A

Project Report

ON

"Online Birth Certificate System"

Bachelor of Technology (Computer Engineering)

Submitted By

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Ashwini Baviskar



Collage of Engineering & Technology North Maharashtra Knowledge City Jalgaon

Academic Year: 2022-2023

Guided By,

Prof. Khushal Patil



Department of Computer Engineering

CERTIFICATE

This is to certify that the project title "Online Birth Certificate System" has beendone by Mrs. Priyanka Patil, Mrs. Shivani Kulkarni, Mrs. Yogeshvari Deshmukh, Mrs. Ashwini Baviskar, Mr. Kartik Baviskar under my guidance in partial fulfillment of Bachelor of Computer Engineering Degree under KBSNorth Maharashtra Knowledge City, Jalgaon for the academic year 2022-2023.

Elsewhere for award of any other degree.

Project Guide	Head of Department	

(Prof. Khushal Patil) (Prof. Sonal Baviskar)

PrincipleExternal Examiner(Prof. Serjerao Ahirrao)Prof. ______)

DECLARATION

We are hereby declare that the work presented in this Report "Online Birth Certification system" was carried out by me under the supervision of guide from Prof. Sonal Baviskar.

This work or any part of this work is based on original research and has not been submitted to any University/Institution for the award of any degree.

Date:

Place: Jalgaon

Students Name

Priyanka Patil Shivani Kulkarni Yogeshvari Deshmukh Kartik Baviskar Ashwini Baviskar

ACKNOWLEDGEMENT

This gives us an opportunity to express our deep sense gratitude for everyone who has helped us in this project by giving their valuable guidance and support.

I would like to thank Prof. Mrs. Sonal Baviskar madam who allowed me to work on this project and guided me throughout its completion.

I also thank head of department, Prof. Mrs. Sonal Baviskar madam to their encouragement and valuable support throughout the project.

I also extend my thanks to all staff Members for their co-operation during my course. Finally, I would like to thanks my friends for their co-operation to complete this project.

> With warn regards, Priyanka Patil Shivani Kulkarni Yogeshvari Deshmukh Kartik Baviskar AShwini Baviskar

INDEX

Chapter No.	Name
Chapter 1	Introduction
	Exiting System
	Need of the System
	Objective of the System
	Features of the System
Chapter 2	System Analysis
Chapter 3	System Design
Chapter 4	User Interface
Chapter 5	Testing
Chapter 6	Conclusion
Chapter7	Bibliography

CHAPTER I INTRODUCTION

Introduction:

Online Birth Certificate System maintains a good record of date of birth of people. This system helps admin to view data of date of birth of people who reside in country. The main objective of "Online Birth Certificate System" project is to providing easier registration of date of birth and gets certificate of birth online which save lots of time.

In Online Birth Certificate System, we use PHP and MySQL Database.

Existing System

In present all birth certificate system work done on the paper. The whole year data is stored in the registers. We can't generate reports as per our requirements because it take more time to calculate the date of birth report. In the existing system, all the information which is maintained by this computerized system is manually maintained in number of papers and files. It is very easy to add the information on paper at first time manually. But it's very hard anyone have to update or search any record.

Disadvantage of Existing System:

- **Not user friendly:** The present system not user friendly because data is not stored in structure and proper format.
- Manual Control: All report calculation is done manually so there is a chance of error.
- Lots of paper work: Visitors maintain in the register so lots of paper require storing details.
- Time consuming

Need of System

There is a need of computerized system for cabs services because

- It's very hard to maintain the records in files
- Time consuming.
- Misplacing of data occurs at sometimes.
- To minimize hard work.
- Fast access to data.
- To get all the information at just one click.

Objective of System

The main objective of this project is to computerize the manual system & reduce the time consumption.

In other words, we can say that our project has the following objectives:

- Make all the system computerize
- Reduce time consumption
- Reduce error scope
- All system managements are automated
- Centralized database management
- Easy operations for operator of the system
- No paper work requirement

Purpose of the System

The purpose of developing Online Birth certificate system is to computerized the tradition way of birth registration. Another purpose for developing this application is to generate the report automatically.

Scope of the System

Births registration plays a very important role in planning of various government schemes. All the important information like place of birth date, place of birth and vital particular at the time of Births are required in various places so this project helps to maintain all these records at one place which is useful for government as well as people.

CHAPTER II

System Analysis

System Analysis:

System analysis will be performed to determine if it is feasible to design information based on policies and plans of the organization and on user requirements and to eliminate the weaknesses of the present system.

- The new system should be cost effective.
- To augment management, improve productivity and services.
- To enhance user / system interface.
- To improve information, qualify and usability.
- To upgrade systems reliability, availability, flexibility and growth potential.

Feasibility Study

A feasibility analysis is undertaken to determine the possibility or probability of either improving the existing system or developing a completely new system.

It helps to obtain an overview of the problem and to get rough assessment of whether feasible solution exists.

There are three aspects in feasibility study portion of the preliminary investigation.

- 1) Operational feasibility
- 2) Technical feasibility
- 3) Economical feasibility

Operational Feasibility: -

It is a measure of how well a proposed system solves the problems, and takes advantages of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development.

Operational feasibility covers two aspects. One is the technical performance aspect and other is the acceptance within the organization. Operational feasibility determines how the proposed system will fit the current operation.

In the system operational feasibility checks, whether the user who is going to use the system is able to work with the software with which the system id coded and also the mind of the user going to use system. If the user does not understand or is able to work on the system further development is waste.

The system is easy to learn and it will require a very short time to learn the operation of the system for a person having knowledge in accounting. So that system was operationally feasible

Technical feasibility: -

This involves questions such as whether the technology needed for the system exists, how difficult it will be to build, and whether the firm has enough experience using that technology. The assessment is based on an outline design of system requirements in terms of Input, Processes, Output, Fields, Programs, and Procedures. This can be quantified in terms of volumes of data, trends, frequency of updating, etc. in order to estimate whether the new system will perform adequately or not.

The technical feasibility in the proposed system deals with the technology used in the system. It deals with the hardware and software used in the system whether they are of latest technology or not. It happens that after a system is prepared a new technology arises and the user wants the system based on that technology. Thus, it is important to check the system to be technically feasible.

The minimum memory requirement is 32MB of RAM while 64MB is better to have for better performance. As far as software is concerned, MySQL and PHP should be installed on the server.

Economic feasibility: -

Economic analysis is the most frequently used method for evaluating the effectiveness of a new system. More commonly known as cost/benefit analysis, the procedure is to determine the benefits and savings that are expected from a candidate system and compare them with costs. If benefits outweigh costs, then the decision is made to design and implement the system.

