

# **Savitribai Phule Pune University**



University of Pune

Project Report On  
**Matrimony Web Application**

Submitted by  
**Shinde Kunal Dattatray.**  
**Nagale Shubham Dilip.**

MCS I Year (II semester)

Seminar Guide  
**Prof. Patil Sir**

Submitted To -  
Rajarshi Shahu Mahavidyalaya ,  
Deolali-Pravara, Tal- Rahuri,  
Dist- Ahmednagar.  
(Maharashtra) India

For the academic year 2020-21

## **CERTIFICATE**

This is to certify that the project report entitled “**Matrimony Web Application**” at has been submitted by **Mr. Shinde Kunal Dattatray. And Mr.Nagale Shubham Dilip. M.Sc (Computer Science) - I<sup>st</sup> year (II<sup>nd</sup> sem), Rajarshi Shahu Mahavidyalaya Deolali- Pravara.**

In the partial fulfillment for the requirement of award master of computer science degree of Savitribai Phule Pune University in the academic year 2020-21 is a record of student own study carried under my supervision and guidance.

This report has not been submitted to any other university or institution for the award of the degree.

*Examiner*

*Prof.Patil Sir*

*Internat Examiner*

*External Examiner*

*(Project Guide)*

# **Project Content**

- **Introduction**
- **Technology and hardware used**
- **Python Architecture**
- **MySQL Database**
- **Entity Diagram**
- **Data Flow Diagram**
- **Activity Diagram**
- **Testing**
- **Requirement Specification**
- **Project Structure**
- **Project Layout**

# Introduction :-

What is matrimonial web application?

The main objective of Matrimonial Web Application is to provide Grooms and Brides with excellent matchmaking experience by exploring the opportunities and resources to meet true potential partner. Keeping our objective in mind, we have created a world renowned online matchmaking services that will touch the souls of millions of people all over the globe.

**The purposes of the Matrimonial Web Application are:**

- The main purpose of this application is to facilitate matchmaking business by applying the information in the field.
- It helps the user by providing profiles of perspective “Bride” or “Groom” and other information regarding them online.
- User can get information regarding their dream life partner at his/her home at his/her convenience.
- This application also provides a search utility which helps those users who have a certain criteria of qualities in mind to make online matrimonial easier.
- Since internet is a pivot for modern business, our project which is based on internet paves a path for modernization in trade.

**For this web application, we will provide following capabilities:**

- Admin Model
- User Registration Model
- All Match Model

- User Login Model
- Mail Box Model
- Contact Us Model
- Success Story Model
- Feedback Model
- User Profile Model
- Image Upload Model
- Search Model

## **STAKEHOLDERS :-**

Stakeholders are those people who are successfully involved in completion of the project at specified time and period. Different stakeholders are present in the project.

### **The Client and Administrator:**

He is the one for whom the project is being made. He is successfully engaged for the completion of software as soon as possible.

**The Technical Staff:**

They are the peoples who are providing guidance in area of programming language to the programmer. The guidance is given to the student or programmers so that he can complete the given project in proper time or proper way.

**The Creator or Programmer:**

The student it self is the programmer who wants the project to be completion in specify time. He is the main stakeholder for project

**TECHNOLOGY  
AND  
HARDWARE USED**

## **Python programming Language Introduction**

Python is a widely used general-purpose, high level programming language. It was created by Guido van Rossum in 1991 and further developed by the Python Software Foundation. It was designed with an emphasis on code readability, and its syntax allows programmers to express their concepts in fewer lines of code.

Python is a programming language that lets you work quickly and integrate systems more efficiently.

There are two major Python versions: **Python 2 and Python 3**. Both are quite different.

### **Beginning with Python programming:**

#### **1) Finding an Interpreter:**

Before we start Python programming, we need to have an interpreter to interpret and run our programs. There are certain online interpreters like <https://ide.geeksforgeeks.org/>, <http://ideone.com/> or <http://codepad.org/> that can be used to run Python programs without installing an interpreter.



**Windows:** There are many interpreters available freely to run Python scripts like IDLE (Integrated Development Environment) that comes bundled with the Python software downloaded from <http://python.org/>.

**Linux:** Python comes preinstalled with popular Linux distros such as Ubuntu and Fedora. To check which version of Python you're running, type "python" in the terminal emulator. The interpreter should start and print the version number.

