

# **ONLINE DISCUSSION FORUM**

**A Report of the Main Project Work submitted in Partial  
fulfilment of the Requirements for the Degree of**

**BACHELOR OF COMPUTER APPLICATIONS**

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**MAR AUGUSTHINOSE COLLEGE,  
RAMAPURAM**

*(Affiliated to Mahatma Gandhi University)*

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# MAR AUGUSTHINOSE COLLEGE, RAMAPURAM

(Affiliated to Mahatma Gandhi University)

## DEPARTMENT OF COMPUTER SCIENCE



## CERTIFICATE

*This is to certify that the project entitled “ONLINE DISCUSSION FORUM” is a Bonafede record of the project work done by MUZAMMIL IBRAHIM P M (Reg no. 200021090821) under the guidance of Mr. Shibu Kallarackal, MCA, during the academic year 2020-23, for the partial fulfillment of the requirements for the award of the Degree of Bachelor of Computer Applications under M.G. University, Kottayam.*

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Viva-voce Examination conducted on ..... at Mar Augusthinose College, Ramapuram

**Internal Examiner**

**External Examiner**

Place:

Date:

## **DECLARATION**

I, **MUZAMMIL IBRAHIM P M** hereby declare that the project report, titled **"ONLINE DISCUSSION FORUM"** is a record of original work undertaken by me for the award of the degree of Bachelor of Computer Applications. I have completed this project under the guidance of Mr. Shibu Kallarackal, Department of Computer Science.

I also declare that this project has not been submitted for the award of any degree. I hereby confirm the originality of the work.

**MUZAMMIL IBRAHIM P M**

Place:

Date:

## ACKNOWLEDGEMENT

Firstly, I thank **God Almighty** whose blessing were always with me and helped me to complete this project work successfully.

I acknowledge my deep sense of gratitude to **Dr. Joy Jacob MA, MPhil, Ph.D.**, the Principal for permitting me to do this project.

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MUZAMMIL IBRAHIM P M

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## **ABSTRACT**

The project titled “Online Discussion-Forum” is designed using HTML,CSS, JAVASCRIPT, Bootstrap as Frontend and Django, SQLite3 Server as back end. The coding language used is Python.

This project is aimed at developing online form for the group discussion. This is a web-based tool. Any user can post the doubts topics and can reply for the other user doubts. The user can invites others for Discussion and submit query. This is useful for a small office, school or a department or for that matter any group who is interested to organize it effectively. Facility to share the resource and post articles that can be viewed by registered user.

## **1. INTRODUCTION**

This website “**ONLINE DISCUSSION FORUM**” is made for providing a platform for having discussions. This forum provides the platform under one roof to interact with different members which maybe the experts in a particular field or a normal employee for seeking or to give advices. An online space on which anybody can have discussions regarding any research, academic documents or any latest technology free of cost. A website which helps to resolve doubts, queries related to any field by having discussions with other registered users.

With highly growing of the telecommunication infrastructures, such as Internet and the development of the high performance have brought about new era of rapid advances in information technology. Internet has become an ocean of information related to every aspect which has existence in this world. The main purpose of this website is to develop a one roof platform for the effective interaction, effective exposure, and a right direction toward communication.

## **2. SYSTEM ANALYSIS**

A system requirements analysis is a complete description of the behavior of the system to be developed. It includes a set of use cases that describe all of the interactions that the users will have with the system. In addition to use cases, the system requirement analysis contains functional requirements, which define the internal workings of the system: that is, the calculations, technical details, data manipulation and processing, and other specific functionality that shows how the use cases are to be satisfied. It also contains nonfunctional requirements, which impose constraints on the design or implementation (such as performance requirements, quality standards or design constraints). Requirement: The requirement is a complete description of the behavior of the system to be developed.

**Functional Requirement:** A functional requirement defines the internal workings of the system: that is, the calculations, technical details, data manipulation and processing, and other specific functionality that shows how the use cases are to be satisfied.

**Non-Functional Requirement:** Non-functional requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. It is about how the system supposes to be and specify the quality of the system, is mostly related to the satisfaction of the user, example minimum acceptable page load time. Some of these nonfunctional requirements are: 1. Integrity 2. Usability 3. Maintainability Integrity: Integrity testing is basically a type of software testing that is done to check whether the application or the product is secured or not. It checks to see if this application is vulnerable to attacks, if anyone hack the system or login to the application without any authorization. It is a process to determine that an information system protects data and maintains functionality as intended. The security testing is performed to check whether there is any information leakage in the sense by encrypting the application or using wide range of software's and hardware's and firewall etc.



## **Objective of the System:**

It is a website of its own kind that provides a ceramic way to attain and give knowledge. Here the process of knowledge sharing is concerned with the purity of the facts and figures collected from various authentic sources. My aim is to help the passionate people to share their views with its purity and trueness. These different users can guide each other on various aspects. Beyond this my website will give the opportunity to every user say “a lot of eminent personalities within the institute who can share their bright knowledge over the website”. Last but not the least this website also gives the opportunity to the employees for sharing of knowledge and for utilization of the efforts by gaining the knowledge.

### **2.1 Scope of the System**

“Software scope describes the data and control to be processed, function, performance, user management, access control management”

**Data and Control:** The input data to the system will be customer detail, as well as document detail for order. The output data will be different reports and reports usable in order and inquiry analysis. With the help of various reports, easy to make any needed decision.

**Functions:** Basic functions of the system authenticate the user and user inputs document details, customer details and inquiry details as needed. It processes the input data to make the output information presented as reports.

**Performance:** The performance of the system requires the project to take low resources from Server and present more information in smallest memory utilization.

**User Management:** Each user should have its own password to log in to the system and based on the rolls and rights allocated to the user by the administrator of the system, user will be allowed to open the different forms and perform required operations.

### **3. REQUIREMENTS SPECIFICATION**

#### **3.1 Hardware Specification**

MACHINE	:	PENTIUM 4
MOTHER BOARD	:	810 Intel Chipset
MEMORY	:	512 MB DDR2
HARD DISK	:	2 GB
FLOPPY DRIVE	:	1.44 FDD
DVD WRITER	:	20X DVD
MONITOR	:	17" Colour Monitor
FRONT END	:	PYTHON
IDE	:	Sublime Text

#### **3.2 Software Configuration**

BACK END	:	SQLITE3
OPERATING SYSYEM	:	Microsoft Windows 10

#### **3.3 Programming Environment**

An operating system is a collection of programs that control the operations of the purpose of obtaining an effective performance. It acts as an interface between hardware and user programs. It facilitates the execution of the programs. Operating system is software responsible for allocating resources including memory, processor time, disk space and peripheral device such as printers, modems and the monitor.

