enhancements may evolve with time.

There is a time to the market constraint.

A new technology is being used and is being learned by the development team while working on the project.

Resources with needed skill set are not available and are planned to be used on contract basis for specific iterations.

There are some high-risk features and goals which may change in the future.

**Integration and Testing:** All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.

**Deployment of system:** Once the functional and nonfunctional testing is done, the product is deployed in the customer environment or released into the market.

**Maintenance:** There are some issues which come up in the client environment. To fix those issues patches are released. Also, to enhance the product some better versions are released. Maintenance is done to deliver these changes in the customer environment.

### 3.6.4 Roles and Responsibility

There is role of the user to first of all analysis, designing, coding, testing and documentation. The main responsibility of the system is to satisfy the student requirements and provide the all solution their query.

## 3.7 TIME LINE CHART/GANTT CHART

Table 3.7.1 Time Duration

Sr. No.	Milestones	Milestone	Duration
		(days)	(days)
1	Requirements	25	27
2	Analysis and Module Specification	32	35
3	Designing	40	50
4	Coding	55	60
5	Documentation	15	17
Total days		167	189

Table 3.7.2 TimeLine

Development Phase	100 Days					Duration
	0-20	21-40	41-60	61-80	81-100	
Requirement Gathering & Analysis						7
Designing						10
Coding						48
Testing						5
Implementation						5
Documentation						Parallel
Total (Days)	100					

Table 3.7.3 Gantt Chart

Module↓	Month→	January			February				March			
		2nd week	3rd week	4th week	1st week	2nd week	3rd week	4th week	1st week	2nd week	3rd week	4th week
Analysis & Required Gathering		■										
Design			■	■								
Implementation					■	■	■	■	■	■		
Testing											■	■
Documentation											■	■
Final presentation											■	■

## CHAPTER 4

# SYSTEM ANALYSIS

### 4.1 STUDY OF CURRENT SYSTEM/EXISTING SYSTEM

Currently there isn't any Web portal that makes Attendance task easy by adding interactivity and administrative features on the portal.

Faculty taking attendance during lectures timing by calling student name or number.  
It creates noise and student need to pay attention on faculty for his/her name.

### 4.2 PROBLEM OR WEAKNESS OF CURRENT SYSTEM/LIMITATION OF EXISTING SYSTEM

It Campus is considered as a network to distribute the information among students and lecturers where all the faculty members, students and parents are able to communicate with each other through a network system.

### 4.3 PROPOSED SYSTEM/REQUIREMENT OF NEW SYSTEM

We are developing advanced attendance portal. By using this portal, the faculty's task becomes easy and they can complete their task of taking attendance in very efficient manner.

Currently, this type of concept is not available in market. We are developing our portal on this creative concept.

Our main purpose is reduced wasting of time while taking an attendance.

### 4.4 FEASIBILITY STUDY

When a new project is proposed, it normally goes through feasibility assessment. Feasibility study is carried out to determine whether the proposed system is possible to

develop with available resources and what should be the cost consideration. Facts considered in the feasibility analysis were.

Technical Feasibility

Economic Feasibility

Behavioral Feasibility

### **Technical Feasibility**

Technical Feasibility deals with the hardware as well as software requirements. Technology is not a constraint to type system development. We have to find out whether the necessary technology, the proposed equipment's have the capacity to hold the data, which is used in the project, should be checked to carry out this technical feasibility.

The technical feasibility issues usually raised during the feasibility stage of investigation includes these

This software is running in windows 2000 Operating System, which can be easily installed.

The hardware required is Pentium based server.

The system can be expanded.

This feasibility study present tangible and intangible benefits from the prefect by comparing the development and operational cost. The technique of cost benefit analysis is often used as a basis for assessing economic feasibility. This system needs some more initial investment than the existing system, but it can be justifiable that it will improve quality of service.

Thus feasibility study should center along the following points:

Improvement resulting over the existing method in terms of accuracy, timeliness.

Cost comparison

Estimate on the life expectancy of the hardware

Overall objective

Our project is economically feasible. It does not require much cost to be involved in the overall process. The overall objectives are in easing out the requirement processes.