Implementation of this system will be a lifetime investment, which will ensure returns to the store of good services and market value throughout the future. So, the system is found economically feasible.

Operating Environment

1. Software Requirements:

• Technology : Open Source

• Front end : PHP

• Back end : MySQL

Operating system : WINDOWS XP

2. Tool & Technologies Used:

MySQL

• XAMPP (Apache Server)

• Notepad ++

Modules:

This project has two modules i.e. admin and user.

Admin Module

1. Home: In this section, admin can briefly view the total number of new application, total verified application and total rejected application.

- **2. Birth Application:** In this section, admin view the application details and they have also right to change application status according to current status.
- **3. Reports:** In this section admin can view the application details in a particular period.
- **4. Search:** In this section, admin can search application with the help of customer application

Admin can also update his profile, change the password and recover the password.

User Module

- **1. Home Page:** In this section, user can view welcome page of web application.
- **2. Birth Reg Form:** In this section, user can fill the form of birth certificate and see the status of his/her application.
- **3.** Certificate: In this section user can take print of verified certificate.

User can also update his profile, change the password and recover the password.

CHAPTER-III

System Design

System Design

System design is the solution to the creation of a new system. This phase is composed of several modules. This phase focuses on the detailed implementation of the feasible system, Its emphasis on translating design specifications to performance specification. It also specifies how the database is to be built for storing and retrieving data.

Application Design

Input design encompasses internal and external program interfaces and the design of user interfaces. Internal and external interface designs are guided by information obtained from the analysis model. This defines user tasks and actions either an elaborative or object-oriented approach. Design issues such as response time, comma structure, error handling and help facilities are considered and a design model for the system is defined. A set of generic design guidelines governs general interaction, information display and data entry.

It is a process of converting user-oriented to a computer based formatted goal of the input design is to make a data entry easier, logical, and free of error. Error in the input data is controlled by the input design. The quality of the system input determines the quality of system output specification describes manner in which the data entered in the system processing.

Database Design

The data in the system has to be stored and retrieved from database. Designing the database is part of system design. Data elements and data structures to be stored have been identified at analysis stage. They are structured and put together to design the data storage and retrieval system.

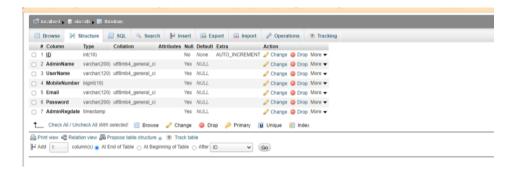
A database is a collection of interrelated data stored with minimum redundancy to serve many users quickly and efficiently. The general objective is to make database access easy, quick, inexpensive and flexible for the user. Relationships are established between the data items and unnecessary data items are removed. Normalization is done to get an internal consistency of data and to have minimum redundancy and maximum

stability. This ensures minimizing data storage required, minimizing chances of data inconsistencies and optimizing for updates.

MySQL Table Design:

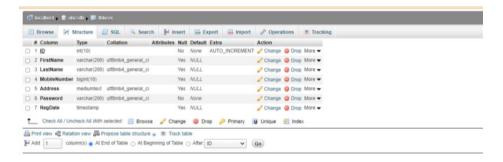
Admin Table: (Table name is tbladmin)

This store admin personal and login details.



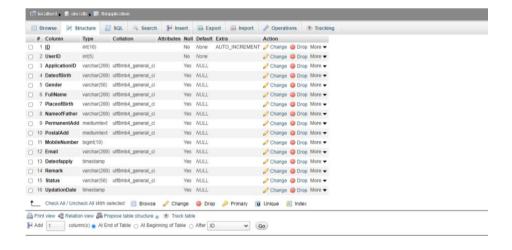
User Table (Table name is tbluser)

This stores detail of registered users.



Application Table: (Table name is tblapplication)

This table stores the detail of user who applies for birth certificate.



DFD Diagrams

A data flow diagram is a graphical view of how data is processed in a system in terms of input and output.

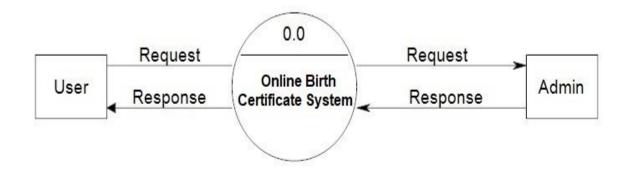
The Data flow diagram (DFD) contains some symbol for drawing the data flow diagram.

Data flow diagram symbols

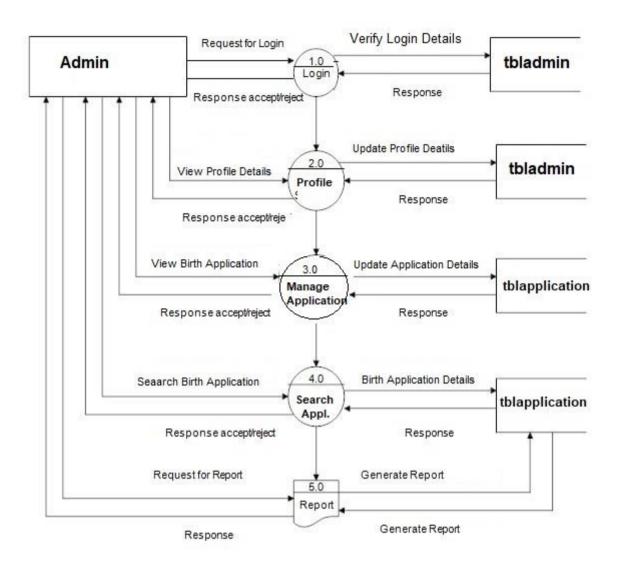
Symbol	Description
	Data Flow – Data flow are pipelines through the packets of information flow.
	Process : A Process or task performed by the system.
	Entity: Entity are object of the system. A source or destination data of a system.
	Data Store : A place where data to be stored.

Context level DFD – 0 level

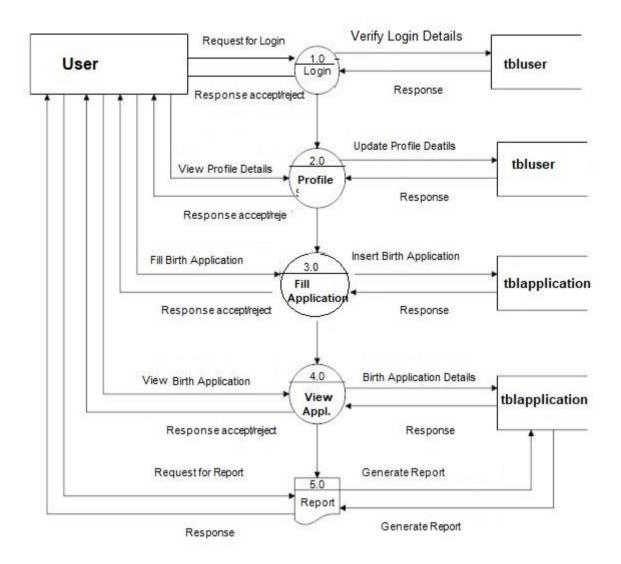
The context level data flow diagram (dfd) is describing the whole system. It shows the all-user module who operate the system. The Sanitization Services system data flow diagram shows there are two users to run the system Admin and Users.