### **3.4 Operating System Features**

#### **WINDOWS 10**

Windows 10 is a computer operating system by Microsoft as part of its Windows family of operating systems. It was known as Threshold when it was being developed and announced at a press event on 30 September 2014. It came out for PCs on July 29, 2015. Beginning on that day, Windows 10 was available as a free upgrade for users running Windows 7 and Windows 8.1 for one year.

Windows 10 is designed to provide a common, "universal" user interface for various systems. These include desktop, laptop, and all-in-one PCs, tablet computers, smartphones, and embedded systems such as the Xbox game console. Unlike earlier versions of Windows, Windows 10 is regularly updated with new features based on user feedback, including before it was first released. Microsoft releases updates every half a year, an example of the software as a service principle. Each release has four digit. Build number (a type of version number), the first two digits referring to the year of release, and the other two digits referring to the month of release.

#### **➤ Kernel Features**

The kernel is considered to be the heart of the operating system that provides services to the programs running on the computer. It takes care of the hardware, software, network resources, file systems and the remaining services.

- Security
- System fault tolerance
- Multitasking
- Multiprocessing
- Platform independence
- File system reliability
- File system security
- Flexible protocol support

- Enhanced scalability
- Multi-user environment
- Communication

### **3.5 Language Features**

As a programming language, the features of Python brought to the table are many. Some of the most significant features of Python are:

#### **• Easy to Code**

Python is a very developer-friendly language which means that anyone and everyone can learn to code it in a couple of hours or days. As compared to other object-oriented programming languages like Java, C, C++, and C#, Python is one of the easiest to learn.

#### **• Open Source and Free**

Python is an open-source programming language which means that anyone can create and contribute to its development. Python has an online forum where thousands of coders gather daily to improve this language further. Along with this Python is free to download and use in any operating system, be it Windows, Mac or Linux.

#### **• Support for GUI**

GUI or Graphical User Interface is one of the key aspects of any programming language because it has the ability to add flair to code and make the results more visual. Python has support for a wide array of GUIs which can easily be imported to the interpreter, thus making this one of the most favorite languages for developers.

- **Object-Oriented Approach**

One of the key aspects of Python is its object-oriented approach. This basically means that Python recognizes the concept of class and object encapsulation thus allowing programs to be efficient in the long run.

- **High-Level Language**

Python has been designed to be a high-level programming language, which means that when you code in Python you don't need to be aware of the coding structure, architecture as well as memory management.

- **Integrated by Nature**

Python is an integrated language by nature. This means that the python interpreter executes codes one line at a time. Unlike other object-oriented programming languages, we don't need to compile Python code thus making the debugging process much easier and efficient. Another advantage of this is, that upon execution the Python code is immediately converted into an intermediate form also known as byte-code which makes it easier to execute and also saves runtime in the long run.

- **Highly Portable**

Suppose you are running Python on Windows and you need to shift the same to either a Mac or a Linux system, then you can easily achieve the same in Python without having to worry about changing the code. This is not possible in other programming languages, thus making Python one of the most portable languages available in the industry.

- **Highly Dynamic**

As mentioned in an earlier paragraph, Python is one of the most dynamic languages available in the industry today. What this basically means is that the type of a variable is decided at the run time and not in advance. Due to the presence of this feature, we do not need to specify the type of the variable during coding, thus saving time and increasing efficiency.

- **Extensive Array of Library**

Out of the box, Python comes inbuilt with a large number of libraries that can be imported at any instance and be used in a specific program. The presence of libraries also makes sure that you don't need to write all the code yourself and can import the same from those that already exist in the libraries.

- **Support for Other Languages**

Being coded in C, Python by default supports the execution of code written in other programming languages such as Java, C, and C#, thus making it one of the versatile in the industry.

### **3.6 Software Tools Used**

The whole Project is divided in two parts the front end and the back end.

- **Front end**

The front end is designed using of Python, HTML, and CSS.

### **PYTHON:**

Python is an easy to learn, powerful programming language. It has efficient high-level data structures and a simple but effective approach to object-oriented programming. Python's elegant syntax and dynamic typing, together with its interpreted nature, make it an ideal language for scripting and rapid application development in many areas on most platforms. Each rule begins with a name (which is the name defined by the rule) and::=. A vertical bar (|) is used to separate alternatives; it is the least binding operator in this notation. A star (\*) means zero or more repetitions of the preceding item; likewise, a plus (+) means one or more repetitions, and a phrase enclosed in square brackets ([ ]) means zero or one occurrences (in other words, the enclosed phrase is optional). The \* and + operators bind as tightly as possible; parentheses are used for grouping. Literal strings are enclosed in quotes. White space is only meaningful to separate tokens. Rules are normally contained on a single line; rules with many alternatives may be formatted alternatively with each line after the first beginning with a vertical bar. In lexical definitions (as the example above), two more conventions are used: Two literal characters separated by three dots mean a choice of any single character in the given (inclusive) range of ASCII characters. A phrase

between angular brackets (`<...>`) gives an informal description of the symbol defined; e.g., this could be used to describe the notion of ‘control character’ if needed.

Even though the notation used is almost the same, there is a big difference between the meaning of lexical and syntactic definitions: a lexical definition operates on the individual characters of the input source, while a syntax definition operates on the stream of tokens generated by the lexical analysis. All uses of BNF in the next chapter (“Lexical Analysis”) are lexical definitions; uses in subsequent chapters are syntactic definitions.

## **HTML :**

HTML or Hyper Text Markup Language is the main markup language for creating web pages and other information that can be displayed in a web browser. HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets (like `<html>`), within the web page content. HTML tags most commonly come in pairs like `<h1>` and `</h1>`, although some tags represent empty elements and so are unpaired,

For example :`<img>` The first tag in a pair is the start tag, and the second tag is the end tag (they are also called opening tags and closing tags). In between these tags web designers can add text, further tags, comments and other types of text-based content. The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page. HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. It can embed scripts written in languages such as JavaScript which affect the behavior of HTML web pages.

## **CSS:**

Cascading Style Sheets(CSS) is a style sheet language used for describing the look and formatting of a document written in a markup language. While most often used to style web pages and interfaces written in HTML and XHTML, the language can be applied to any kind of XML document, including plain XML, SVG and XUL. CSS is a cornerstone specification of the web and almost all web pages use CSS style sheets to describe their presentation. CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification. of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the structural content (such as by allowing for table less web design). CSS can also allow the same markup page to be presented in different styles for different rendering methods, such as on-screen, in print, by voice (when read out by a speech-based browser or screen reader) and on Braille-based, tactile devices. It can also be used to allow the web page to display differently depending on the screen size or device on which it is being viewed. While the author of a document typically links that document to a CSS file, readers can use a different style sheet, perhaps one on their own computer, to override the one the author has specified. However, if the author or the reader did not link the document to a specific style sheet the default style of the browser will be applied. CSS specifies a priority scheme to determine which style rules apply if more than one rule matches against a particular element. In this so-called cascade, priorities or weights are calculated and assigned to rules, so that the results are predictable.

