TALUK FRONT OFFICE APPLICATION

A PROJECT REPORT

submitted By

APARNA U SURESH

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of

Master of Computer Applications

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College of Engineering

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Declaration

I undersigned hereby declare that the project report titled **"Taluk Front Office Application "** submitted for partial fulfillment of the requirements for the award of degree of Master of Computer Applications of the APJ Abdul Kalam Technological University, Kerala is a bonafide work done by me under supervision of Smt. Baby Syla L, Asst.Professor. This submission represents my ideas in my words and where ideas or words of others have been included. I have adequately and accurately cited and referenced the original sources. I also declare that I have adhered to ethics of academic honesty and integrity as directed in the ethics policy of the college and have not misrepresented or fabricated any data or idea or fact or source in my submission. I understand that any violation of the above will be a cause for disciplinary action by the Institute and/or University and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been obtained. This report has not been previously formed the basis for the award of any degree, diploma or similar title.

Place : Trivandrum **Aparna u suresh**

Date : 14/11/2022

DEPARTMENT OF COMPUTER APPLICATIONS

COLLEGE OF ENGINEERING
TRIVANDRUM

CERTIFICATE

This is to certify that the report entitled **Taluk front office appliction** submitted by **Aparna U Suresh** to the APJ Abdul Kalam Technological University in partial fulfillment of the requirements for the award of the Degree of Master of Computer Applications is a bonafide record of the project work carried out by him under my guidance and supervision. This report in any form has not been submitted to any University or Institute for any purpose.

Internal Supervisor External Supervisor

Head of the Dept

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Abstract

The project entitled “Taluk front office application” is an web application that allows the font office administrator to apply for any application as per the public needs and also allows the public to know status of application through online with free of cost.This project is developed using PHP as front end and MySQL as back end. The system is intended to develop an application to perform functionalities like accessing basic information from public for authentication and provide a pass to public to get into the taluk office for consulting various section officers without the need to wait in any queue and without knowing which section a public need to visit. The issued pass contain basic informations like name of the public,which section as per the application they need to visit etc..This is a project that also provides a portal for public to view application status through online by simply entering the application number. Before the implementation of this application ,manual process is used in taluk office to apply for an application by the public and in taluk office many files are maintained to manually store the records of each public. This manual process requires man power and are more time consuming. To avoid such difficulties we implemented such system. Taluk front office application is also useful for each employees in taluk office who are facing problems with the current manual work. This application also provides a provision for the administrator to create new application for the public,edit application,v iewing different sections in a taluk office and also updating or adding a new section.This project aims to provide an effective solution for maintaining information about all the public coming under a particular taluk using a database. The system has two logins, one for public and another for admin(who is the taluk front office administrator). System is helpful as it reduces the paper work, time consumption and makes the process of getting an application result in simple and faster way. This system is helpful to public to know application status from anywhere and at anytime. The entire project can logically be divided into two modules:Public Admin. These two parts works differently.The public can apply for an application with the help of admin and can view the status of application whether it is fresh or on processing or completed from anywhere by just browsing through the URL which is provided to public in the application page at the time of application. Admin can do all the operations like create application,v iewing and editing application,pass generation in pdf format ,updating status of each application etc..

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Chapter 1

Introduction

The project entitled “Taluk front office application” is a project which will be helpful for the public as well as the employees who are working in the taluk office,who are dealing with troubles of these days manual system, as it provides a portral for the employees in the office to make an application form for the public easily and for the public to easily search their status of application from anywhere and anytime.Due to rapid growth in technology,every users of the system need to upgrade themselves to current fassions and our upcoming ages are searching for essential administration in a single touch.This project is created to provide effective , cheap, reliable, time saving , efficient and comfortable service for everyone.This project aims to provide an effective solution for maintaining information about all the public coming under an particular taluk using a database system. Thus it solves the issue of over time consumption. Futhermore, public no need to pay cash for the generation of an application.This provide a greater advantage to this project.

Chapter 2

Requirement Analysis

2.1 Purpose

The evaluation of essays using manual techniques are time consuming and can be depended upon many other things. The purpose of this project is to develop a system to evaluate essays given by the user. The "Taluk front office application" is build by using Php and Natural language mysql. The system helps us to include essay type questions in many exams.