Admin - Data Flow Diagram



User – Data Flow Diagram

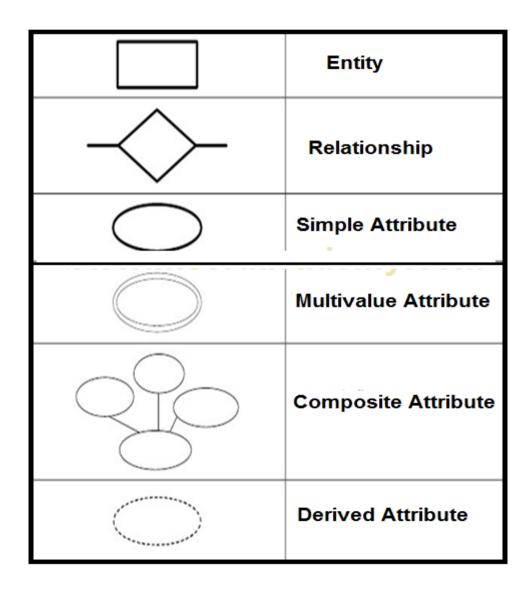


ER Diagrams

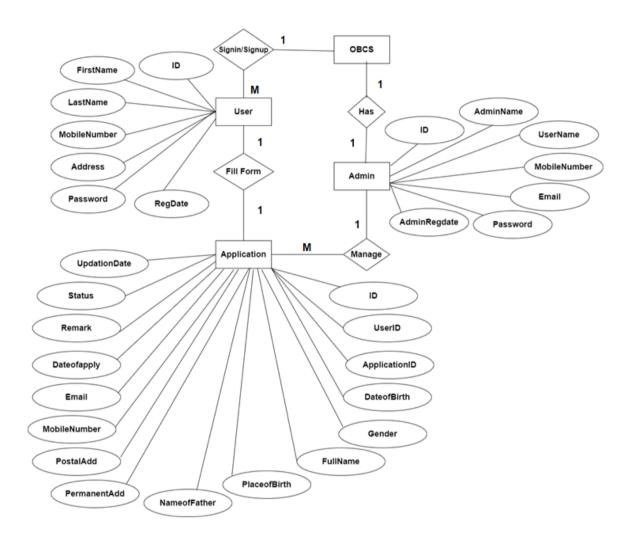
E-R (Entity-Relationship) Diagram is used to represents the relationship between entities in a table.

E-R diagram means Entity Relationship diagram. Entity means object of system, generally we refer entity as database table, the e-r diagram represents the relationship between each table of database. E-R diagram represent entity with attributes, attributes is a property of entity. If we assume entity is a database table then all the columns of table are treated as attributes.

E-R Diagram Symbols



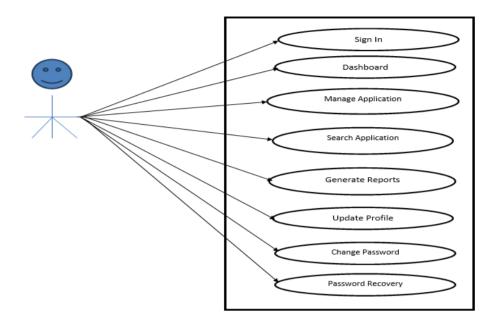
E-R Diagram for Online Birth Certificate System



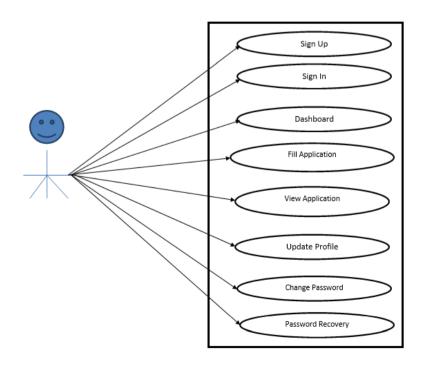
Use Case Diagram

A use case diagram is a diagram that shows a set of use cases and actors and relationships.

Use Case Diagrams for Admin

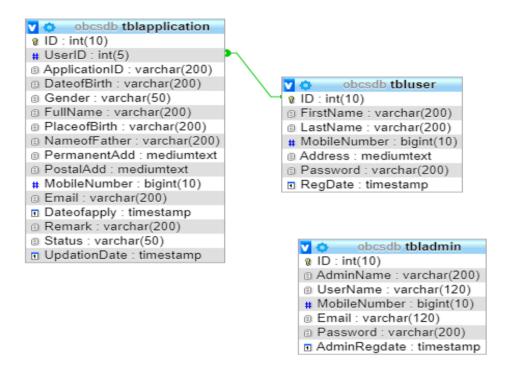


Use Case Diagrams for User



Class Diagram:

The class diagram shows a set of classes, interfaces, collaborations and their relationships.



Software Engineering Approach

The field of software engineering is related to the development software in systematic manner unlike simple programs which can be developed in isolation and there may not be any systematic approach being followed. As there is large difference between programming and software engineering. As it provides models that lead to the production of well documented software in a manner that is predictable. For a mature process, it should be possible to determine in advance how much time and effort will be required to produce the final product. To develop successful software, I have to follow some models, which act as guidelines.

The model I have used is **Waterfall Model or Classic Life Cycle**. In this model first of all the existed system is observed. Then customer requirements are taken in consideration then planning, modeling, construction and finally deployment.

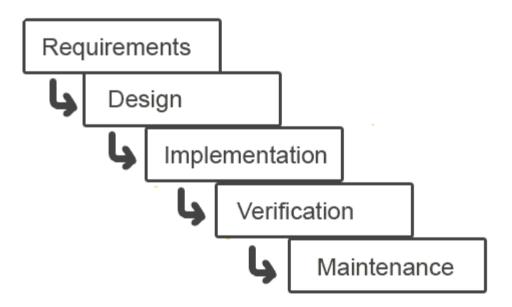


Fig.1. Waterfall Model

Detail Description of Technology Used

XAMPP

XAMPP installs a complete working PHP/MySQL server environment on Windows platforms (9x/NT). Installs PHP, MySQL, Apache, and PHPMyAdmin.