### ➤ **Back end**

## **SQLITE3**

**SQLite** is a **server-less database** that means you can use it within almost all programming languages including Python. As it doesn't require a server, there is **no need to install** it to work with SQLite as it is shipped by default along with Python version 2.5.x onwards

**SQLite3** module is used to integrate the SQLite database with Python. It is a standardized Python DBI API 2.0 and provides a straightforward and simple-to-use interface for interacting with SQLite databases.



## **4. SYSTEM DESIGN**

The most creative and challenging phase of system life cycle is system design. The term design describes a final system and the process by which it is developed. It refers to the technical specifications that will be applied in implementing the candidate system. The elegant design achieves its objectives with minimum use of resources. The first step is to determine how the output is to be produced and in what format. The input and the database have to be designed to meet the requirements of proposed output.

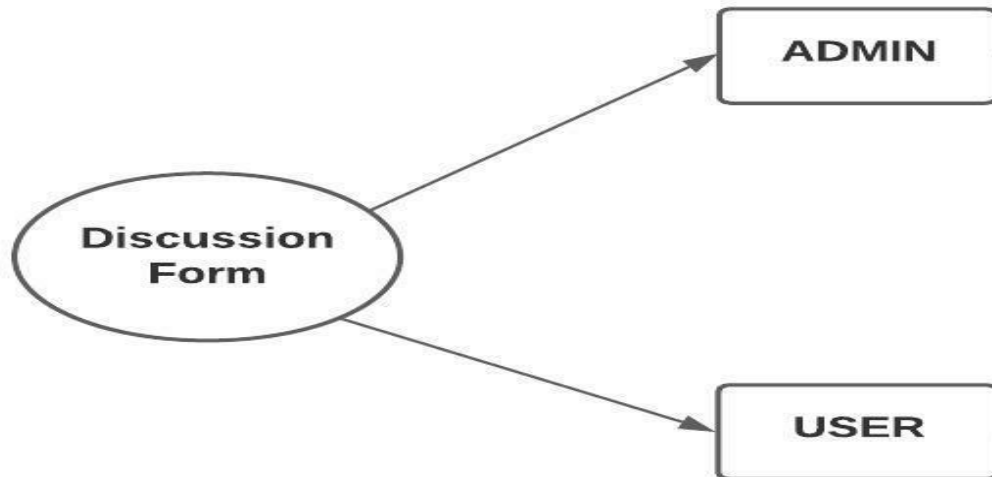
### **4.1 Data Flow Diagram**

Larry Constantine first developed the DFD as a way of expressing system requirements in a graphical form this led to module design. A dataflow diagram DFD also known as a "bubble chart" is a graphical technique that depicts information and transforms that are applied as data move from input to output. The DFD is used to represent increasing information flow and functional details.

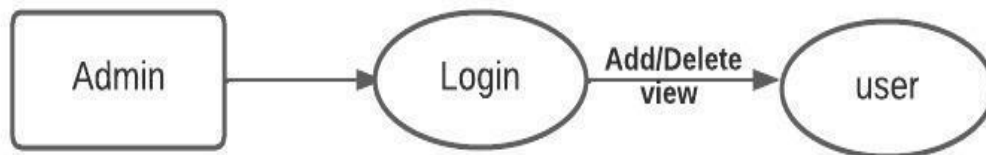
Data flow diagrams is a means of representing a system at any level of detail with a graphic network of symbols showing data flows, data stores, data process and data stores. The purpose of data flow diagram is to provide a semantic bridge between users and system developers.

The diagram is the basis of the structural analysis. Data flow diagrams are supported by other techniques of structured system analysis data structured diagram, data dictionaries and procedure representing techniques such as decision tables, decision tree and structured English. Processes represent activities in which data is manipulated by being retrieved or transformed in some way. A circle represents it. The process will show the data transformation or change. Data coming into a process must be "worked-on" or transformed in some way. Thus, all process may have an input and output.

