Automatic Time Table Generator for Colleges

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Abstract - **This project is aimed at developing a Time Table Generator for Colleges. Timetable generation is a very well known problem that is faced in every educational institution. The problem actually occurs when there are clashes among the preferences given by the staffs. Colleges are supposed to make time tables for each semester which used to be a very tedious and pain staking job. Student is eligible for viewing his timetable once they are finalized for a given semester. Staff also is eligible for viewing Staff timetable once they are finalized for a given semester and Class Allot. The objective of the Time Table Allotment for any department project was to develop an application that enables allotment subject to staff as well as classes for students. Administrator Added the Following details for Add the Student, Add Staff, Add Subject, Time Table Entry, Time Table Update.**

Index Terms – **Time Table Generator, Administrator, Student, Staff.**

I. INTRODUCTION

Colleges are supposed to make time tables for each semester which used to be a very tedious and pain staking job. The project entitled "Time Table Generator" is developed using PHP as front end and MYSQL as back end. In this Time table Generator system integrates with many modules and processing. In many cases automation and control is the most critical area to College efficiency. In Information Technology is widely used for faster and easier way of communications. Administrator Added the Following details for Add the Student, Add Staff, Add Subject, Time Table Entry, Time Table Update. Student and Staff View the time Table details. This Time Table generator system is being implemented the PHP. Since

PHP is our Front-End it looks more look and feels for the web application is very Effective & Security. Time Table generator system is a project for a very useful for Students to view the time table details in this website.

II. SYSTEM DEVELOPMENT

EXISTING SYSTEM:

In the existing system, each task is carried out manually and processing is also a tedious job. In previous system colleges were maintaining time table details manually in pen and paper, which was time taking and costly. The Organization is not able to achieve its need in time and also the results may not accurate. Because of the manual maintenance there are number of difficulties and drawbacks exist in the system. Some of them are

Drawbacks of the Existing System

1. Increased transaction leads to increased source document and hence maintenance becomes difficult.

2. If any student, staff entry is wrongly made then the maintenance becomes very difficult.

PROPOSED SYSTEM:

The proposed system is designed to be more efficient than the manual system. It invokes all base tasks that are now carried out manually, such as the forms transactions and reports which is added advantage. The proposed System is completely computer-based application. Thousands of records can searched and displayed without taking any significant time.

Advantages of the Proposed System:

1. Gives accurate information
2. Simplifies the manual work
3. It minimizes the documentation related work
4. Provides up to date information
5. Friendly Environment by providing warning messages.

III. PROPOSED METHODOLOGIES

MODULES:

1. Admin
   a) Add Student
   b) Add Staff
   c) Add Subject
   d) Time Table Entry

2. Student
   a) Authentication
   b) View Time Table

3. Staff
   a) Authentication
   b) View Student Time Table

Modules Description:

Authentication Module:

This module contains all the information about the authenticated Administrator. Administrator without his username and password can't enter into the login if he is only the authenticated Staff then he can enter to his login. Authentication is the process of verifying the identity of a user by obtaining some sort of credentials and using those credentials to verify the Administrator identity. If the credentials are valid, the authorization process starts. Authentication process always proceeds to Authorization process. Administrators assume these responsibilities as volunteers who go through a community review process. They are not acting as users. They are never required to use

their tools, and must never use them to gain an advantage in a dispute whose need the access for their database in secured way of organization. Administrators should not be confused incoming user registration time and login time.

Add Student:

In this module Administrator Add the Student Information using this module. It Contains Information about the Student id, Name, Password, Email id, Gender, Mobile Number, Department, Semester. It makes easy to integrate Administrator password authentication into your web app. The credentials are not stored in your database.

Add Staff:

In this module Administrator Add the Staff Information using this module. It Contains Information about the Staff id, Name, Password, Email id, Gender, Mobile Number, Address, Department. It makes easy to integrate Administrator password authentication into your web app. The credentials are not stored in your database.