2.2 Overall Description

The project entitled "Taluk front office application" is a project which will be helpful for the public as well as the employees who are working in the taluk office,who are dealing with troubles of these days manual system, as it provides a portral for the employees in the office to make an application form for the public easily and for the public to easily search their status of application from anywhere and anytime.Due to rapid growth in technology,every users of the system need to upgrade themselves to current fassions and our upcoming ages are searching for essential administration in a single touch.This project is created to provide effective , cheap, reliable, time saving , efficient and comfortable service for everyone.This project aims to provide an effective solution for maintaining information about all the public coming under an particular taluk using a database system. Thus it solves the issue of over time consumption. Futhermore, public no need to pay cash for the generation of an application.This provide a greater advantage to this project.

2.2.1 Hardware Requirements

The selection of hardware configuration is very important task related to software development particularly insufficient RAM may affect adversely on the speed and correspondingly on the efficiency of the entire system. The processor should be powerful to handle all operations. Hard disk have sufficient capacity to store database and application. The network should be well sufficient to handle the communication fast.

- Processor : Pentium or above
- Processor Speed : 2.9 GHz
- Hard Disk Space : 1 GB
- Main Memory : 2 B
- Memory : 2 GB RAM

2.2.2 Software Requirements

- Operating System : Windows10
- Front End : PHP
- Back End : MySQL
- SQL Server ; XAMPP
- Web Browser : Any web browser

2.3 Functional Requirements

The functional requirements includes all the activities or processes that should be achieved by the proposed system. It includes

PHP: The term PHP is an acronym for PHP. Hypertext Preprocessor. PHP is a server-side scripting language designed specifically for web development. It is open-source which means it is free to download and use. It is very simple to learn and use. The files have the extension ".php". Rasmus Lerdorf inspired the first version of PHP and participating in the later versions. It is an interpreted language and it does not require a compiler. PHP is one of the most widely used server side scripting language for web development. Popular websites like Facebook, Yahoo, Wikipedia etc, and our very own Studytonight, are developed using PHP. PHP is so popular because it's very simple to learn, code and deploy on server, hence it has been the first choice for beginners since decades.

- PHP code is executed in the server.
- It can be integrated with many databases such as Oracle, Microsoft SQL Server, MySQL, PostgreSQL, Sybase, Informix.
- It is powerful to hold a content management system like WordPress and can be used to control user access. supports main protocols like HTTP Basic, HTTP Digest, IMAP, FTP, and others.
- Websites like www.facebook.com, www.yahoo.com are also built on PHP.

One of the main reasons behind this is that PHP can be easily embedded in HTML files and HTML codes can also be written in a PHP file. The thing that differentiates PHP from the client-side language like HTML is, PHP codes are executed on the server whereas HTML codes are directly rendered on the browser. PHP codes are first executed on the server and then the result is returned to the browser. The only information that the client or browser knows is the result returned after executing the PHP script on the server and not the actual PHP codes present in the PHP file. Also, PHP files can support other client-side scripting languages like CSS and JavaScript. Other characteristics of PHP are as follows.

- Simple and fast

- Efficient
- Secured
- Flexible
- Cross-platform, it works with major operating systems like Windows, Linux, MacOS.

About the database : Database is an integrated set of interrelated data stored in one- line medium with controlled redundancy to several applications with an enterprise. The primary purpose behind relational model is the preservation of data integrity, which implies that data must be stored in a format that prevents it from being accused from outside the DBMS that creates it.

The overall objective in the development of a database technology has been to treat data as an organizational recourse and as integrated whole .Database is an integrated collection of data, the most significant of data as seen by the programs as data is stored on the direct access storage devices .This is the difference between logical physical data. The data organization in a database aim to achieve 3 major objectives.

- Data integration
- Integrity
- Independence

The databases are implemented using a DBMS package. Each particular DBMS has unique characteristics for database design. MySQL is an open-source relational database management system (RDBMS). Its name is a combination of "My", the name of co-founder Michael Widenius's daughter and "SQL", the abbreviation for Structured Query Language. MySQL is free and open-source software under the terms of the GNU General Public License, and is also available under a variety of proprietary licenses. MySQL is a component of the LAMP web application software stack (and others), which is an acronym for Linux, Apache, MySQL, Perl/PHP/Python. MySQL is used by many database-driven web applications, including Drupal, Joomla, phpBB, and WordPress.