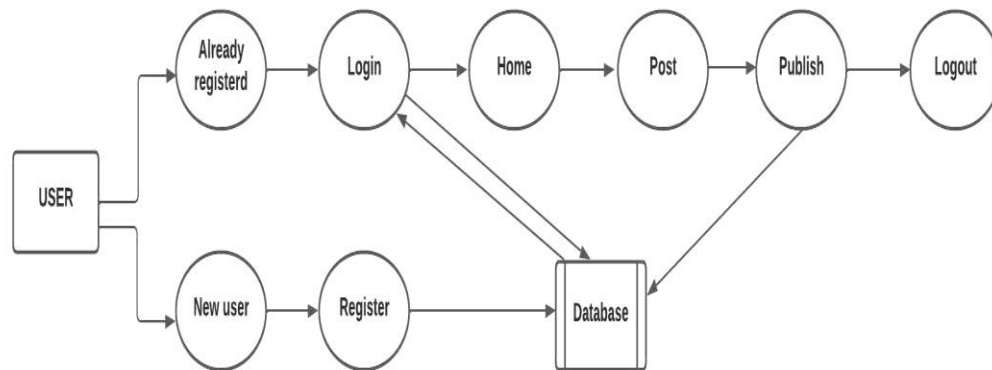
## CONTEXT FLOW DIAGRAM



## ADMIN DATA FLOW DIAGRAM



## USER DATA FLOW DIAGRAM



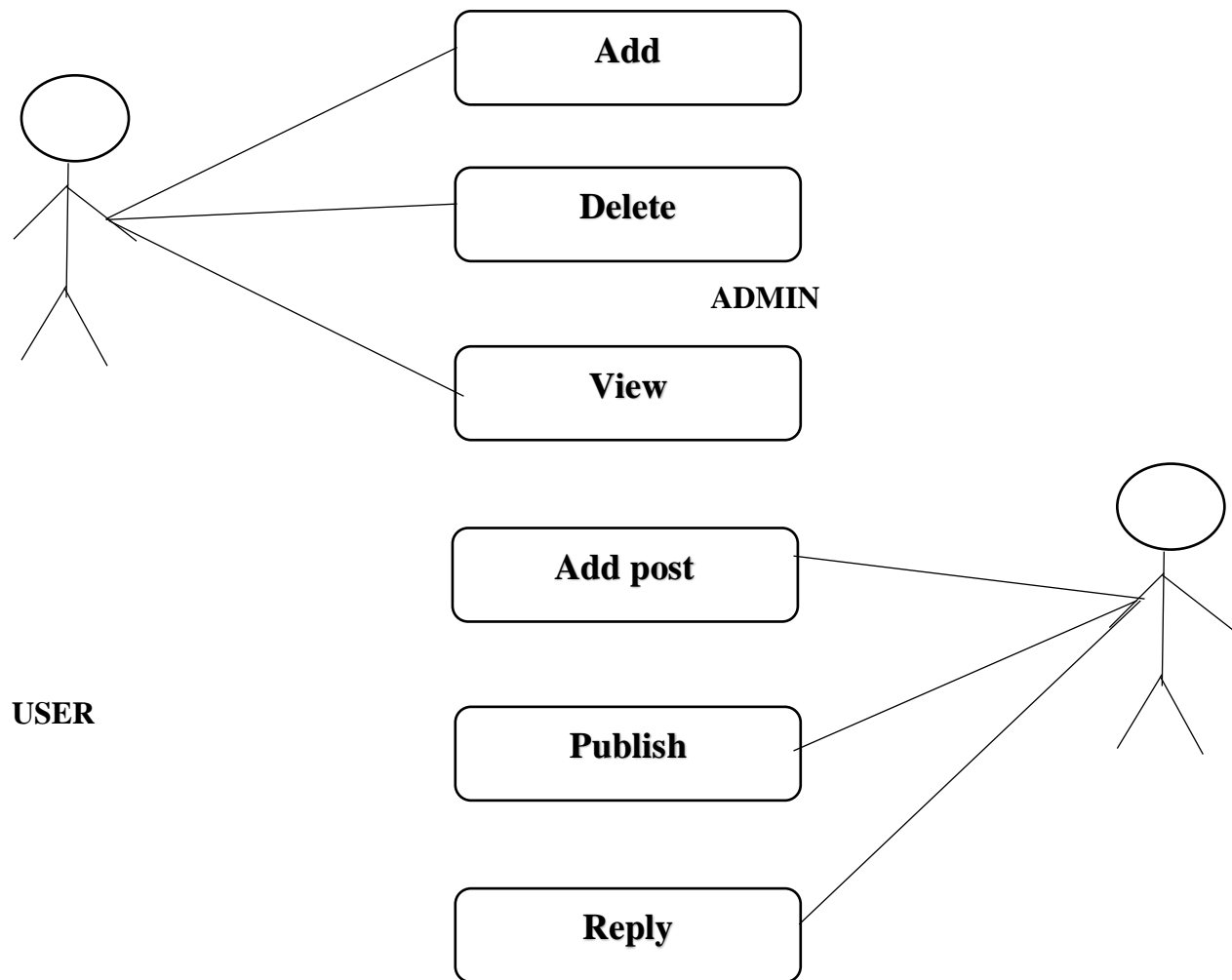
### 4.2 E R Diagram

An Entity Relationship (ER) Diagram is a type of flowchart that illustrates how “entities” such as people, objects or concepts relate to each other within a system. ER Diagrams are most often used to design or debug relational databases in the fields of software engineering, business information systems, education and research. Also known as ERDs or ER Models, they use a defined set of symbols such as rectangles, diamonds, ovals and connecting lines to depict the interconnectedness of entities, relationships and their attributes. ER diagrams are related to data structure diagrams (DSDs), which focus on the relationships of elements within entities instead of relationships between entities themselves. ER diagrams also are often used in conjunction with data flow diagrams (DFDs), which map out the flow of information for processes or systems.



## 4.2 Usecase Diagram

A use case diagram is used to represent the dynamic behavior of a system. It encapsulates the system's functionality by incorporating use cases, actors, and their relationships. It models the tasks, services, and functions required by a system/subsystem of an application. It depicts the high-level functionality of a system and also tells how the user handles a system. The main purpose of a use case diagram is to portray the dynamic aspect of a system. It accumulates the system's requirement, which includes both internal as well as external influences. It invokes persons, use cases, and several things that invoke the actors and elements accountable for the implementation of use case diagrams. It represents how an entity from the external environment can interact with a part of the system.



## **5. DATABASE DESIGN**

The overall objectives in the development of database technology has been to treat data as an organizational resource and as an integrated whole Database Management System allow the data to be protected and organized separately from other resources. If Database Management System can provide centralized access to the data from the Programs, it is possible to treat the data as separate resource. The objectives of Database design are,

- Data integration
- Data abstraction
- Data independence

Several degrees of normalization have to be applied during the process of table design. The major aim of the process of normalization is to reduce data redundancy and Prevent losing data integrity. Redundancy refers to unwanted and unnecessary repetition of data. Data integrity has to be converted at all levels. For normalization can create problems related to storage and retrieval of data. During the process of normalization, dependencies can be identified which cause serious problems during deletion and updating. Normalization also helps in simplifying the structure of tables. The theme behind a database is to handle the information as an integrated whole thus making access to information easy, quick, inexpensive and flexible for the users. The entire package depends on how the data is maintained in the system. Each table has been designed with a perfect vision. Minor tables have been created which through takes much space facilities for the purpose of querying fast and accurately. The tables used in this project are described below.

## 5.1 Table Design

### Profile

Fieldname	Data Type	Length	Description
user	OneToOneField	0	User
image	ImageField	0	Image

### Post

Fieldname	Data Type	Length	Description
user1		200	User1
post_id	AutoField	200	Post id
post_content	CharField	5000	Post content
timestamp	DateTimeField	0	Time stamp
image	imageField	0	Image

### Reply

Fieldname	Data Type	Length	Description
user		0	User
reply_id	AutoField	0	Reply id
reply_content	CharField	100	Reply content
timestamp	DateTimeField	0	Time stamp
image	imageField	0	Image

## **5.2 User Interface Design**

I/O design forms one of the major aspects of any system design. It requires much careful attention towards the user side. It defines the interface between user and system. Carefully designed input and output define how effective the system is.

### **➤ INPUT DESIGN**

Input design converts user-oriented inputs to computer-based formats, which requires careful attention. The collection of input data is the most expensive part of the system in terms of the equipment used and the number of people involved. In input design, data is accepted for computer processing and input to the system is done through mapping via a map support or links. Inaccurate input data is the most common cause of errors in data processing. The input screens need to be designed more carefully and logically. A set of menus is provided which help for better application navigation. 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.