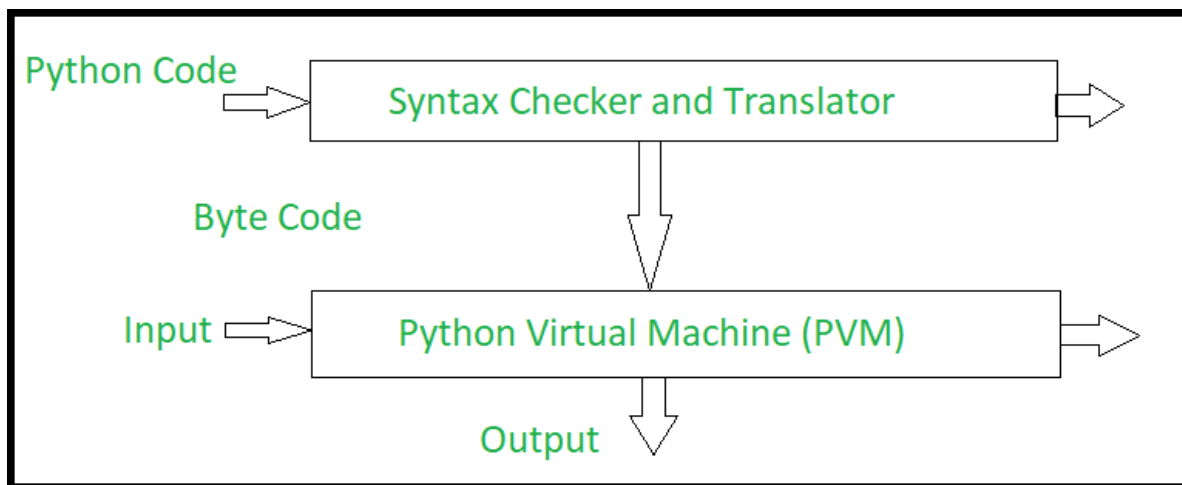
**macOS:** Generally, Python 2.7 comes bundled with macOS. You'll have to manually install Python 3 from <http://python.org/>.

# Python Architecture:

## Internal working of Python

Python is an object oriented programming language like Java. Python is called an interpreted language. Python uses code modules that are interchangeable instead of a single long list of instructions that was standard for functional programming languages. The standard implementation of python is called “cpython”. It is the default and widely used implementation of the Python.

Python doesn't convert its code into machine code, something that hardware can understand. It actually converts it into something called byte code. So within python, compilation happens, but it's just not into a machine language. It is into byte code and this byte code can't be understood by CPU. So we need actually an interpreter called the python virtual machine. The python virtual machine executes the byte codes.



**The Python interpreter performs following tasks to execute a Python program :**

- **Step 1 :**  
The interpreter reads a python code or instruction. Then it verifies that the instruction is well formatted, i.e. it checks the syntax of each line. If it encounters any error, it immediately halts the translation and shows an error message.
- **Step 2 :**  
If there is no error, i.e. if the python instruction or code is well formatted then the interpreter translates it into its equivalent form in intermediate language called “Byte code”. Thus, after successful execution of Python script or code, it is completely translated into Byte code.
- **Step 3 :**  
Byte code is sent to the Python Virtual Machine(PVM). Here again the byte code is executed on PVM. If an error occurs during this execution then the execution is halted with an error message.

### **What can Python do?**

- Python can be used on a server to create web applications.
- Python can be used alongside software to create workflows.
- Python can connect to database systems. It can also read and modify files.
- Python can be used to handle big data and perform complex mathematics.
- Python can be used for rapid prototyping, or for production-ready software development.

### **Why Python?**

- Python works on different platforms (Windows, Mac, Linux, Raspberry Pi, etc.)
- Python has a simple syntax similar to the English language.
- Python has syntax that allows developers to write programs with fewer lines than some other programming languages.
- Python runs on an interpreter system, meaning that code can be executed as soon as it is written. This means that prototyping can be very quick.
- Python can be treated in a procedural way, an object-orientated way or a functional way.

## Python Syntax compared to other programming languages

- Python was designed for readability, and has some similarities to the English language with influence from mathematics.
- Python uses new lines to complete a command, as opposed to other programming languages which often use semicolons or parentheses.
- Python relies on indentation, using whitespace, to define scope; such as the scope of loops, functions and classes. Other programming languages often use curly-brackets for this purpose.

## What is a Database?

A database is a separate application that stores a collection of data. Each database has one or more distinct APIs for creating, accessing, managing, searching and replicating the data it holds.

Other kinds of data stores can also be used, such as files on the file system or large hash tables in memory but data fetching and writing would not be so fast and easy with those type of systems.

Nowadays, we use relational database management systems (RDBMS) to store and manage huge volume of data. This is called relational database because all the data is stored into different tables and relations are established using primary keys or other keys known as Foreign Keys.

A **Relational Database Management System (RDBMS)** is a software that —

- Enables you to implement a database with tables, columns and indexes.
- Guarantees the Referential Integrity between rows of various tables.
- Updates the indexes automatically.
- Interprets an SQL query and combines information from various tables.

### **RDBMS Terminology :-**

Before we proceed to explain the MySQL database system, let us revise a few definitions related to the database.

- **Database** — A database is a collection of tables, with related data.
- **Table** — A table is a matrix with data. A table in a database looks like a simple spreadsheet.
- **Column** — One column (data element) contains data of one and the same kind, for example the column postcode.
- **Row** — A row (= tuple, entry or record) is a group of related data, for example the data of one subscription.
- **Redundancy** — Storing data twice, redundantly to make the system faster.
- **Primary Key** — A primary key is unique. A key value can not occur twice in one table. With a key, you can only find one row.
- **Foreign Key** — A foreign key is the linking pin between two tables.
- **Compound Key** — A compound key (composite key) is a key that consists of multiple columns, because one column is not sufficiently unique.
- **Index** — an index in a database resembles an index at the back of a book.
- **Referential Integrity** — Referential Integrity makes sure that a foreign key value always points to an existing row.