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.

2.4 Non Functional Requirements

2.4.1 Performance Requirements

- Accuracy : Accuracy in functioning and the nature of user-friendly should be maintained by the system.
- Speed : The system must be capable of offering speed.
- Low cost: This system is very cheap to implement and is also user-friendly.
- Less Time consuming: It uses very less time comparing to the existing sysytem .
- User Friendly: This proposed system is highly user friendly they enables to create a good environment.

2.4.2 Quality Requirements

- Scalability : The software will meet all of the functional requirements.
- Maintainability : The system should be maintainable. It should keep backups to atone for system failures, and should log its activities periodically.
- Reliability : The acceptable threshold for down-time should be large as possible. i.e. mean time between failures should be large as possible. And if the system is broken, time required to get the system backup again should be minimum.
- Availability: This system is easily available as the core equiments in building the sofware is easily obtained.
- High- Functionality: This system is highly functional in all environment since, They are highly adaptable.

Chapter 3

Design And Implementation

The proposed system is used to evaluate essays automatically by using a pre-trained model. The model is trained using Linear Regression upon the features extracted by natural language processing.

3.1 Introduction

We have realized that without a proper design our system will not function properly. Thus in the design phase we converted the information collected in the analysis stage into proper data and processed the data useful for the system. Design of a system can be defined as the process of applying various techniques and principles for the purpose of defining a device, a process or a system in sufficient detail to permit its physical realization. Thus system design is a solution of "how to" approach to the creation of a new system. This important phase provides the understanding and procedural details necessary for implementing the system recommended in the feasibility study. The design step produces a data design, an architectural design and a procedural design.

3.1.1 System Design

The project entitled "Taluk front office application" is useful for the employees as well as for the public who are facing problems with current manual work of maintaining records of public and for application generation in case for public. This project is created to provide "safe, reliable, saving, efficient and affordable services to everyone. But this system will help the user to make

the work done even faster.

The modules used in the project are:

- Admin Module
- Public Module

3.1.2 Public Module

The most common activities carried out by public module are listed below:

- Public can check the application status using the application number provided

3.1.3 Admin Module

The most common activities carried out by administrator module are listed below:

- The admin can login using a unique username and password. The admin can now generate pass or create an application for the public
- Admin can also edit/update an application
- Admin can also add/edit/delete sections in taluk office
- Can maintain a separate file number for each application
- Can update the status
- Can also search an application using file number/application number

3.1.4 Methodology

There are two parts in this project. The first part is the creation of the model and the second one is the creation of user program which will work with the pre-trained model.

The main process of the automated essay scoring is the creation of the trained model. The major steps in the model creation Feature extraction, training, testing and model evaluation. The major steps in the model creation are mentioned below.

The second part of the project is to build the user interface. The user interface is build using HTML and Python. This is the part of project which deals with the user. The input text is fed

into the server through this. And the results returned are also displayed in the user program. The interface is built in a way such that it is easy and understandable for the person who uses it. For that we uses responsible HTML designs which uses Bootsstrap, CSS and JavaScript also to provide the better user experience. Python Flask is also used for the development of user interface.

3.2 Data Flow Diagram

DFD shows the flow of data through a system. It helps a lot during problem analysis. It is useful in understanding a system and can be effectively used for partitioning during the analysis. It is used to describe and analyse the movement of data through a system-manual or automated-including the processes, stores of data, and delays in the system. Data flow diagrams (DFD) depict how data interact with a system. The transformation of data from input to output through processes can be analysed through data flow diagrams. They are also known as data flow graphs, bubble charts or pert networks. Data flow diagrams are extremely useful in modelling many aspects of a business functions. Data flow diagrams use a variety of symbols to represent a provider of data such as a customer or management. A data flow diagram is a graphical description of system or portion of system. In Consist of data flow process, sources, destination and stores all described through the use of easily understood symbol. Data flow diagrams are centre tool and the basis from which other components are developed the transformation of data from input to output through process may be described locally and independently of the physical components Data flow diagrams are powerful enough to show parallel activities There are two types of DFD's