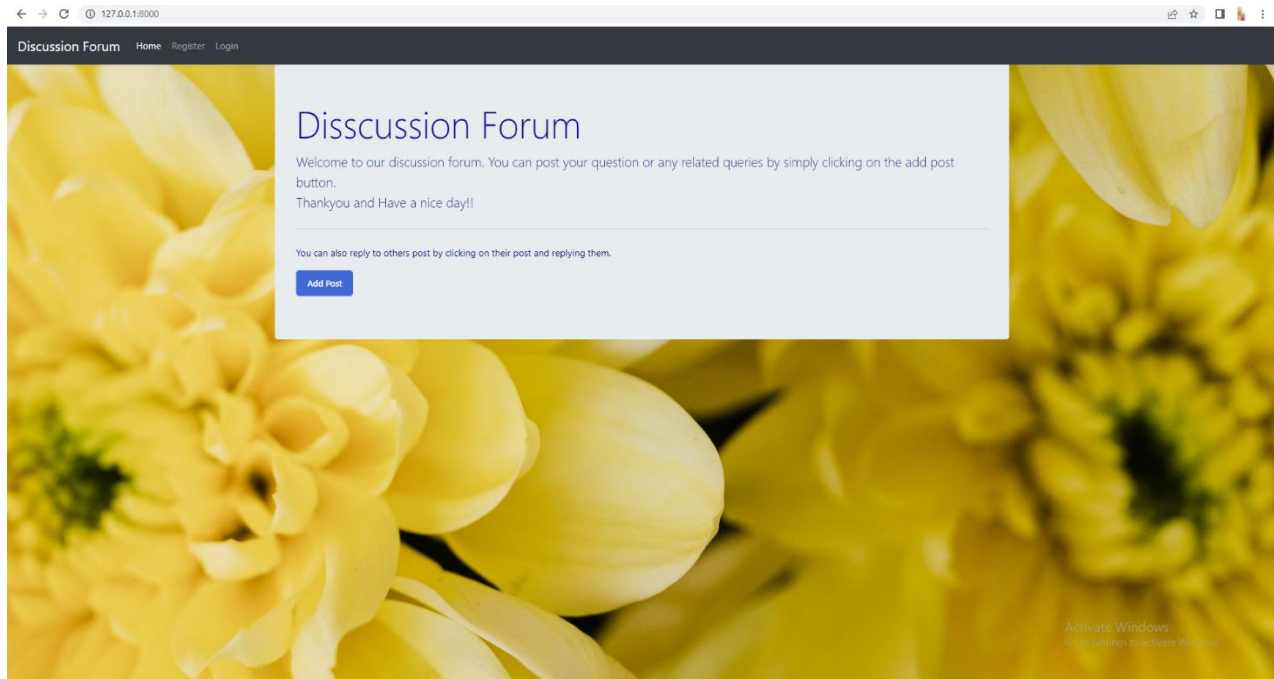
### **➤ OUTPUT DESIGN**

Outputs are the most important and useful information to the user and to the department. Intelligent output designs will improve systems relationships with the user and help much in decision-making. Outputs are also used to provide a permanent hard copy of the results for later use.