# MySQL Database:-

MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses. MySQL is developed, marketed and supported by MySQL AB, which is a Swedish company. MySQL is becoming so popular because of many good reasons –

- MySQL is released under an open-source license. So you have nothing to pay to use it.
- MySQL is a very powerful program in its own right. It handles a large subset of the functionality of the most expensive and powerful database packages.
- MySQL uses a standard form of the well-known SQL data language.
- MySQL works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, etc.
- MySQL works very quickly and works well even with large data sets.
- MySQL is very friendly to PHP, the most appreciated language for web development.
- MySQL supports large databases, up to 50 million rows or more in a table. The default file size limit for a table is 4GB, but you can increase this (if your operating system can handle it) to a theoretical limit of 8 million terabytes (TB).
- MySQL is customizable. The open-source GPL license allows programmers to modify the MySQL software to fit their own specific environments.

## Types of DBMS :-

There are mainly 4 types of DBMS, which are Hierarchical, Relational, Network, and Object-Oriented DBMS.

- **Hierarchical DBMS:** As the name suggests, this type of DBMS has a style of predecessor-successor type of relationship. So, it has a structure similar to that of a tree, wherein the nodes represent records and the branches of the tree represent fields.

- **Relational DBMS (RDBMS):** This type of DBMS, uses a structure that allows the users to identify and access data *in relation* to another piece of data in the database.
- **Network DBMS:** This type of DBMS supports many to many relations wherein multiple member records can be linked.
- **Object-oriented DBMS:** This type of DBMS uses small individual software called objects. Each object contains a piece of data, and the instructions for the actions to be done with the data.

### **Feasibility Study:**

.Feasibility study is the process to check possibility of system development. It is method to check varies different requirement and availability of financial and technical resources

Before starting the process of various parameters must be check like:

Estimated finance is there or not.

The man power to operate the is there or not.

The man power is train or not.

All the below all the conditions are satisfied to start the project. This is why in depth analysis of feasibility is carried out.

There are three different ways feasibility can be tested:

- Economical feasibility
- Technical Feasibility
- Operational Feasibility.

### **Economical Feasibility :-**

In economic feasibility, analysis of the cost of the system is carried out. The system should be only developed if it is going to give returned the current manual system user can get price only by purchasing the newspapers. In addition if He was to see archives

of particular equity then he has to refer to all the old newspapers. For research reports he has to buy another magazine. So instead of it is basically used to see existing computer, hardware and software etc., weather it is sufficient or additional equipment are required? Minimum System requirement is such that it can be affordable by of the user who is having computer. All the user requires is compatible browser and python installed so our system is fully technical feasible.

### **Operational Feasibility:-**

Once the system is designed there must be trained and expert operator. If there are not trained they should give training according to the needs of the system.

From the users perspective our system fully operational feasible as it just requires some knowledge of computer. Operators only need add daily prices of various equities and there are enough validations available so operator does not require any special technical knowledge. So our system also passes the test of operational feasibility.



**ARCHITECTURE  
AND DESIGN  
OF THE PROJECT**

## **ARCHITECTURE AND DESIGN OF THE PROJECT**

Since the application will have client server architecture, it will have two-tier architecture.

USER INTERFACE-GUI COMPONENTS

DATABASE ACCESS

# **ENTITY RELATIONSHIP DIAGRAM:-**

The Entity Relationship Diagram (model) is based on perception of a real world that consists of a collection of basic objects called as Entity and relationships among these objects.

Entities in database are described as set of attributes.

- A Relationship is an association among several Entities.
- The set of Entities of the same type are called as Entity set.
- The set of the Relationships of same type are called as Relationship Set.

A graphical model of the data needed by the system, including think about which information is stored and the relationship among them, produced in structured analysis and information engineering.

The relational approaches to system development places a great deal of emphasis on data storage requirements include the data entities, their attributes and the relationship among the data entities. The model used to defined the data storage requirements in called the Entity Relationship Diagram.

On the Entity Relationship Diagram, a rectangle represents data entities, and lines connecting the rectangle show the relationship among data entities.