PHP

PHP is a scripting language originally designed for producing dynamic web pages. It has evolved to include a command line interface capability and can be used in standalone graphical applications. While PHP was originally created by Rasmus Lerdorf in 1995, the main implementation of PHP is now produced by The PHP Group and serves as the de facto standard for PHP as there is no formal specification. PHP is free software released under the PHP License, however it is incompatible with the GNU General Public License (GPL), due to restrictions on the usage of the term PHP. It is a widely-used general-purpose scripting language that is especially suited for web development and can be embedded into HTML. It generally runs on a web server, taking PHP code as its input and creating web pages as output. It can be deployed on most web servers and on almost every operating system and platform free of charge. PHP is installed on more than 20 million websites and 1 million web servers.

PHP originally stood for Personal Home Page. It began in 1994 as a set of Common Gateway Interface binaries written in the C programming language by the Danish/Greenlandic programmer Rasmus Lerdorf. Lerdorf initially created these Personal Home Page Tools to replace a small set of Perl scripts he had been using to maintain his personal homepage. The tools were used to perform tasks such as displaying his résumé and recording how much traffic his page was receiving. He combined these binaries with his Form Interpreter to create PHP/FI, which had more functionality. PHP/FI included a larger implementation for the C programming language and could communicate with databases, enabling the building of simple, dynamic web applications.

Lerdorf released PHP publicly on June 8, 1995 to accelerate bug location and improve the code. This release was named PHP version 2 and already had the basic functionality that PHP has today. This included Perl-like variables, form handling, and the ability to embed HTML. The syntax was similar to Perl but was more limited, simpler, and less consistent. Zeev Suraski and Andi Gutmans, two Israeli developers at the Technion IIT, rewrote the parser in 1997 and formed the base of PHP 3, changing the language's name to the recursive initialism PHP: Hypertext Preprocessor. The

development team officially released PHP/FI 2 in November 1997 after months of beta testing. Afterwards, public testing of PHP 3 began, and the official launch came in June 1998. Suraski and Gutmans then started a new rewrite of PHP's core, producing the Zend Engine in 1999. They also founded Zend Technologies in Ramat Gan, Israel.

On May 22, 2000, PHP 4, powered by the Zend Engine 1.0, was released. On July 13, 2004, PHP 5 was released, powered by the new Zend Engine II. PHP 5 included new features such as improved support for object-oriented programming, the PHP Data Objects extension (which defines a lightweight and consistent interface for accessing databases), and numerous performance enhancements. The most recent update released by The PHP Group is for the older PHP version 4 code branch.

In 2008, PHP 5 became the only stable version under development. Late static binding has been missing from PHP and will be added in version 5.3. PHP 6 is under development alongside PHP 5. Major changes include the removal of register_globals, magic quotes, and safe mode. The reason for the removals was because register_globals had given way to security holes, and magic quotes had an unpredictable nature, and was best avoided. Instead, to escape characters, Magic quotes may be substituted with the addslashes() function, or more appropriately an escape mechanism specific to the database vendor itself like mysqli_real_escape_string() for MySQL.

PHP does not have complete native support for Unicode or multibyte strings; Unicode support will be included in PHP 6. Many high profile open source projects ceased to support PHP 4 in new code as of February 5, 2008, due to the GoPHP5 initiative, provided by a consortium of PHP developers promoting the transition from PHP 4 to PHP 5. It runs in both 32-bit and 64-bit environments, but on Windows the only official distribution is 32-bit, requiring Windows 32-bit compatibility mode to be enabled while using IIS in a 64-bit Windows environment. There is a third-party distribution available for 64-bit Windows.

MySQL

What is a database?

Quite simply, it's an organized collection of data. A database management system (DBMS) such as Access, FileMaker Pro, Oracle or SQL Server provides you with the software tools you need to organize that data in a flexible manner. It includes facilities to add, modify or delete data from the database, ask questions (or queries) about the data stored in the database and produce reports summarizing selected contents.

MySQL is a multithreaded, multi-user SQL database management system (DBMS). The basic program runs as a server providing multi-user access to a number of databases. Originally financed in a similar fashion to the JBoss model, MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQ LAB now a subsidiary of Sun Microsystem, which holds the copyright to most of the codebase. The project's source code is available under terms of the GNU General Public License, as well as under a variety of proprietary agreements.

MySQL is a database. The data in MySQL is stored in database objects called tables. A table is a collections of related data entries and it consists of columns and rows. Databases are useful when storing information categorically. A company may have a database with the following tables: "Employees", "Products", "Customers" and "Orders".

Database Tables

A database most often contains one or more tables. Each table is identified by a name (e.g. "Customers" or "Orders"). Tables contain records (rows) with data.

Oueries

A query is a question or a request. With MySQL, we can query a database for specific information and have a record set returned.

Create a connection to a database

Before you can access data in a database, you must create a connection to the database. In PHP, this is done with the mysqli_connect() function.

Closing a Connection

The connection will be closed automatically when the script ends. To close the connection before, use the mysqli_close() function:

phpMyAdmin

phpMyAdmin is an open-source tool written in PHP intended to handle the administration of MySQL over the World Wide Web. phpMyAdmin supports a wide range of operations with MySQL. Currently it can create and drop databases, create/drop/alter tables, delete/edit/add fields, execute any SQL statement, manage users and permissions, and manage keys on fields. while you still have the ability to directly execute any SQL statement. phpMyAdmin can manage a whole MySQL server (needs a super-user) as well as a single database. To accomplish the latter you'll need a properly set up MySQL user who can read/write only the desired database. It's up to you to look up the appropriate part in the MySQL manual.

phpMyAdmin can:

- browse and drop databases, tables, views, fields and indexes
- create, copy, drop, rename and alter databases, tables, fields and indexes
- maintenance server, databases and tables, with proposals on server configuration
- execute, edit and bookmark any SQL-statement, even batch-queries
- load text files into tables
- create and read dumps of tables
- export data to various formats: CSV, XML, PDF, ISO/IEC 26300 OpenDocument Text and Spreadsheet, Word, Excel and LATEX formats
- administer multiple servers
- manage MySQL users and privileges
- check referential integrity in MyISAM tables
- using Query-by-example (QBE), create complex queries automatically connecting required tables
- create PDF graphics of your Database layout
- search globally in a database or a subset of it
- transform stored data into any format using a set of predefined functions,
 like displaying BLOB-data as image or download-link
- support InnoDB tables and foreign keys
- support mysqli, the improved MySQL extension

Apache Web server

Often referred to as simply Apache, a public-domain open source Web server developed by a loosely-knit group of programmers. The first version of Apache, based on the NCSA httpd Web server, was developed in 1995.