## Behavioral Feasibility

This analysis involves how it will work when it is installed and the assessment of managerial environment in which it is implemented. People are inherently resistant to change and computers have been known to facilitate change. The new proposed system is very much useful to the useful to the users and there for it will accept broad audience from around the world.

## Schedule Feasibility

In Schedule Feasibility Study mainly timelines/deadlines is analyzed for proposed project which includes how many times teams will take to complete final project which has a great impact on the organization as purpose of project may fail if it can't be completed on time.

## Economic Feasibility

A system that can be developed and that will be used if installed must still be a good investment for the organization. Financial benefits must equal or exceed the costs. The financial and economic issues raised are as under:

No extra cost is incurred for developing the system.

No extra cost for the modification or addition of software and hardware will require in case of future expansion of the current system.

The company will be at profit if they implement this system because of the cost of implementation is nominal as compared to the profit they will be earning in terms of efficiency.

## 4.5 FUNCTIONAL REQUIREMENT

**1. Admin:** Responsibility of admin is to manage the application database and update the data in database regularly. For e.g. student's attendance and they fees information.

**2. Faculties:** Responsibility of faculties is to complete tasks which are assigned to him by administrators and manage some part of database.

**3. Students:** Once the portal being tested and being uploaded then after customer (or end student) will use this application. User is the main reason for which this application is being built. The end user can easily interact their attendance using this portal.

#### **4.6 NON-FUNCTIONAL REQUIREMENT**

**Usability:** The interface should use terms and concepts, which are drawn from the experience of people who will make most of the system.

**Efficiency:** The portal must provide easy and fast access without consuming more cost.

**Readability:** Users should never be surprised by the behavior of the system and it should also provide meaningful feedback when error occurs so that user can recover from the error.

**Accuracy:** The user should require that data obtained from the database and stored in the database must be accurate.

**Security:** The user wants the data stored in database must be secured and cannot be accessed by unauthorized user.

**Maintainability:** Users want that the system should be maintained easily means that if there are some changes required in the system that can be done easily.

#### **4.7 REQUIREMENT VALIDATION**

It is okay with not knowing the computer. As the system is paper based.

The risk of corrupted data is much less.

Data loss is less of a risk, particularly if records are stored in a fire-proof environment.

Problems with duplicate copies of the same records are generally avoided.

The process is simplified as you don't need to be familiar with computer operation

## CHAPTER 5

### SYSTEM DESIGN

#### **5.1 SYSTEM DESIGN AND METHODOLOGY**

- 1. Admin:** Responsibility of admin is to manage the application database and update the data in database regularly. For e.g. student's attendance and fees information.
- 2. Faculties:** Responsibility of faculties is to complete tasks which are assigned to him by administrators and manage some part of database.
- 3. Students:** Once the portal being tested and being uploaded then after customer (or end student) will use this application. User is the main reason for which this application is being built. The end user can easily interact their attendance using this portal.

#### **5.2 DATA DICTIONARY /DATABASE DESIGN**

Table 5.2.1 Admin

**Table Name: Admin**

Field Name	Data Type	Size	Constrains	Description
Admin_id	Varchar	10	Primary key	Auto generated from system
Admin_name	Varchar	30	Not null	Role of admin
Admin_pwd	Varchar	20	Not null	Password for log in

Table 5.2.2 Student

**Table Name: Student**

Field Name	Data Type	Size	Constrains	Description
Enrollment	Number	15	Primary key	Auto generated from system
Student_name	Varchar	50	Not null	Student name
Student_Add	Varchar	50	Not null	Student full address
S_Contact_no	Number	10	Not null	Student contact number
S_EmailID	Varchar	30	Not null	Student Email id
S_password	Varchar	20	Not null	Password for log in

Table 5.2.3 HOD

**Table Name: HOD**

<b>Field Name</b>	<b>Data Type</b>	<b>Size</b>	<b>Constrains</b>	<b>Description</b>
H_id	Varchar	10	Primary key	Auto generated from system
H_name	Varchar	30	Not null	HOD name
H_Contact_no	Number	10	Not null	HOD contact number
H_Address	Varchar	50	Not null	HOD full address
H_Email Id	Varchar	30	Not null	HOD Email id
H_password	Varchar	20	Not null	Password for log in
Dep_id	Varchar	10	Foreign key	Autogenerated from system