**Notations used in ER-Diagram:**

 = Represents Data Entity

 = Attributes

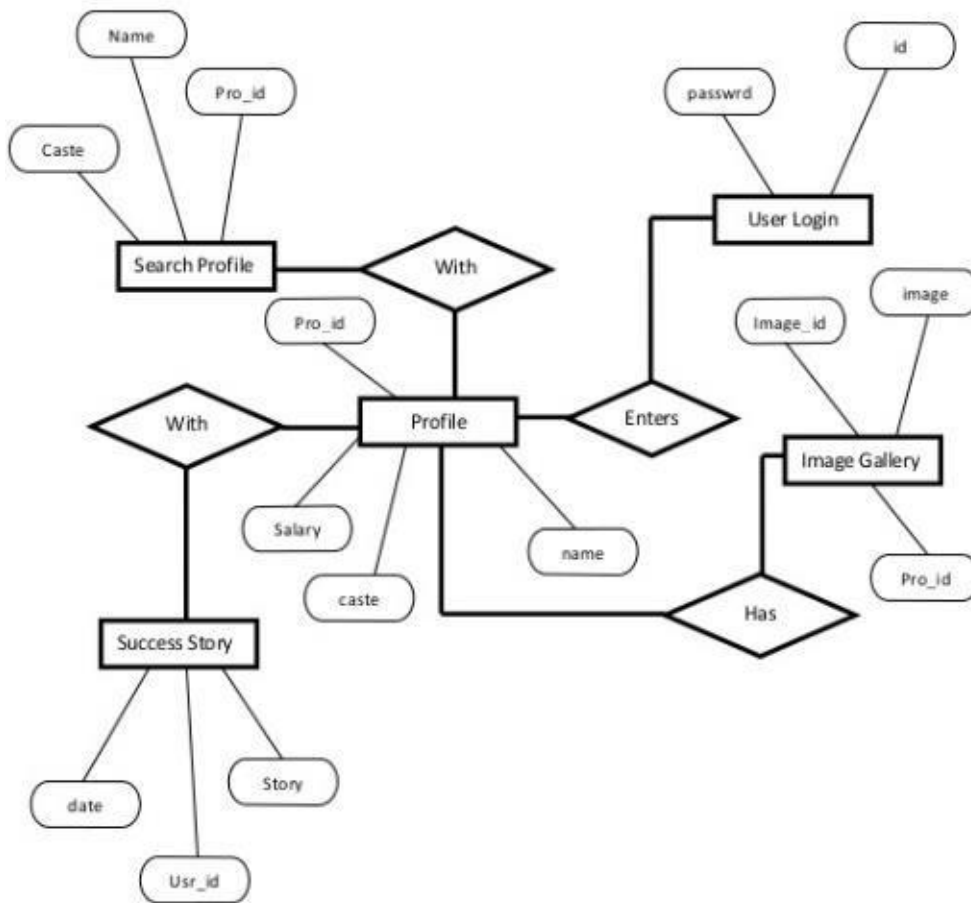
 = Represent Relationship.