- Physical Data Flow Diagram
- Logical Data Flow Diagram

3.2.1 Physical Data Flow Diagram

These are implementation dependent view of current system showing the task in carried out and how they are performed They show the actual devise department people etc, involved In the current system. Physical characteristics include:

- Name of the file
- Function description
- Name of the control.
- Controls properties.
- Name of the project

3.2.2 Logical Data Flow Diagrams

An implementation independent view of the system focusing on the flow of data between process without regard for specific device storage location of people in the system it will not specify the physical characteristics listed above for physical data. Advantages:

- Users easily understood these simple notation .
- Users can make suggestions for modification
- They can also spot problem quickly
- If analyst wants to overview the overall system late,they use the higher overview of the system

Rules for constructing a Data Flow Diagram

- Arrows should not cross each other
- Squares, circles and files must bear names
- Decompromised data flow squares and circle can have same names.

- Choose meaningful names for data flow.
- Draw all data flows around the outside of the diagram.

The four basic symbols are used to construct data flow diagram. They are symbol that represent data source, data flow, data transformations and data storage. The points at which data are transformed are represented by enclosed figures, usually circles, which are called node .

Basic data flow diagram symbols are: Square: defines a source (originator) or destination of system data.

Circle: identifies data in flow.It is a pipeline through information flows.

Arrow:represents a process that transforms incoming in to outgoing

Open Rectangle: is a data store.

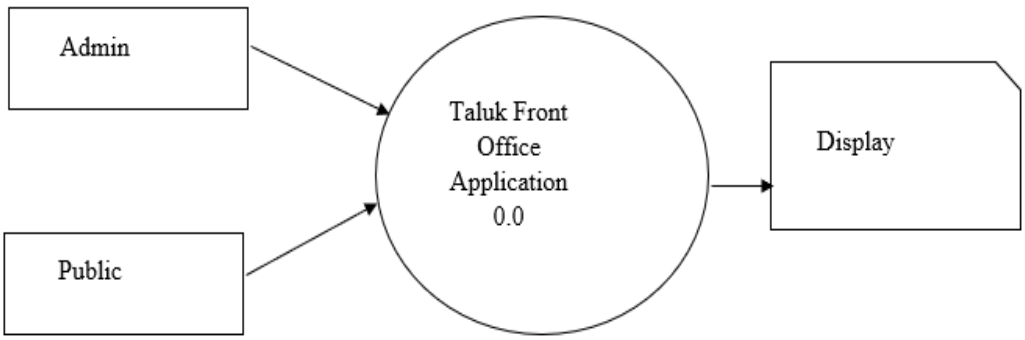

Figure 3.1: Level 0 DFD

The diagram shows Level 0 Data flow diagram of the Automated Essay Scoring System. As the diagram indicates there is a user part and an admin one. The input of the project is the essay by the user and which is given to the Automated essay scoring system. Then the essay is passed to the admin part for the evaluation of the essay. The evaluation of essay and score calculation is occurred in the admin side. The value of the evaluation is passed back to the user through the application. This is how the data flows through the application. Since there is no database in the application, the data is not stored anywhere. The data is lost after the evaluation.