Table 5.2.4 Faculty

**Table Name: Faculty**

<b>Field Name</b>	<b>Data Type</b>	<b>Size</b>	<b>Constrains</b>	<b>Description</b>
F_id	Varchar	10	Primary key	Auto generated from system
F_name	Varchar	30	Not null	Faculty name
F_Contact_no	Number	10	Not null	Faculty contact number
F_Address	Varchar	50	Not null	Faculty full address
F_Email Id	Varchar	30	Not null	Faculty Email id
F_password	Varchar	20	Not null	Password for log in
Dep_id	Varchar	10	Foreign key	Auto generated from system

Table 5.2.5 Department

**Table Name: Department**

<b>Field Name</b>	<b>Data Type</b>	<b>Size</b>	<b>Constrains</b>	<b>Description</b>
Dep_id	Varchar	10	Primary key	Auto generated from system
Dep_name	Varchar	20	Not null	Department Name

Table 5.2.6 Student Section

**Table Name: Student Section**

<b>Field Name</b>	<b>Data Type</b>	<b>Size</b>	<b>Constrains</b>	<b>Description</b>
Enrollment no	Number	15	Foreign key	Autogenerated from system
SS_Total Fees	Number	5	Not null	Student Total Fees
SS_paid Fees	Number	5	--	Student paid fees
SS_Attend_total Day	Number	5	--	Student total lecture Attendance Day
SS_present Day	Number	5	--	Student total lecture Present
SS_Absent Day	Number	5	--	Student total lecture Absent Day