 = Connection between two or more entities

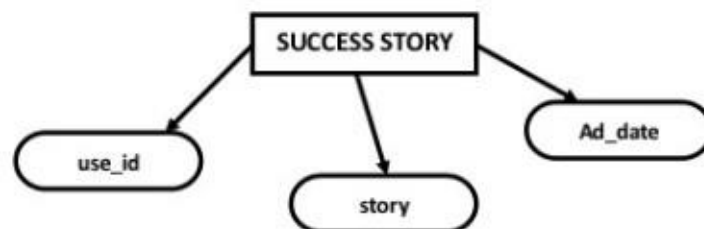
Profile:-



Search Profile:-



Success stories :-

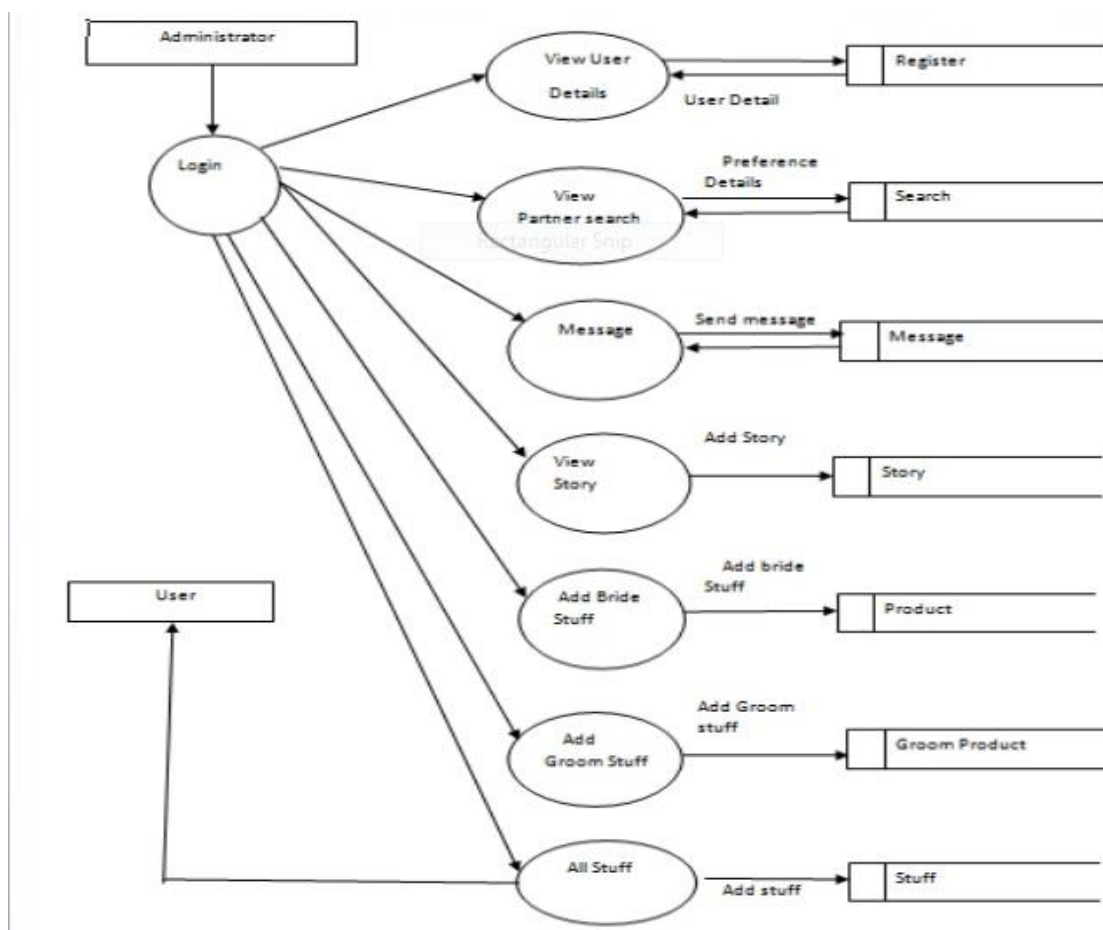


# **DATAFLOW DIAGRAM**

A data flow diagram (DFD) is a graphical system model that shows all of the main requirements for an information system in one diagram: inputs and outputs, processes, and data storage. A DFD describes what data flows rather than how it is processed. Everyone working on the development project can see all aspects of the system working together at once with DFD. That is one reason for its popularity. The DFD is also easy to read because it is a graphical model.

The DFD is mainly used during problem analysis. End users, management, and all information system workers typically can read and interpret the DFD with minimal training.

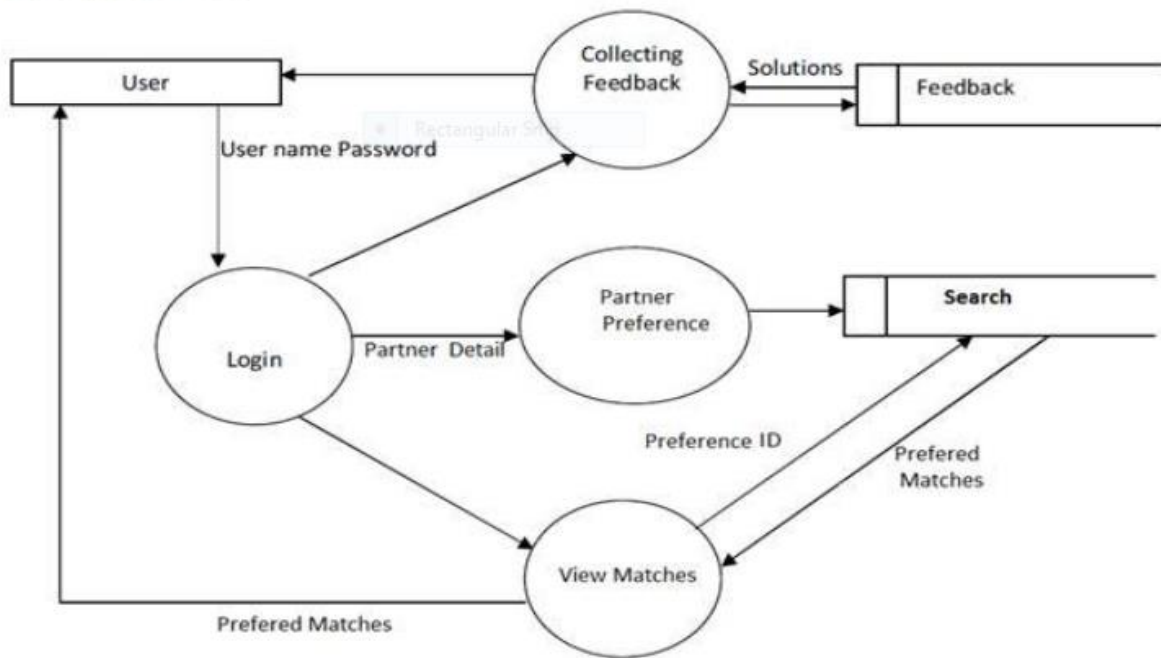
#### DFD for ADMINISTRATOR:



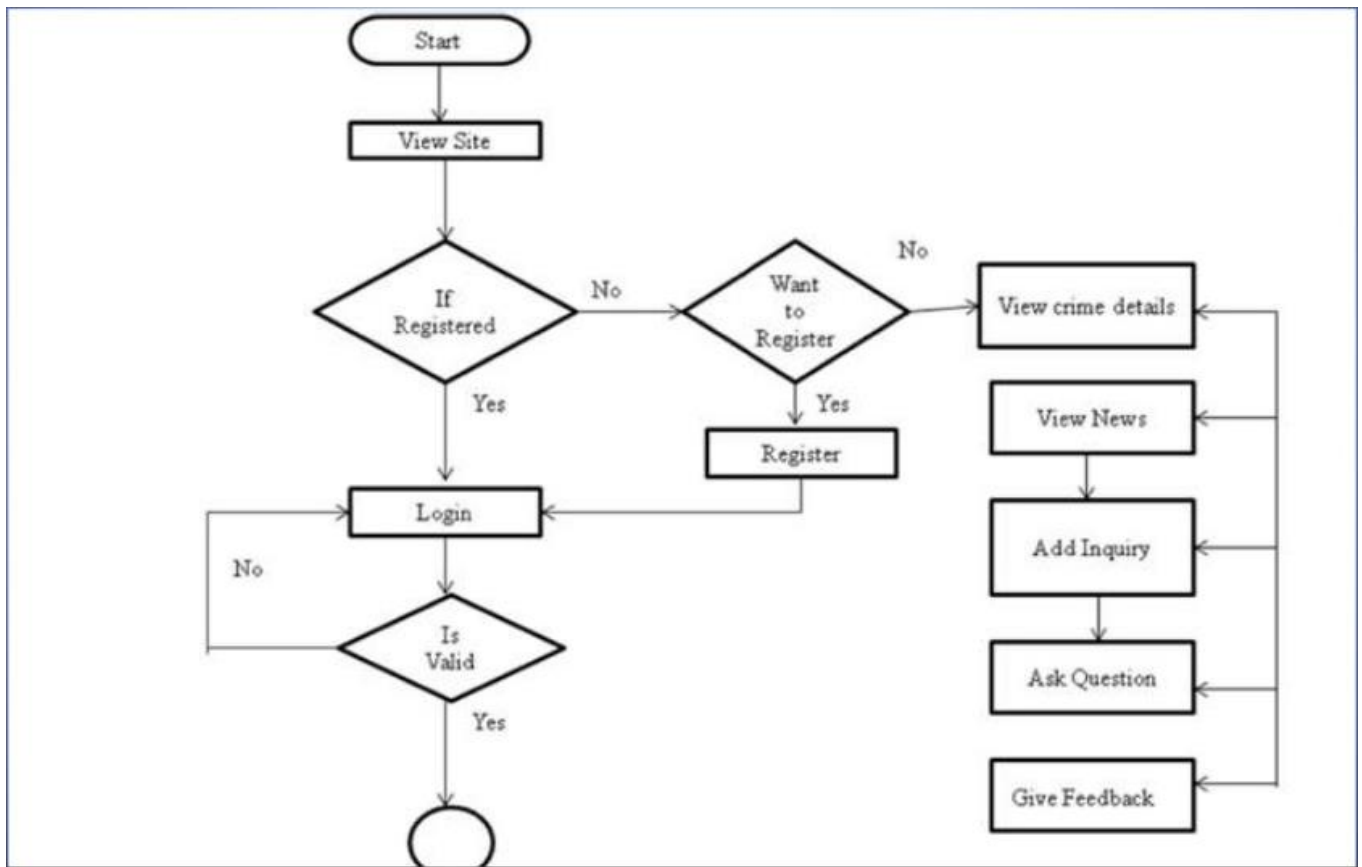


DFD for USER:

Level 2 DFD- User

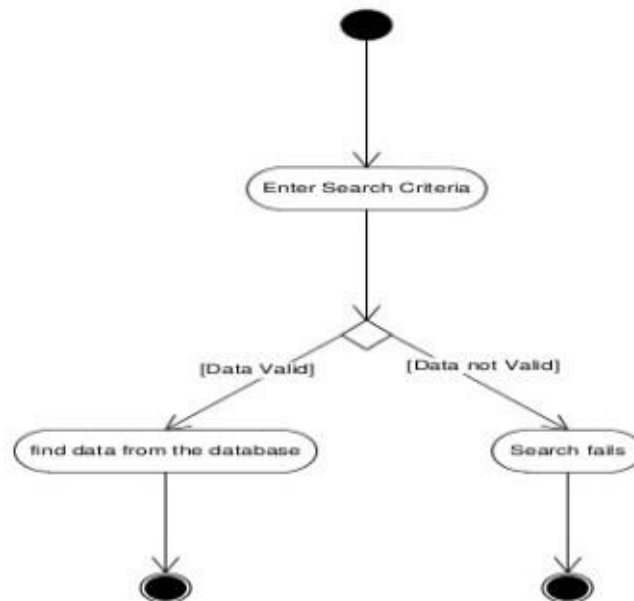


## DFD for METRIMONIAL WEB APPLICATION:-



# **ACTIVITY DIAGRAM:**

## SEARCH RECORDS :-



## UPDATE RECORDS :-



# TESTING

## TESTING PLAN :-

Similar to the project plan, due to confidentiality issues, we cannot provide details test plan to the development team. We will still add the core components that make up our test plan.

- Test plan identifier
- References
- Introduction
- Test items
- Application risk issues
- Features to be tested
- Features not to be tested
- Approach
- Item pass/fail criteria
- Entry & exit criteria
- Environmental needs

## **TESTING STRATEGY :-**

Test more and test frequent is organization tagline for testing. A typical screen in python is tested at four level before it goes for production.

Level 1 is generally the work to be tested by other developers or other interns(this is typical first level of testing where focus is not on requirement but end user testing)

Ratio: 0% end user:100% Technical

Level 2 is the where a senior programmer comes into the testing cycle of the screen that was unit tested by the developer in this phase the onus is to test software for technical requirements specified.