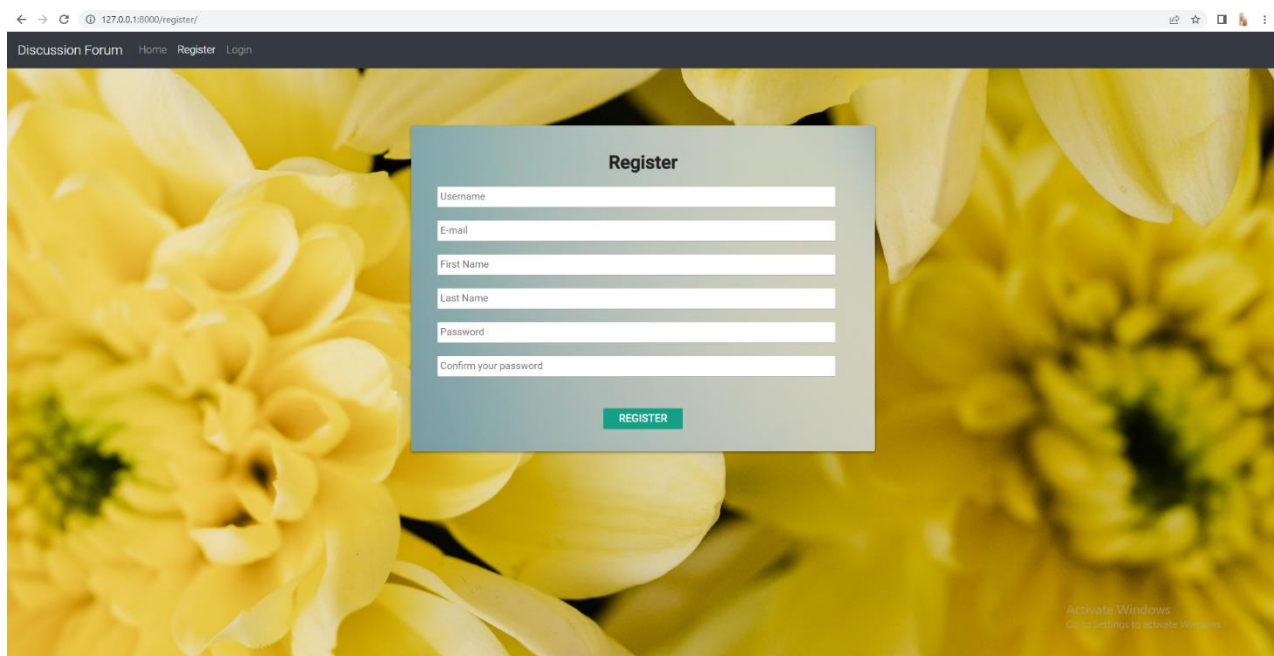


## 6. SCREEN LAYOUTS

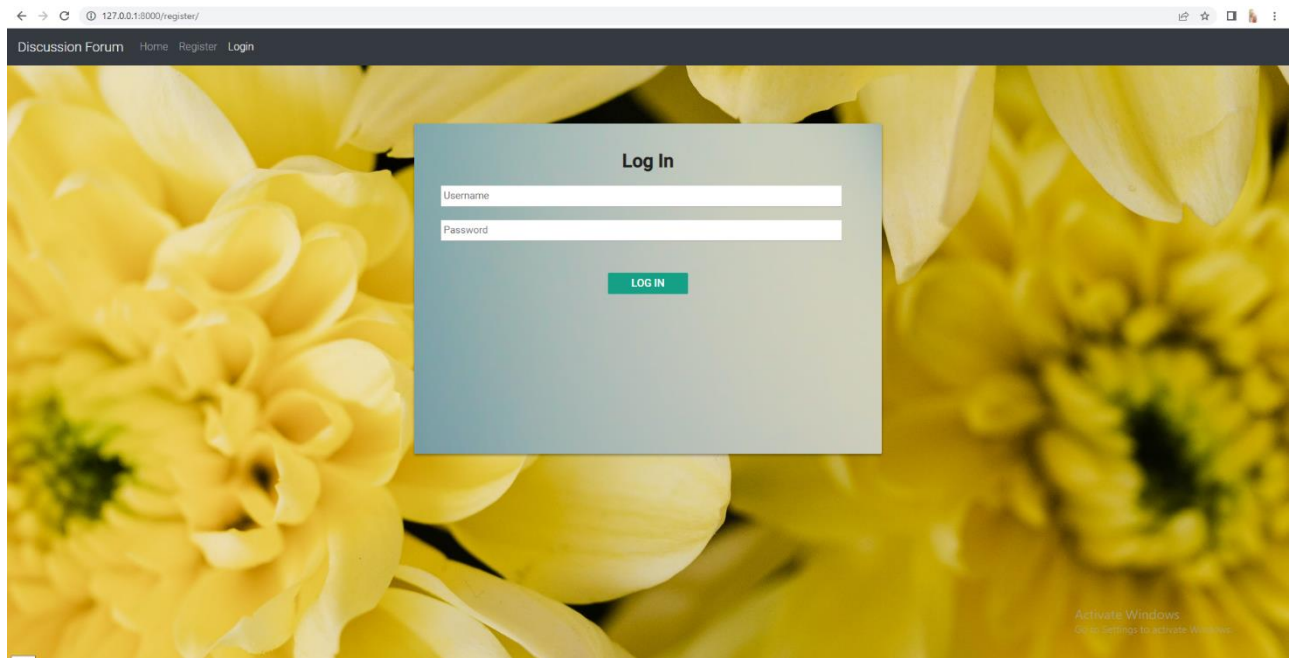
### HOME



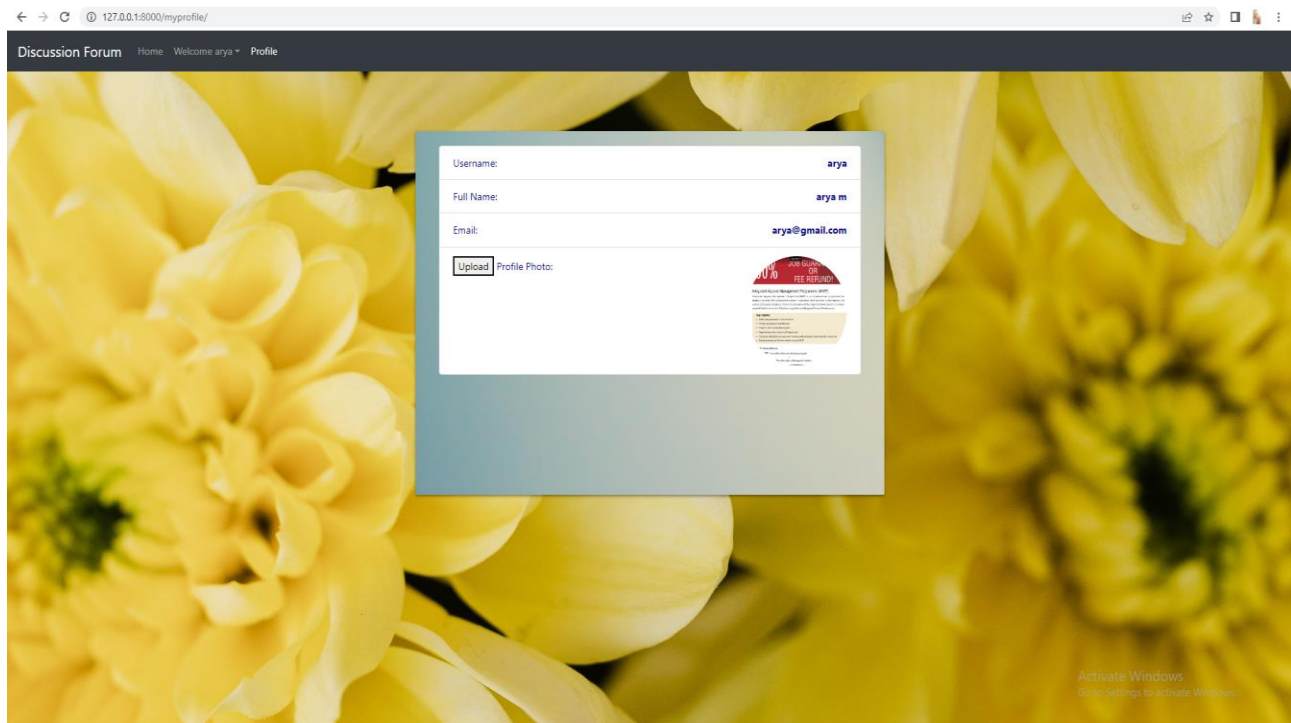
### USER REGISTRATION



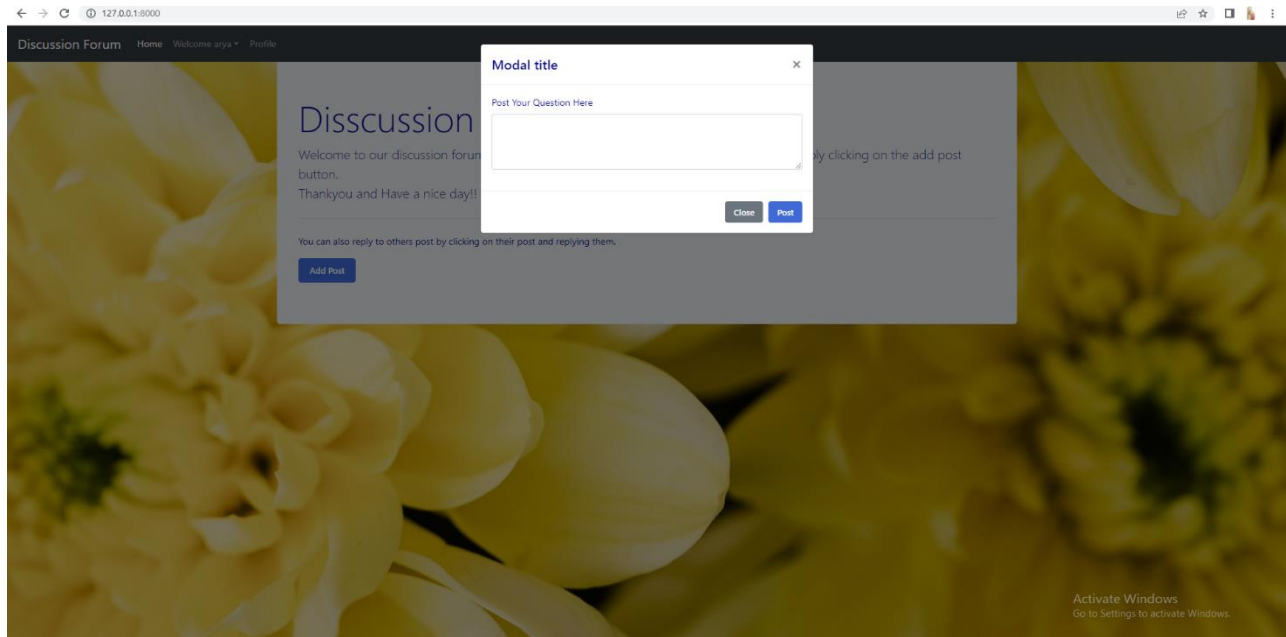
## USER LOGIN



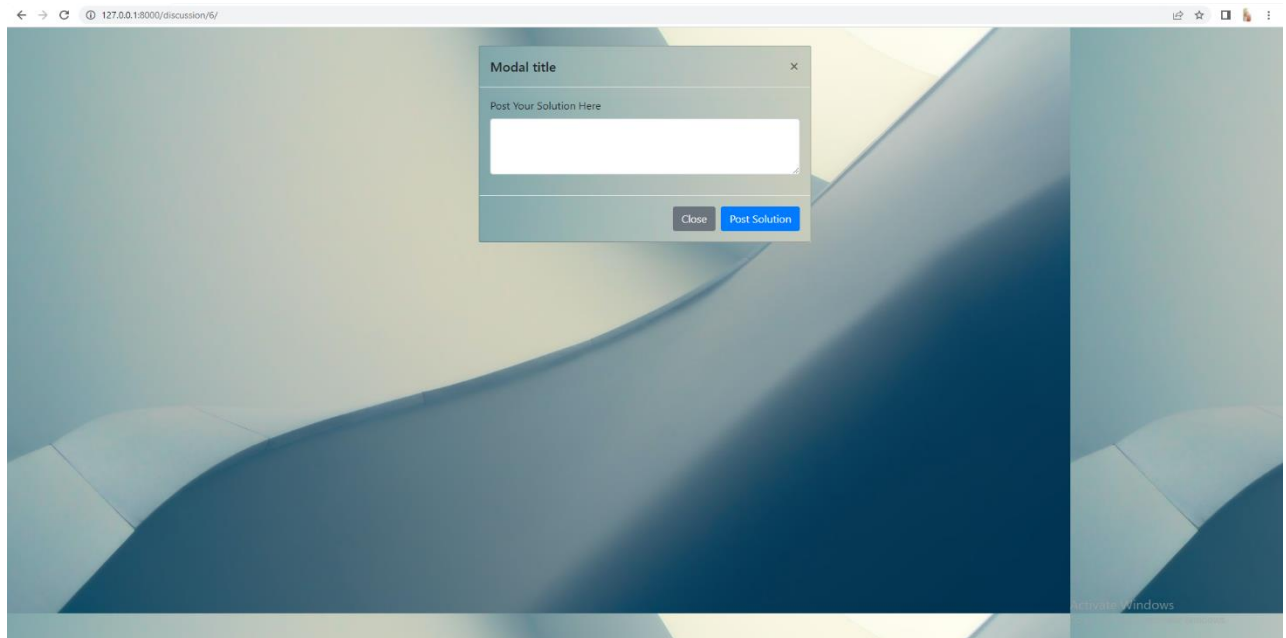
## USER PROFILE



## ADD POST



## REPLY



# ADMIN HOME

[←](#) [→](#) [127.0.0.1:8000/admin/](#) [🔍](#) [☆](#) [📱](#) [⋮](#)

Django administration

WELCOME, ADMIN! [VIEW SITE](#) / [CHANGE PASSWORD](#) / [LOG OUT](#)

Site administration

AUTHENTICATION AND AUTHORIZATION		
Groups	<a href="#">+ Add</a>	<a href="#">🔧 Change</a>
Users	<a href="#">+ Add</a>	<a href="#">🔧 Change</a>
PROFILE OF USER		
Posts	<a href="#">+ Add</a>	<a href="#">🔧 Change</a>
Profiles	<a href="#">+ Add</a>	<a href="#">🔧 Change</a>
Replies	<a href="#">+ Add</a>	<a href="#">🔧 Change</a>

Recent actions

My actions

- ✖ nesla  
User
- ✖ anya  
User

Activate Windows  
Go to Settings to activate Windows.

## **7. FEASIBILITY ANALYSIS**

Feasibility analysis is a system proposal according to its workability, impact on the organization, ability to meet client and user needs and efficient use of resources. It is most necessary and prudent to evaluate the feasibility of the project at the earliest possible time. The key considerations that are involved in the feasibility analysis are,

- Economic Feasibility
- Technical Feasibility
- Behavioral Feasibility

### **7.1 Economic Feasibility**

Economic analysis is the most frequently used method for evaluating the effectiveness of the candidate system. More commonly known as cost/benefit analysis, the procedure is to determine the benefits and savings that are expected from a candidate system; otherwise further alterations will have to be made, if it is to have a chance of approved. The proposed system is cost effective because of its experimental and user-friendly interface. The user can directly view and change the record.

### **7.2 Technical Feasibility**

This study is carried out to check the technical feasibility that is the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demand on the available technical resources. The developed system must have a modest requirement as only minimal or null changes are required for implementing this system. In Bank Management System project works in PYTHON and uses backend SQLite3 Server.

### **7.3 Behavioural Feasibility**

It centres on the reaction of the users. Since the system is user-friendly, user training is an easy matter. Any one, with the basic knowledge of computer can operate the system. The users need not have prior knowledge of PYTHON.

## **8. TESTING**

Software testing is in critical element of the software development cycle. The testing is essential for ensuring the quality of the software developed and represents the ultimate view of specification, design and code generation. Software testing is designed as the process by which one detects the defects in the software. Testing begins at the module level and work towards the integration of entire computers-based system. A good test case is one that has a high probability of finding an as-yet undiscovered error. A successful test is one such uncovers or finds such errors. If testing is conducted successfully, it will uncover the errors in the software. It also demonstrates that software functions are being performed according to specification and also behavioral and performance requirements are satisfied. For this, test plans have to be prepared. The implementation of a computer system requires that test data have to be prepared and that the element's is being tested in a planned and efficient manner. Nothing is complete without testing as it is vital success of the system.