### 5.3 USE CASE DIAGRAM

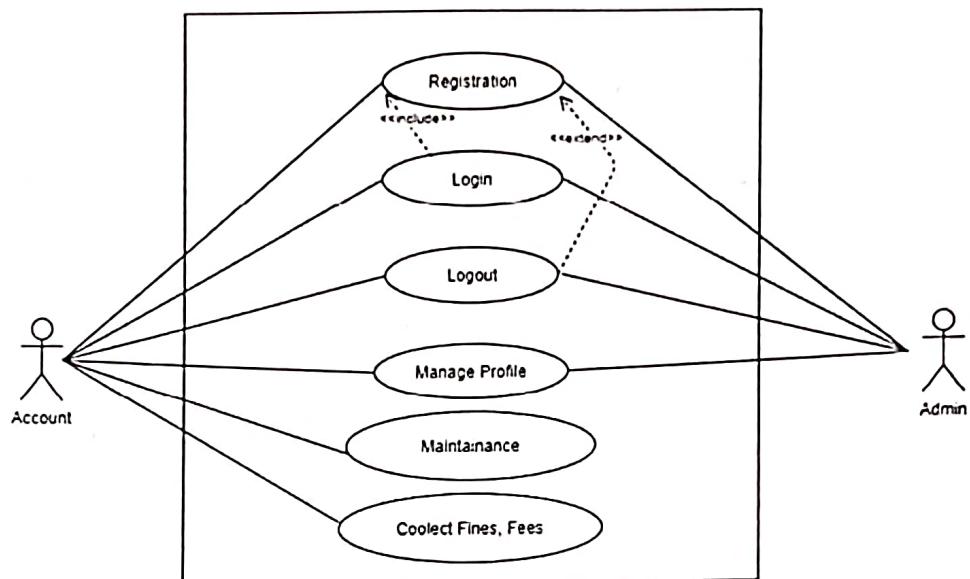


Fig.5.3.1 Use case diagram- Admin

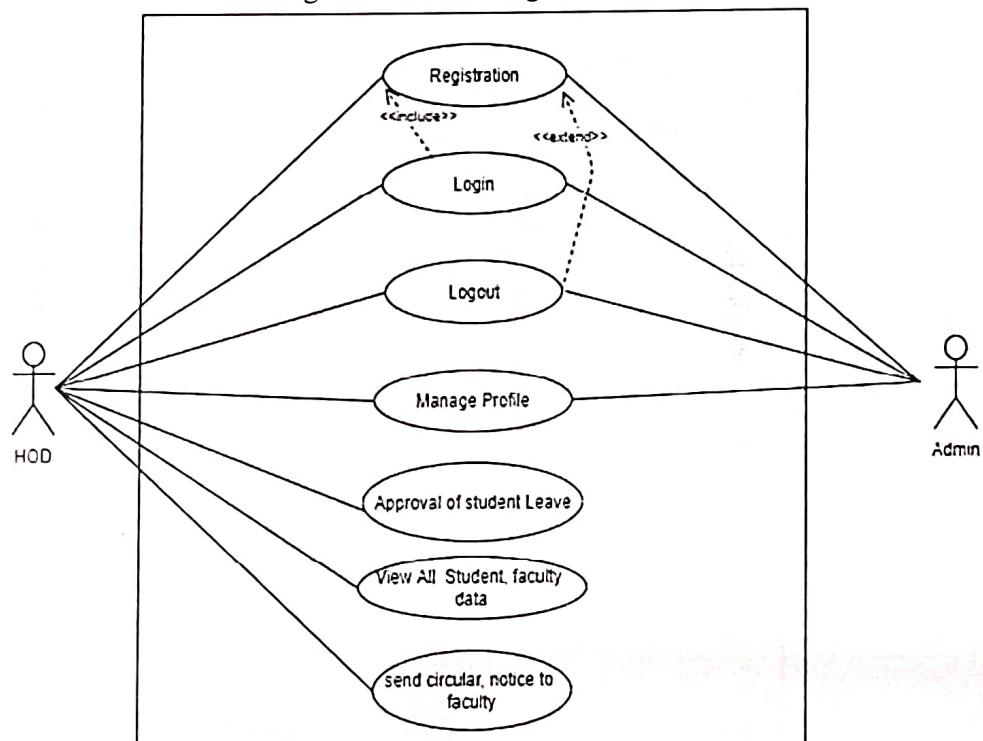


Fig. 5.3.2 Use case Diagram-HOD

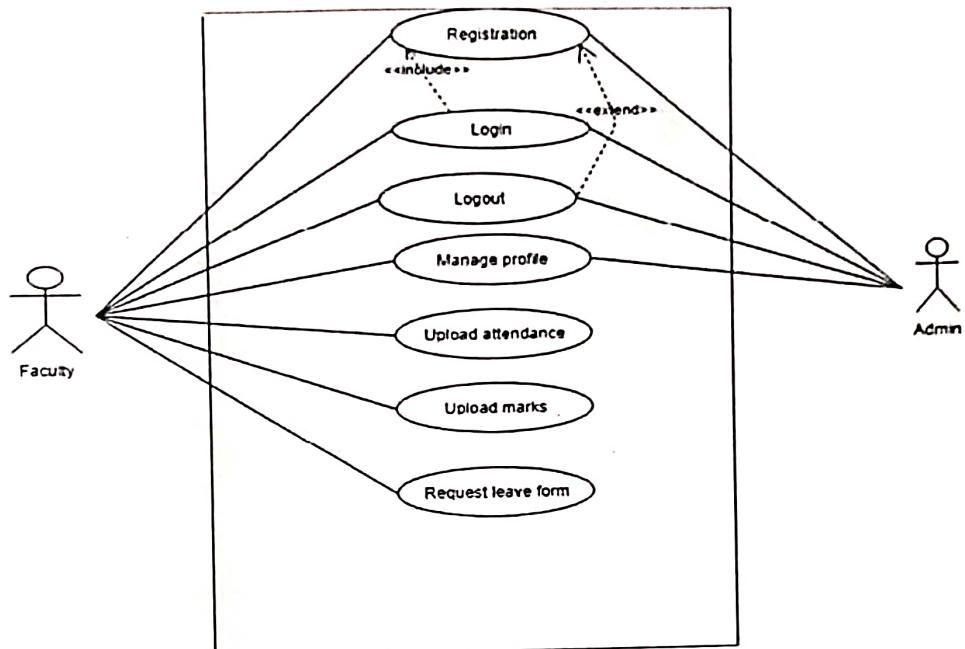


Fig.5.3.3 Use Case diagram-faculty

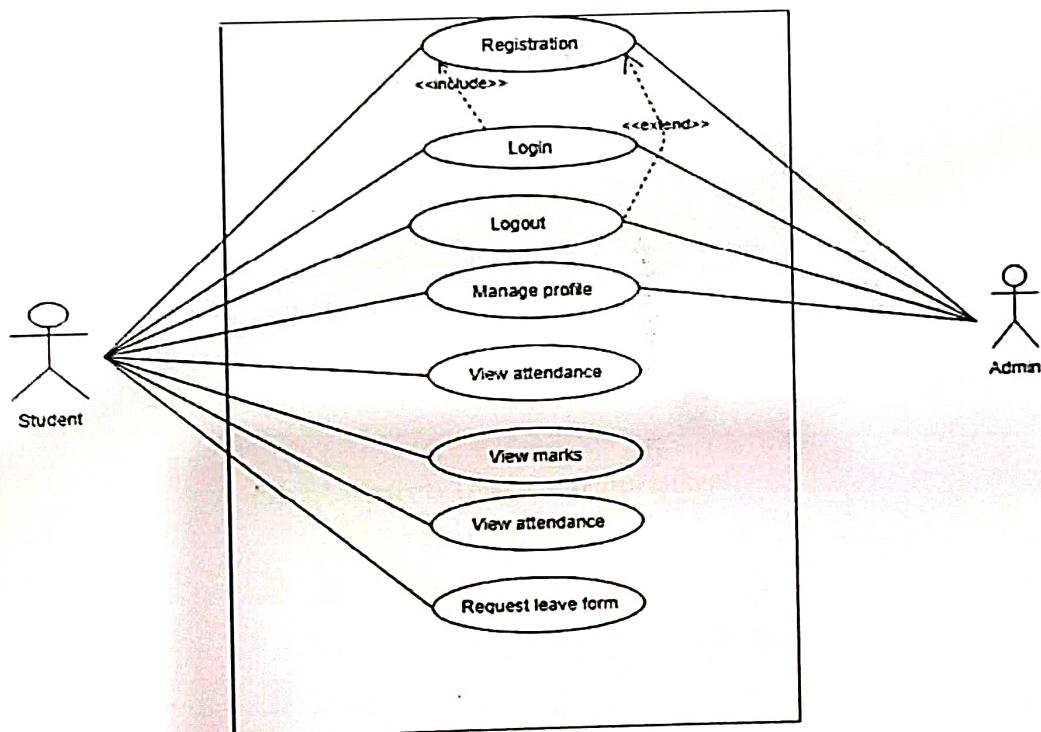


Fig 5.3.4 Student

## 5.4 ACTIVITY DIAGRAM

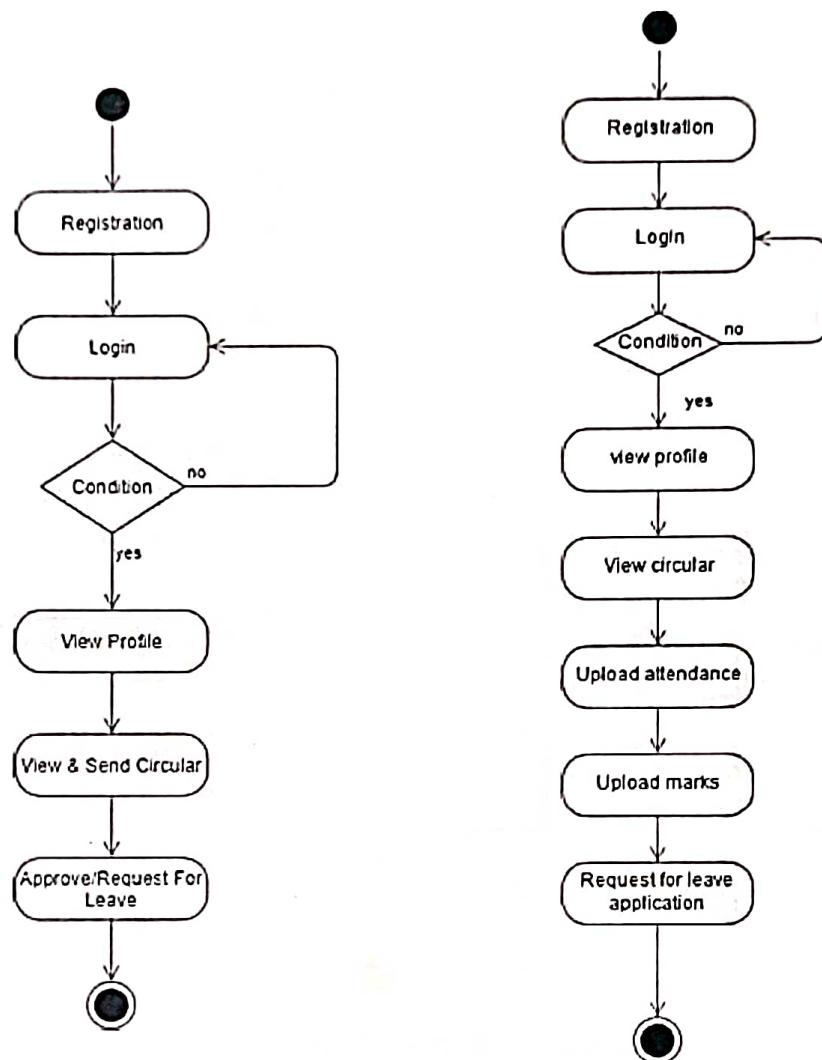


Fig.5.4.1 Activity Diagram-Registration

## CHAPTER 6

# IMPLEMENTATION

### 6.1 IMPLEMENTATION ENVIRONMENT

#### Python with Django

Django is a free, open source web framework written in the python programming language. A “web framework” is software that abstracts away many of the common challenges related to building a website, such as connecting to a database, handling security, user accounts, and so on. These days most developers rely on web frameworks rather than trying to build a website truly from scratch. Django in particular was first released in 2005 and has been in continuous development since then. Today, it is one of the most popular web frameworks available, used by the largest websites in the world—Instagram, Pinterest, Bitbucket, Disqus—but also flexible enough to be a good choice for early-stage startups and prototyping personal projects.