Ratio:80% Technical:20% end user

Level 3 where a tester will come into picture. The tester will test the software for both end user as well as technical point of view.

The ratio here is:50% Technical:50% end user

Level 4 is where we make the code at Release-Ready . Here screen of tested to the core and each and every standard must be followed and verified.

Ration here is:80% user testing-20% technical

This allows us to text a screen at four level and at the end of four weeks when the screen goes to production, it is generally bug free because more people gave looked at this screen from different viewpoints.

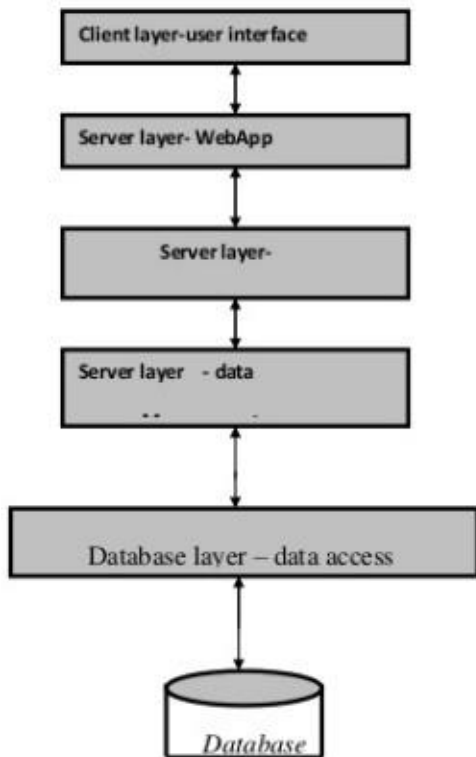
- Detail design document
- Development and test process standards.
- Methodology
- Low level design

Also organization has separate module to store all bugs

So each screen is released for testing as a build and all information for that screen(till release) is maintained using this particular build.

## **CONTENT TESTING:**

Errors in web application content can be as trivial as minor typographical error as incorrect information, improper organization or validation of intellectual property was. Content testing attempt to uncover this and many other problems before the user encounter them.



In figure testing should be ensure that,

- Valid information is passed between the client and server form the interface layer
- The web application process script correctly and properly extracts or formats user data.
- Queries are passed to a data management layer that communicates with database access routines
- User data are passed correctly to a server side data transformation function that format appropriate queries.

### TESTING METHOD :-

Testing is presents an interesting anomaly for the software engineering activities, the engineer attempts to build software from an abstract concept to a tangible product. Now comes testing the engineer creates a series of test case that are initiated to “demolish” the software that has been build infects, testing is the one step in the software process that could be viewed as destructive rather than constructive.

Models of Testing:

There are different models of testing on the basis of testing methods there are two types of testing.

- Black-Box-Testing
- White-Box-Testing

### **White-Box-Testing :-**

White box testing sometimes called glass-box testing is a test case design method that users the control structure of the procedural design to drive the test case always we are thinking that there is no necessary to execute or checks the loops and conditions. And large number of errors is uncovered. With using white-box testing methods, we have cheke that all independent paths within a function have been executed at least once.

All logical decisions are their true and false side. All loops working correctly at their boundary values and within their specified conditions.

In our coding we test that all the loops works truly in each module. The one technique of white box testing is basis path testing. It contains two parts, one is low graph notation and the second is cuclometer complexity. In flow graph notation we are checking logical control of flow. By using cyclometer complexity of our project structure.

### **Black-box-testing :-**

Black box testing focuses on the functional requirements of the software. That is black-box testing enable the software engineer to drive sets of input conditions that will fully exercise all functional requirements for the program. Black boox testing is not an alternative to white box testing techniques. Rather it is a complementary approach that is likely to uncover a different class of errors than white box methods.

We use in our coding to find errors in the following categories:

- Incorrect or missing functions
- Interface errors
- Errors in database
- Performance errors
- Initialization and termination error

Unlike white box testing which is performed earlier in the testing process, black box testing purposely disregards control structure, attention is focused on the information domain.

By applying black box techniques, we derive a set of test cases that satisfy following criteria.



Test cases that reduce, by a count that is greater than one, the number of additional test cases must be designed to achieve reasonable testing.

#### Level 1: Build acceptance test

Other related test cases ensure that adopters received the proper Development Release Document plus other build related information. The objective is to determine if further testing is possible. If any level 1 test case fails, the build is returned to developers untested.

#### Level 2 –Smoke Tests

The objective is to determine if further testing is possible. These test cases should emphasize breadth more than depth. All components should be touched, and every major feature should be tested briefly by the smoke test. If any level 2 test case fails, the build is returned to developers un-tested.

#### Level 3-Critical path tests

Critical path test cases must pass by the end of every 2-3 build test cycles. They do not need to be tested every drop, but must be tested at least once per milestone. Thus, the critical path test cases must all be executed at least once during the iteration cycle and once during the final release cycle,

#### Level 4-Standard tests

Test cases that need to be run at least once during the entire test cycle for this release. These cases are run once, not repeated as are the test cases in previous level. Functional testing and detailed design testing. These can be tested multiple times for each milestone test cycle.