### **Testing objectives**

There are several rules that can serve as testing objectives. They are,

- ❖ Testing is a process of executing a program and finding a BUG.
- ❖ A good test case is one that has a high probability of finding an undiscovered error
- ❖ A successful test is one that uncovers an undiscovered error

If testing is conducted successfully according to the objectives as stated above, it would uncover errors in the software. Also testing demonstrates that software functions appear to be working according to the specification that performance requirements appear to have been met. The four stages of testing are,

- ❖ Unit testing
- ❖ Integrated testing
- ❖ System testing
- ❖ Validation testing

## **8.1 Unit Testing**

This testing strategy considers the concept of unit changes. The focus on the algorithmic details of a module and the data flow across the module interface. Each module in 'Bank Management System' is considered as separate unit. The input given and output generated by each module is studied separately. Every possibility of input that can be supplied is considered. Unit testing focuses verification effort on the smallest unit of software designs the module. To check whether each module in the software works properly so that it gives desired outputs to the given inputs. All validations and Conditions are tested in the module level in the test. Control paths are tested to ensure the information properly flows into, out of the program under test. Boundary condition is tested to ensure that the module operates at boundaries, establishes that it restricts processing. All independent paths through the control structure ensure that all statements in a module have been executed at least once. In conclusion, all errors handling paths are tested.

## **8.2 Integration Testing**

This testing strategy combines all the modules involved in the system. After the independent modules are tested, dependent modules that use the independent modules are tested. This sequence of testing layers of dependent module continues until the entire system is constructed. Through each program works individually, they should work after linking them together. This is also referred to as interfacing. Data may be lost across interface and one module can have an adverse effect on another. Subroutines, after linking, may not do the desired function expected by the main routine. Integrated testing is a systematic technique for constructing program structure while at same time, conducting test to uncover errors associated with the interface. In the testing, the programs are constructed and tested in small segments.

## **8.3 Final System Testing**

This is a final step in testing. In this, the entire system was tested as a whole with all forms, code, module and class modules. This form of testing is popularly Known as Black Box testing or system testing. Black Box testing methods focus on the functional requirement of the software. That is, Black Box testing enable the software engineer to derive set of input condition that will fully exercise all functional requirements for a program. Black Box testing attempt to find errors in the following categories; incorrect missing function, interface errors..Error in data structure or external

data base access, performance errors and initialization errors and termination errors. In this system, Black Box testing has been successfully handled any mistakes found are rectified and found running successfully. The test input data was given to the system and got desired output.

## **8.4 Validation Testing**

Validation is basically done by the testers during the testing. While validating the product if some deviation is found in the actual result from the expected result then a bug is reported or an incident is raised. Not all incidents are bugs. But all bugs are incidents. Incidents can also be of type 'Question' where the functionality is not clear to the tester. Hence, validation helps in unfolding the exact functionality of the features and helps the testers to understand the product in much better way. It helps in making the product more user friendly.

Validation testing is the process of ensuring if the tested and developed software satisfies the client /user needs. The business requirement logic or scenarios have to be tested in detail. All the critical functionalities of an application must be tested here. As a tester, it is always important to know how to verify the business logic or scenarios that are given to you. One such method that helps in detail evaluation of the functionalities is the Validation Process.

Whenever you are asked to perform a validation test, it takes a great responsibility as you need to test all the critical business requirements based on the user needs. There should not be even a single miss on the requirements asked by the user. Hence a keen knowledge on validation testing is much important. Test data should be prepared carefully since the data only determine the efficiency and accuracy of the system. Artificial data are prepared solely for the purpose of every program validates the input data.

As a tester, you need to evaluate if the test execution results comply with that mentioned in the requirements document. Any deviation should be reported immediately and that deviation is thus called a bug.

Tools like HP quality Centre, Selenium, Appium, etc. are used to perform validation test and we can store the test results there. A proper test plan, test execution runs, defect reports, reports & metrics are the important deliverables to be submitted.



## **9. SYSTEM IMPLEMENTATION**

An import aspect of system analyst's job is to make sure that the new design is implemented to established standard. Implementation is used here to mean the process of converting a new or a reversed system design into operational one. There are three types of implementation,

- ❖ Implementation of a computer system to replace a manual system. The problems encountered are converting files, training users, creating accurate and verifying print outs for integrity
- ❖ Implementation of a new computer system to replace the existing one
- ❖ Implementation of modified application to replace an existing or, using the same computer. This type of conversion is relatively easy to handle.

### **➤ Conversion**

Conversion means changing from one system to another. The objective is to put the system into operation while holding costs, risks and personal irritation to a minimum. It involves

- Creating computer compatible files.
- Training the operating staff.
- Installing terminals and hardware.

### **➤ User Training**

The analyst must have clear idea about the user's capacity and requirement. A well designed system may fail because of the way are operated and used. So, the user must be trained before using the new system and the quality of the training must be high.

### **➤ System Security and Backup**

The implementation phase is the rollout of the production version of the system to the client community. This involves tasks like backing up the existing system, data conversions producing user documentation.

### ➤ **Security**

Security is an essential part of the increased scale of computerization and the development of the system like sensitive area.

### ➤ **Back up**

Backups for hardware, the data and the system are inevitable factor to be considered. Data backup represents insurance against actual loss of data due to equipment malfunction, program failure or accident. Hence data can be providing on hard disk or on floppy disk.

## **9.1 Documenting the System**

After the jobs of testing were completed the whole system as well documented in clear, Understandable and simple language. This was to ensure that if any updating has to be performed in the future the users would not face any difficulties in performing tasks. An acceptance was made to attain maximum perfection in documentation the software in a simple, precise and self-explanatory manner. The documentations deal with the system development with maximum clarity Each and every process is explained in details. The various tables used by the system with their fields are provided. Different types of programs denoting various activities of the system are included. The testing methods adopted also from a part of the document. The outputs generated by the system constitute another part.

## **10. CONCLUSION**

Every application has its own merits and demerits. The project has covered almost all the requirements. Further requirements and improvements can easily be done since the coding is mainly structured or modular in nature. Changing the existing modules or adding new modules can append improvements. Further enhancements can be made to the application, so that the web site functions very attractive and useful manner than the present one.

It is concluded that the application works well and satisfy the both registered and registered. The application is tested very well and errors are properly debugged. The site is simultaneously accessed from more than one system. The site works according to the restrictions provided in their respective browsers. The speed of the transactions become more enough now. In this site the user can search the appropriate answers for their questions. They can view their favorable questions ,articles and inventions.

## **11.BIBLIOGRAPHY**

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