3.3 Screenshots of user interface

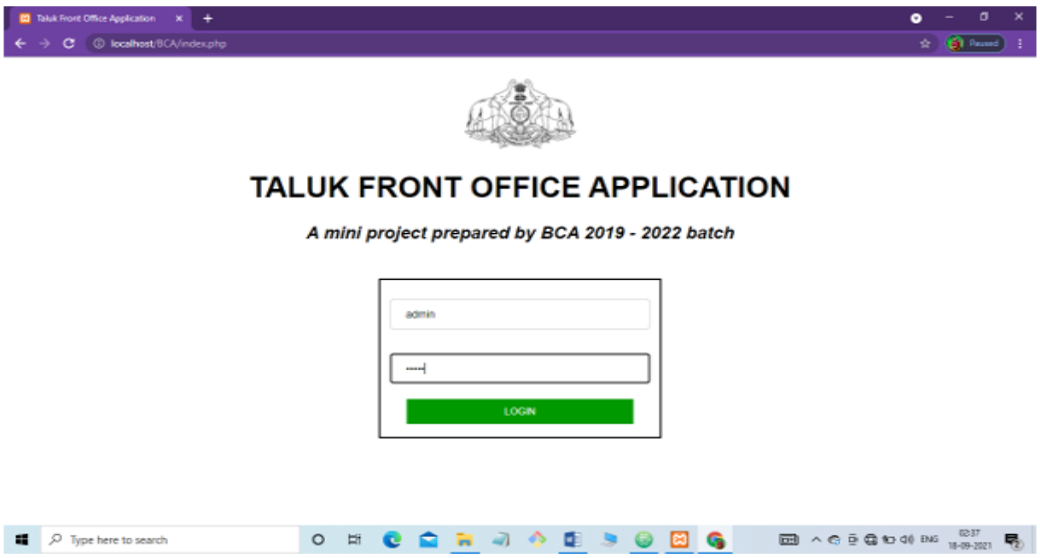

Figure 3.2: input

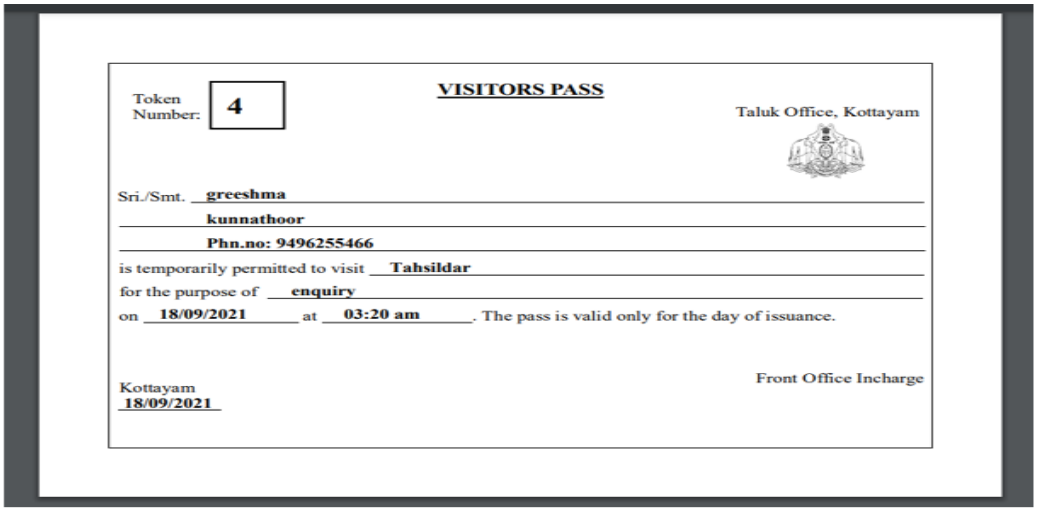

Figure 3.3: output

Chapter 4

Coding

The input to the coding phase is the design document. During the coding phase, different modules identify in the design document are coded according to the respective module specifications. Recall that at the end of the design phase, we not only have the module structure of the system but also the module specifications where the data structures and algorithms for each module are specified. Therefore, we can say that the objective of the coding phase is transformed the design of a system has given by module specification, into a high level language code and to unit this code. A crucial phase in the system development of cycle is the successful implementation of new system design. Implementation simply means converting a new system design into operation. An important accept of the system analysis's job is to make sure that the design is implemented to establish the standard. A critical phase in the system development is the implementation of the new system. Implementation is the process of converting a new system design into an operational one. Implementation includes all the activities that take place to convert from the old system into a new one. The new system may be totally new. Replacing an existing system on it may be a major modification to a system currently put into use. Implementation is the stage of the project when his theoretical design is turned into a working system. At this stage the main work load, the greatest up heave and the major impact on existing practises shift to user department. If the implementation stage is not carefully planned and controlled, it can cause chaos. Thus, it can't be considered to be the more crucial stage in achieving a successful new stage and in giving the user confidence that the system work and be effective.