Core development of the Apache Web server is performed by a group of about 20 volunteer programmers, called the Apache Group. However, because the source code is freely available, anyone can adapt the server for specific needs, and there is a large public library of Apache add-ons. In many respects, development of Apache is similar to development of the Linux operating system.

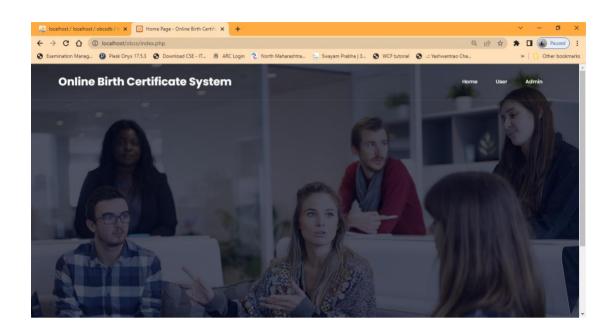
The original version of Apache was written for UNIX, but there are now versions that run under OS/2, Windows and other platforms. The name is a tribute to the Native American Apache Indian tribe, a tribe well known for its endurance and skill in warfare. A common misunderstanding is that it was called Apache because it was developed from existing NCSA code plus various patches, hence the name a patchy server, or Apache server.

Apache consistently rates as the world's most popular Web server according to analyst surveys. Apache has attracted so much interest because it is full-featured, reliable, and free. Originally developed for UNIXTM operating systems, Apache has been updated to run on Windows, OS/2, and other platforms. One aspect of Apache that some site administrators find confusing — especially those unfamiliar with UNIX-style software — is its configuration scheme. Instead of using a point-and-click graphic user interface (GUI) or Windows Registry keys as most other modern software packages, Apache generally relies on simple text files for its configuration settings.