This book is regularly updated and features the latest versions of both Django and Python. It also uses pipenv for managing Python packages and virtual environments, though using pip works fine as well. Throughout we’ll be using modern best practices from the Django, Python, and web development communities including the thorough use of testing.

### 6.2 SECURITY FEATURES

The security feature is the main important feature of the application, it is random code generation of particular

shopkeeper which is created by distributor. No Spam or fake users are allowed to this application. Distributor cannot let add stock and add shopkeeper unless it cannot register and its correct id and password. All the data entry must be according to required pattern. If the email\_id is already existing he cannot use the same email\_id. password can be reset only via registered email only.

### 6.3 CODING STANDARDS

The coding standard is the well-defined and standard style of coding. With the help of the coding standards any person can go into any code and figure out what's going on and new people can get up to speed quickly. Some coding standard ways of doing several things such as the way variables are to be named, the code is to be laid out, the comments are to be described, the work of function are to be carried out. This section describes the coding standards, which we have used in the program. In the context of coding standard, the tag consists.

## CHAPTER 7

# TESTING

### 7.1 TESTING PLAN/STRATEGY

A test plan is the cornerstone of a successful testing implementation. The testing plan represents the overall approach to the test. In many ways, the test plan serves as a summary of the test activities that will be performed. It shows how the tests will be organized, and outlines all of the tester's needs that must be met in order to properly carry out the test. The goal of test planning is to establish the list of tasks that, if performed, will identify all of the requirements that have not been met in the software. There are many standards that can be used for developing test plans. Early in the deployment planning phase, the testing effort, and identifies the methodology that your team will use to conduct tests. It also identifies the hardware, software, and tools required for testing and the features and functions that will be tested. A well-rounded test plan notes any risk factors that jeopardize testing and includes a testing schedule. So, we can say that Test Planning details the activities, dependencies and effort required to conducting the system test.