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Chapter 5

Testing and Implementation

5.1 Testing and various types of testing used.

Once a software is developed, the major activity is to test whether the actual results match with the experimental results. This process is called testing. It's used to make sure that the developed system is defect free. The main aim of testing is to find the errors and missing operations by executing the program. It also ensure that all of the objectivs of the project are met by the developer. The objective of testing is not only to evaluate the bugs in the created software but also finding the ways to improve the efficiency, usability and accuracy of it. It aims to measure the functionality, specification and performance of a software program. Tests are performed on the created software and their results are compared with the expected documentation. When there are too much errors occurred, debugging is performed. And the result after debugging is tested again to make sure that the software is error free. The major testing processes applied to this project are unit testing, integration testing and system testing. In unit testing, our aim is to test all individual units of the software. It makes sure that all of the units of the software works as it intended. In integration testing, the combined individual units are tested to check whether it met the intended function or not. It helps us to find out the faults that may arise when the units are combined. In system testing the entire software is tested to make sure that it satisfies all of the requirements.

5.1.1 Unit Testing

Unit Testing is a software testing technique by means of which individual units of software i.e. group of computer program modules, usage procedures, and operating procedures are tested to determine whether they are suitable for use or not. It is a testing method using which every independent module is tested to determine if there is an issue by the developer himself. It is correlated with the functional correctness of the independent modules. Unit Testing is defined as a type of software testing where individual components of a software are tested. Unit Testing of the software product is carried out during the development of an application. An individual component may be either an individual function or a procedure. Unit Testing is typically performed by the developer. In SDLC or V Model, Unit testing is the first level of testing done before integration testing. Unit testing is such a type of testing technique that is usually performed by developers. Although due to the reluctance of developers to test, quality assurance engineers also do unit testing.

5.1.2 Interation Testing

Integration Testing is defined as a type of testing where software modules are integrated logically and tested as a group. A typical software project consists of multiple software modules, coded by different programmers. The purpose of this level of testing is to expose defects in the interaction between these software modules when they are integrated. Integration Test Case differs from other test cases in the sense it focuses mainly on the interfaces flow of data/information between the modules. Here priority is to be given for the integrating links rather than the unit functions which are already tested

5.1.3 System Testing

System Testing is a type of software testing that is performed on a complete integrated system to evaluate the compliance of the system with the corresponding requirements.In system testing, integration testing passed components are taken as input. The goal of integration testing is to detect any irregularity between the units that are integrated together. System testing detects defects within both the integrated units and the whole system. The result of system testing is the observed behavior of a component or a system when it is tested. System Testing is carried out on the whole system in the context of either system requirement specifications or functional requirement specifications or in the context of both. System testing tests the design and behavior of the system and also the expectations of the customer. It is performed to test the system beyond the bounds mentioned in the software requirements specification (SRS). System Testing is basically performed by a testing team that is independent of the development team that helps to test the quality of the system impartial. It has both functional and non-functional testing. System Testing is a black-box testing. System Testing is performed after the integration testing and before the acceptance testing. System Testing is a level of testing that validates the complete and fully integrated software product. The purpose of a system test is to evaluate the end-to-end system specifications. Usually, the software is only one element of a larger computerbased system. Ultimately, the software is interfaced with other software/hardware systems. System Testing is defined as a series of different tests whose sole purpose is to exercise the full computer-based system

Chapter 6

Results and Discussion

The main aim of the project is provide an effective solution for maintaining information about all the public coming under an particular taluk using a database system. Thus it solves the issue of over time consumption. Futhermore, public no need to pay cash for the generation of an application.This provide a greater advantage to this project.

6.1 Advantages and Limitations

The proposed system overcomes the drawbacks in the existing system. The existing system is thoroughly analysed and proposed system is designed such a way that the users of the system can interact effectively by producing the available information. The increased workload in the existing system is reduced to a great extent. The proposed system is a reliable system.It is flexible and reliable for further modification.

6.1.1 Advantages

- Web based application
- Accuracy and flexibility
- Minimize human effort
- Reduce more paper work
- Save time

- User friendly
- Easy maintenance of records

6.1.2 Limitations

- Lot of paper work.
- Expensive
- Percentage of accuracy is less.
- User wants to wait in a queue.
- It is time consuming.
- It lack of data security.
- Retrieval of data takes lot of time.

Chapter 7

Conclusion and Future Scope

Taluk Front Office Application project is a real time project which is useful for the employees as well as for the public who are facing problems with the current manual work. At the completion of this project we come to know that this system is useful for everyone who want to generate the applications more easily and in effective way. This system can exclude human efforts and saves lot of money and time.

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