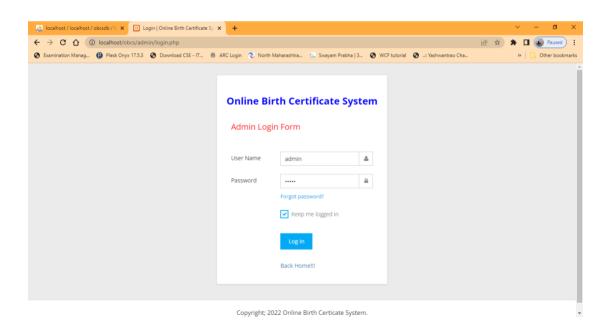
CHAPTER-IV

User Interface

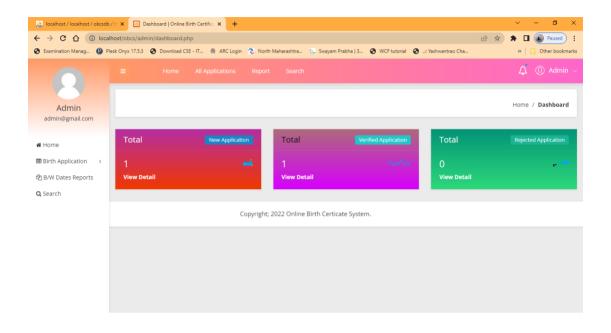
Home Page



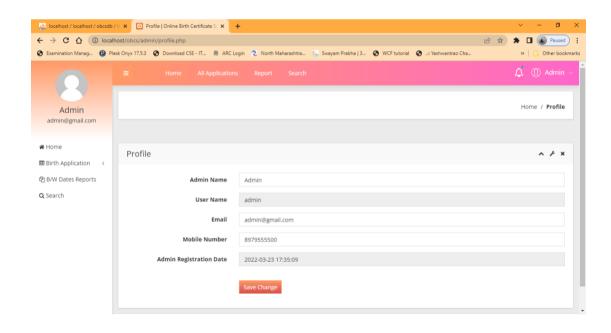
Admin Login Page



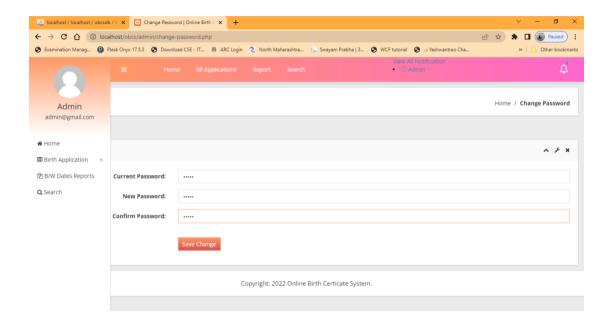
Dashboard



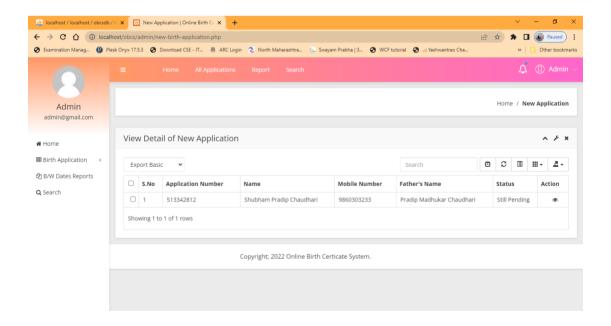
Profile



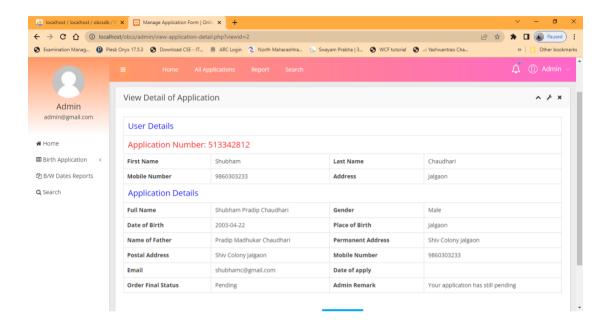
Change Password

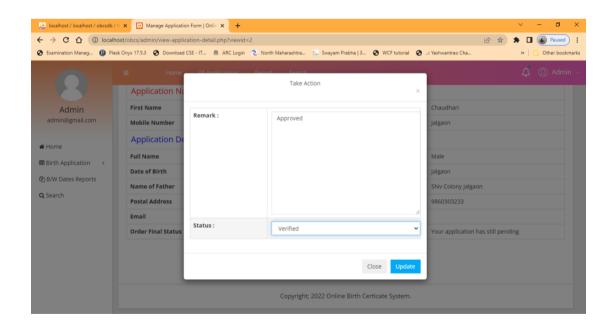


New Application

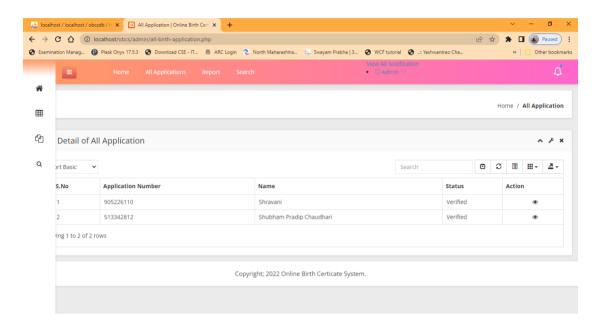


View New Application

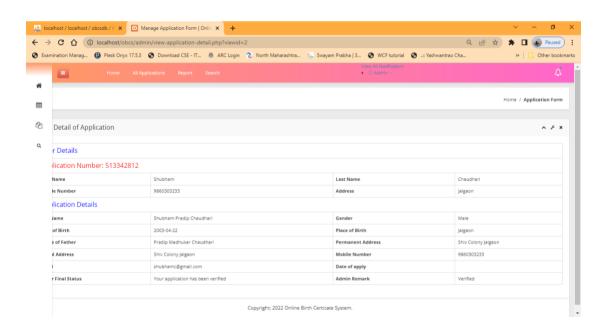




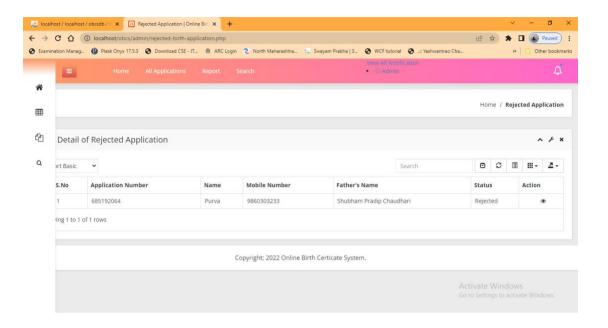
Verified Application



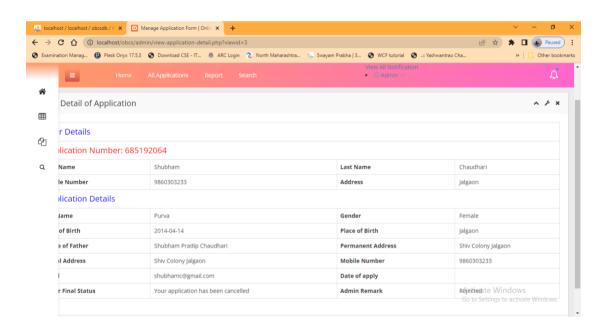
View Verified Application



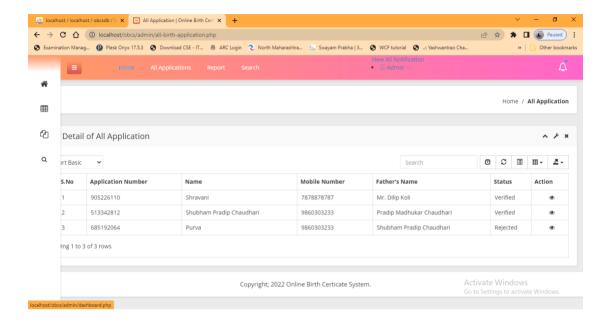
Rejected Application



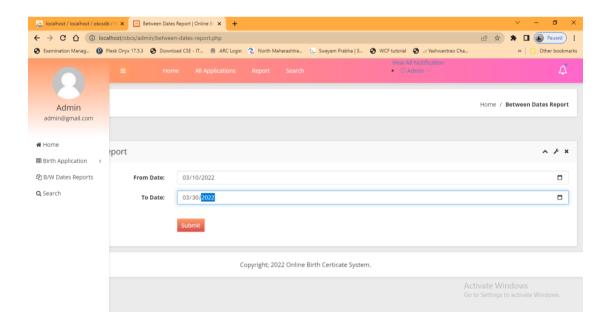
View Rejected Application



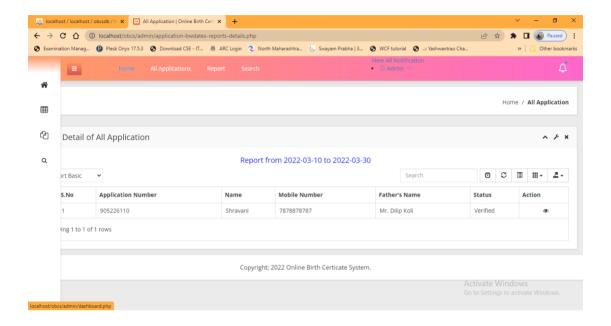
All Application



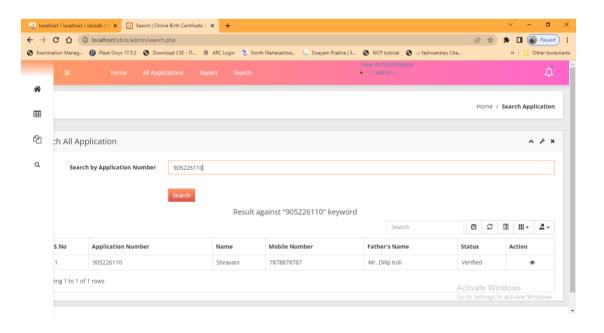
Report of Application



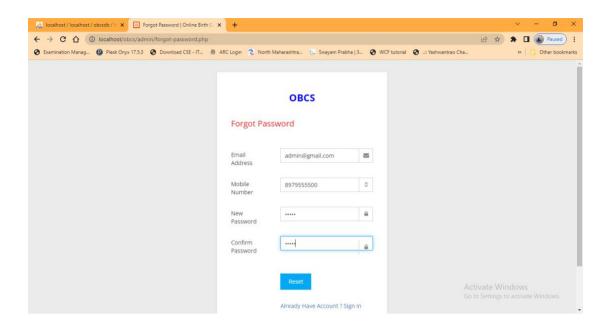
View Report of Application

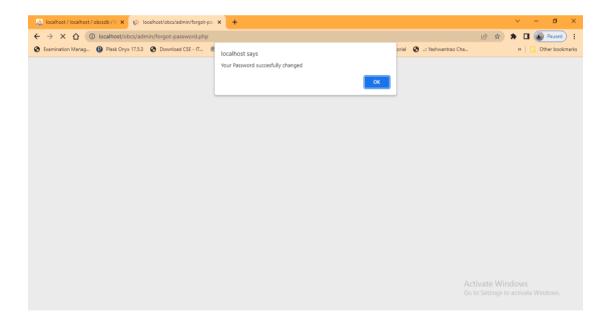


Search Application

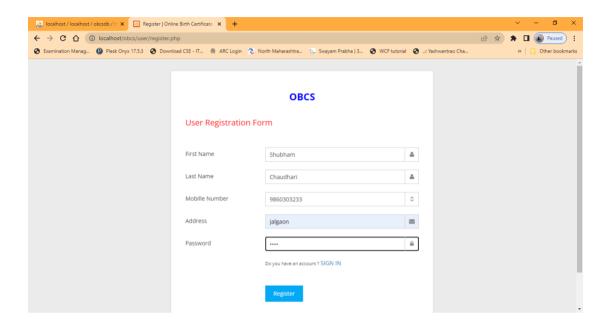


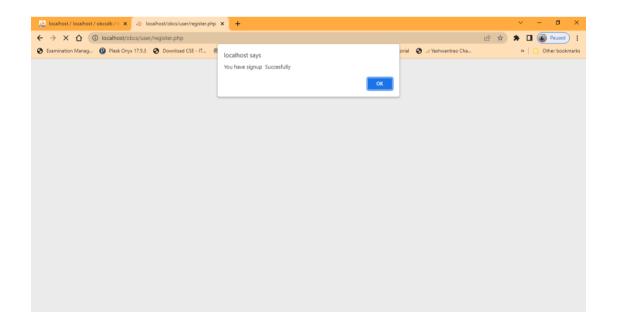
Forgot Password



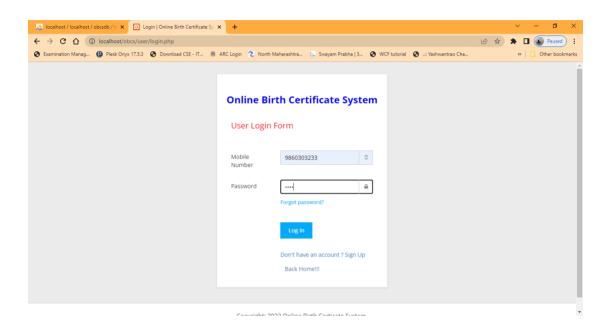


User Signup Page

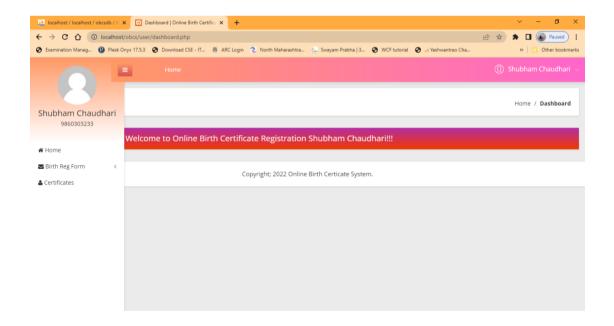




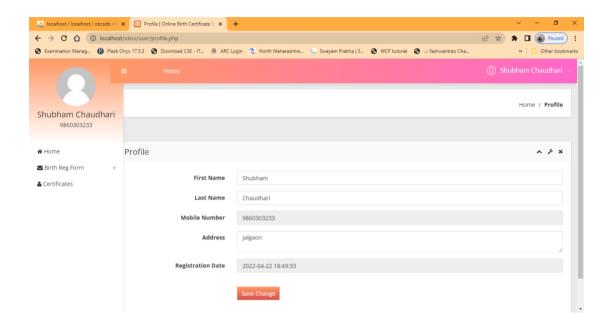
Sign In

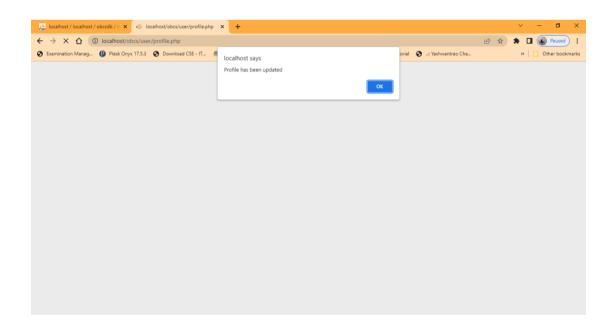


Dashboard



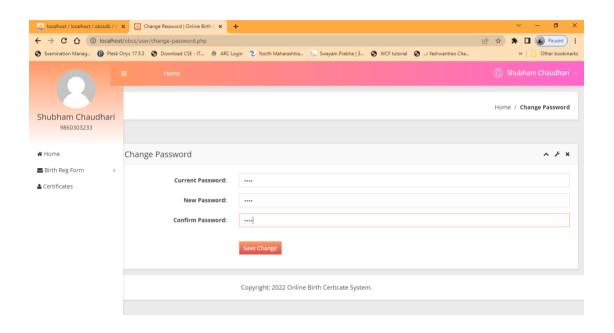
User Profile

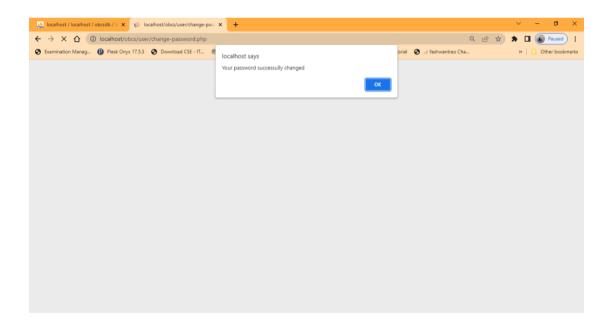




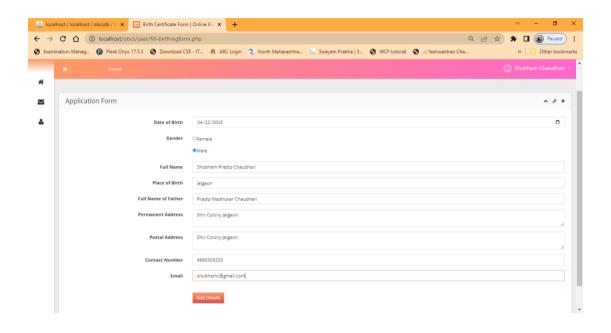
Change Password

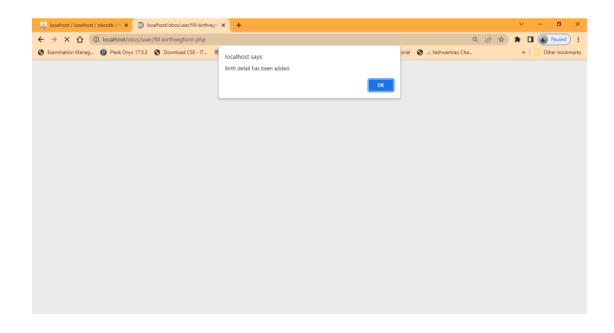
Online Birth Certificate System



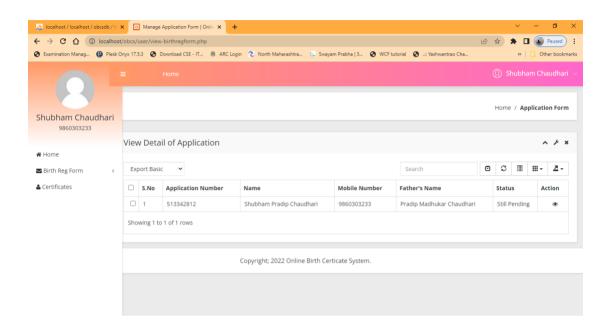


Add Application