Standard test cases usually include installation, Data, GUI, and other test areas.

# **REQUIREMENT SPECIFICATION**

### **Software Specification :-**

Operating System	: windows 7,8,10
Front End	: Pycharm
Back End framework	: Django
Back End Programming Language	: Python
Web Browser	: Google chrome
Web server	: Internet information service (IIS)

### **Hardware Specification:-**

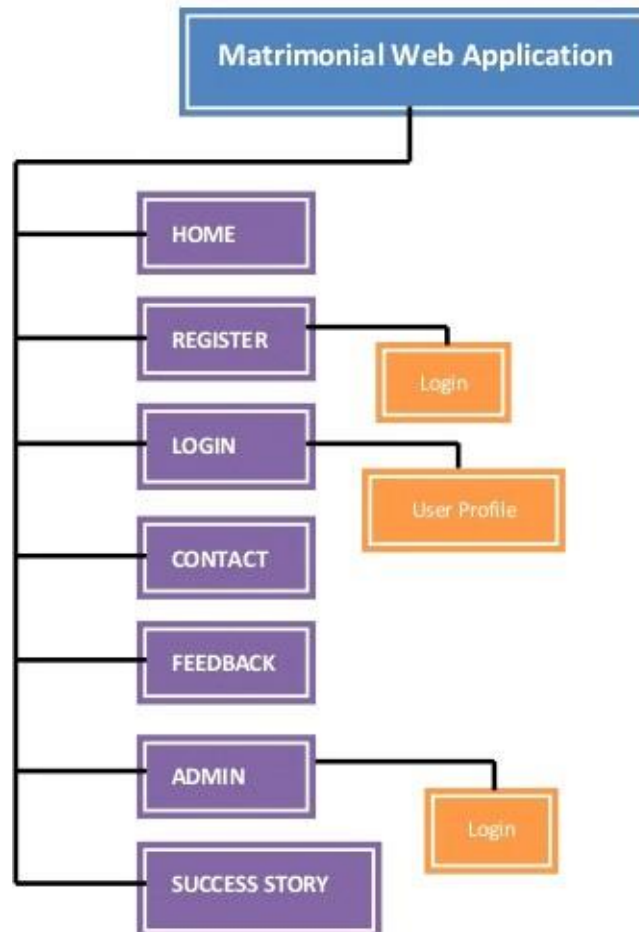
- Minimum Requirement:

Processor	: 1.36GHz
RAM	: 512mb

- Maximum Recommended:

Processor	: 2.2 GHz
RAM	: 1024 mb


## Structured Tree Diagram:-



# PROJECT LAYOUT

## Login Form :-

**MarriageBureau**[HOME](#)[BROWSE PROFILE](#)[HELP](#)[MY PROFILE](#)



**Get Starts Your Relationship....**

### Sign In

[Forget Password ?](#)[Create New Account](#)

## Registration Form:-

**MarriageBureau** [HOME](#) [BROWSE PROFILE](#) [HELP](#) [MY PROFILE](#)  [Search](#)

### Create Account

**Gender**  
☐ Male ☐ Female

**Date of Birth:**

Mo

Day

Year

**Hello Members,**

You are here because you want to find good match for yourself or for someone in your family. Let us give you some tips on how to be successful in searching for your life partner.

1. Enter all the required details on the registration form.
2. Upload a recent favorite photo of yourself.
3. Don't wait for others to contact you. If someone interests you, let them know.
4. Have patience don't expect results immediately.
5. Most important have realistic approach when searching for life partner

Let other members know what you can offer as a good life partner. In about myself space don't say "Contact me" how about writing few interesting things about yourself and reach out to potential matches.


Good Luck!

## Profile form :-

MarriageBureau	HOME	BROWSE PROFILE	HELP	MY PROFILE	<input type="text" value="Search"/>	<input type="button" value="Search"/>
----------------	------	----------------	------	------------	-------------------------------------	---------------------------------------

### Your Profile



**First Name :** Sonam

**Last Name :** Kapoor



## Brides and Grooms Details Form:-

MarriageBureau	HOME	BROWSE PROFILE	HELP	MY PROFILE	Search	Search
----------------	------	----------------	------	------------	--------	--------



First Name	Sonam
Last Name	Kapoor
Gender	Female
Age	24
Education	Masters
State	Maharashtra

**LANGUAGE MATRIMONIALS**

- [Hindi Matrimony](#)
- [English Matrimony](#)
- [Marathi Matrimony](#)
- [Bhojpuri Matrimony](#)
- [Telugu Matrimony](#)
- [Tamil Matrimony](#)
- [Urdu Matrimony](#)
- [Bengali Matrimony](#)
- [Gujarati Matrimony](#)
- [Punjabi Matrimony](#)
- [Bihari Matrimony](#)
- [Malayalam Matrimony](#)

## Feedback Form:-

### Feedback Form

First Name

Your name..

Last Name

Your last name..

Contact Number

Your contact number..

Feedback

Write something..

## Forget Password:-

MarriageBureau

vc

BROS St PRO7CE

GAAP

## Forget Password

Email :

New Password:

Confirm Password:

CHANGE PASSWORD