### 7.2 TESTING METHOD

Involve execution and implementation of the software with test data and examining the outputs of the software and its operational behavior to check that it is performing as required.

#### Defect Testing

Intended to find inconsistencies between a program and its specification. These inconsistencies are usually due to program faults or defects.

### 7.2.1 Test case

A test case is a document, which has a set of test data, preconditions, expected results and post conditions, developed for a particular test scenario in order to verify compliance against a specific requirement.

Test Case acts as the starting point for the test execution, and after applying a set of input values; the application has a definitive outcome and leaves the system at some end point or also known as execution post condition.

**Test\_Valid\_Login:** This test case is used validate the functional unit in the application in order to verify the user login information, i.e., if the username and password are matching correctly and is a valid login. I have used two test cases one with input as valid login and the other input as invalid login.

**Test\_Invalid\_Login:** This test case is used to validate the functional unit which makes sure that the user is not allowed to login if there is a mismatch in the username and password supplied by the user. I have used two test cases for this method, one with a valid input and the other with an invalid input.

**Test\_NoUser:** This test case is used to check if there is no user with that particular user id. I have used two test cases with two valid inputs (i.e., with inputs being those users whose account do not exist in the database) and the tests were passed and one invalid input like already existing user

**Test\_Valid\_StudentPOS:** This test case is used to verify if a faculty member gets the exact POS of the student when he enters the student's ID. I have used two test cases for this method one with a valid student ID and the other with an invalid (non-existing) ID.

## CHAPTER 8

# CONCLUSION AND DISCUSSION

### **8.1 OVERALL ANALYSIS OF INTERNSHIP**

Great skills have been achieved during the development of this project, time management being one of them, research in various areas of web and database development and at the end of the day it can be said that the task has been a great success incorporated with extraordinary challenges. On my Graduation course I learned many theoretical comprehensions. Using that knowledge and Observing live operational system. My project is a fundamental approach of these. I develop the project “Digital Campus”.

### **8.2 DATES OF CONTINUOUS EVALUATION**

#### **8.2.1 DATES OF CONTINUOUS EVALUATION(CE-I)**

Table 8.2.1 CE-I

Sr. no.	Week	Date
1.	Week 1	10/01/22
2.	Week 2	17/01/22
3.	Week 3	24/01/22
4.	Week 4	31/01/22
5.	Week 5	7/02/22
6.	Week 6	14/02/22
7.	Week 7	21/02/22
8.	Week 8	28/02/22
9.	Week 9	7/03/22
10.	Week 10	14/03/22
11.	Week 11	21/03/22
12.	Week 12	28/03/22

## 8.2 DATES OF CONTINUOUS EVALUATION(CE-II )

Table 8.2.1 CE-II

Sr.no.	Month	Date
1.	January	10/01/22
2.	February	10/02/22
3.	March	10/03/22
4.	April	10/04/22

## 8.3 ADVANTAGES

Mobile class registration. ...

Mobile access to grades. ...

Interactive maps with real-time schedules. ...

Complete directory of staff members.

## 8.4 LIMITATION/DISADVANTAGES/PROBLEM OR WEAKNESS

Software is limited to Desktop only.

System requires python interpreter installed on the system.

All options of student management are not included in current version.

Security options provide only low level security against beginner attackers

## 8.5 FUTURE WORK/FUTURE ENHANCEMENT

I also want to modify my application for the Future Work. I hope this work will help me in my future work. The aim of this project is to manage each and every section. Such as every Student, Teacher and Staff. There will be a system for downloading Admission form For New Applicant. It will show every updated notice given by the university authorities.

## REFERENCES

- [www.quora.com](http://www.quora.com)
- <https://www.geeksforgeeks.org/>
- Bergner, Terry; Steiny, Julia and Armstrong, Jane. (2007). Benefits of and Lessons Learned from Linking Teacher and Student Data. National Center for Educational Accountability, Data Quality Campaign. [www.DataQualityCampaign.org](http://www.DataQualityCampaign.org)
- Berry, Barnett. (2007). Connecting Teacher and Student Data: Benefits, Challenges and Lessons Learned. Center for Teaching Quality. [www.teachingquality.org](http://www.teachingquality.org)