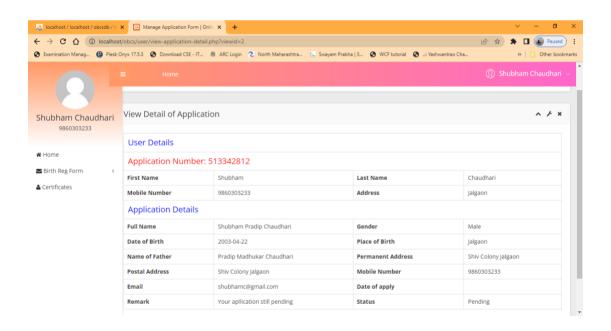




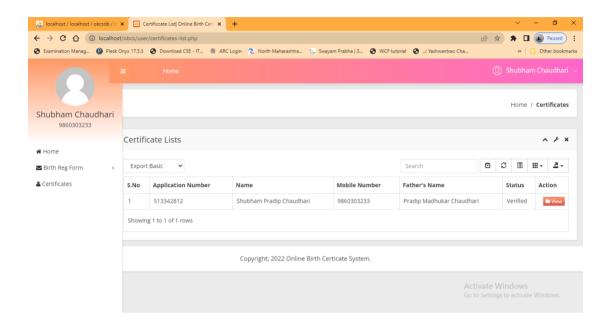
View Applications



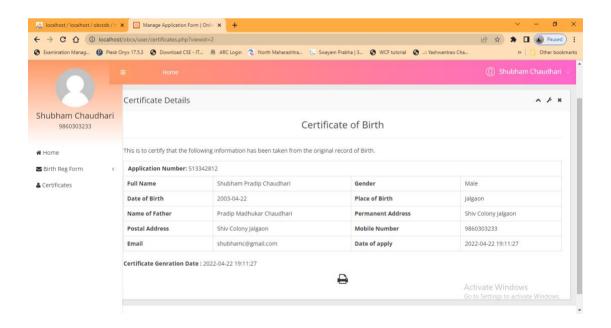
View Applications Detail



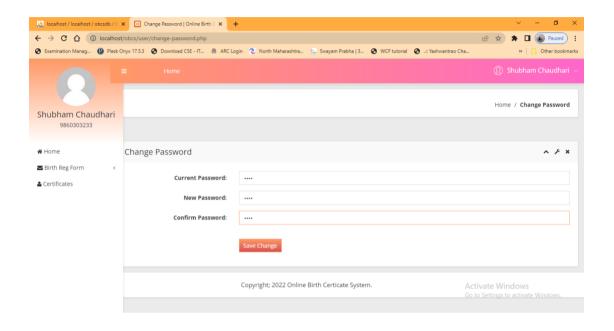
Certificate

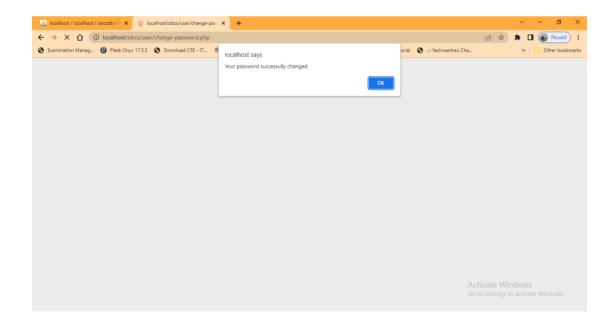


View Certificate



Reset Password





CHAPTER-V

Testing

Introduction:

Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design and code generation. It is a process of executing a program with a primary objective of finding errors. Testing gives the guarantee that the software doesn't fail and runs according to its specifications and in the way the end user expects. This can be done by various software testing techniques which provide a systematic guidance for designing tests that exercise the internal logic of software components and exercise the input and output domains of the program to uncover error in program function, behavior and performance.

The following software testing techniques were used in order to uncover errors in the system:

- 1. White Box testing
- 2. Black Box testing
- 3. Validation testing
- 4. GUI testing
- 5. System testing

1. White Box Testing:

White box testing is also called as "glass box testing". It is related with the structure (internal logic) of the program. It helps in uncovering many errors that black box testing cannot. During white box testing activity, every statement of program was executed at least once. All independent paths were also executed. Every logical decision was executed to check both true and false conditions. All loops were executed at their boundaries and within their operational bounds. Validation check were also done during this process.

2. Black Box Testing:

Black box testing, also called as behavioral testing focuses on the functional requirements of the software. It is related to input and output only and not related with the internal structure of the program. This testing was also done so as to find errors such as -

- Initialization and termination errors
- Behavior and performance errors
- Incorrect or missing functions.

Online Birth Certificate System

- Interface errors
- Errors in data structures and external database access
- Performance errors

3. Validation Testing:

Validation testing occurs when we have to declare some validation regarding our input screens. For example, suppose we have an input screen in which we want to enter the invalid email id then it will show error. This is called validation testing.

4. GUI Testing:

GUI test verifies the alignment, font, image, and buttons as per the requirements. GUI testing is also called look and feel testing.

5. System Testing:

The system test phase begins once modules are integrated enough to platform test in whole system environment. System testing can occur in parallel with Integration test especially with top-down method.

CHAPTER-VI

Conclusion

Conclusion:

This Application provides a computerized version of Birth Certificate which helps admin to view data of date of birth of people who reside in country.

It makes entire process online and can generate reports. It has a facility of user's login where user can fill the application details and send to admin.

The Application was designed in such a way that future changes can be done easily.

CHAPTER-VI

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