Add Subject:

In this module Administrator Add the Subject Information. It Contains Information about the Subject for Subject Name, Department, Semester. It makes easy to integrate Administrator password authentication into your web app. The credentials are not stored in your database.

View Time Table:

In this module User View the Time Table Information. It Contains Information about the Time Table Based on the Day. User can select Sunday to Monday and List out the Time Table.

View Student Time Table:

In this module Staff View the Student Time Table Information. It Contains Information about the Time Table Based on the Day. The Details stored in the database.

IV. TESTING METHODS

It is the process of exercising software with the intent of finding and ultimately correcting errors. This fundamental philosophy does not change for web applications, because web based system and applications reside on network and inter-operate with many different operating systems, browsers, hardware platforms and communication protocols. Thus searching for errors is significant challenge for web applications.

Testing issues:

- ➢ Client GUI should be considered
- ➢ Target environment and platform considerations
- ➢ Distributed database considerations
- ➢ Distributed processing consideration

Testing and Methodologies

System testing is the state of implementation, which is aimed at ensuring that the system works accurately and efficiently as expect before live operation, commences. It certifies that the whole set of programs hang together System testing requires a test plan, that consists of several key activities and steps for run program, string, system and user acceptance testing. The implementation of newly design package is important in adopting a successful new system

Testing is important stage in software development. System test is implementation should be a confirmation that all is correct and an opportunity to show the users that the system works as they expected It accounts the largest percentage of technical effort in software development process.

Testing phase is the development phase that validates the code against the functional specifications. Testing is a vital to the achievement of the system goals. The objective of testing is to discover errors. To fulfill this objective a series of test step such as the unit test, integration test, validation and system test where planned and executed.

Unit testing:

Here each program is tested individually so any error apply unit is debugged. The sample data are given for the unit testing. The unit test results are recorded for further references. During unit testing the functions of the program unit validation and the limitations are tested.

The situation is illustrated in as follows

Coding-> Debugging ->Unit testing -> Integration testing

The four categories of test that a programmer will typically perform on a program   unit

- ➢ Functional test
- ➢ Performance test
- ➢ Stress Test
- ➢ Structure test

Functional test involve exercising the code with nominal input values for which the expected results are known as well as boundary values and special values. Performance testing determines the amount of execution time spent in various parts of unit program through put and response time and device utilization by the program. A variation of stress testing called sensitivity testing in same situations a very small range of data contained in a bound of valid data may cause extreme and even erroneous processing or profound performance degradation. Structured testing is concerned with a exercising the internal logic of a program and traversing paths. Functional testing, stress testing performance testing are referred as "black box" testing and structure testing is referred as "white box" testing

Validation Testing:

Software validation is achieved through a serious of testes that demonstrate conformity with requirements. Thus the proposed system under consideration has been tested by validation & found to be working satisfactory.

Output Testing:

Asking the user about the format required by them tests the output generated by the system under consideration. It can be done in two ways, One on screen and other on printer format. The output format on the screen is found to be correct as the format designed n system test.

System Testing:

In the system testing the whole system is tested for interface between each modules and program units are tested and recorded. This testing is done with sample data. The securities, communication between interfaces are tested. System testing is actually a series of different tests whose primary purpose is to fully exercise the computer based system although each test has a different purpose all work to verify that all system elements properly integrated and perform allocate function. It involves two kinds of activities namely

1. Integrated testing
2. Acceptance testing

Integrated testing:

Integrated testing is a systematic technique for constructing tests to uncover errors associated with interface. Objective is to take unit tested modules and build a program structure that has been dictated by design.

Acceptance testing:

Acceptance testing involves planning an execution of a functional test, performance test and stress test to verify that the implemented system satisfies the requirement. The acceptance testing is the final stage of the user the various possibilities of the data are entered and the results are tested.

Validation testing:

Software validation is achieved through a series of test that demonstrates the conformity and requirements. Thus the proposed system under consideration has to be tested by validation and found to be working satisfactorily. For example in customer enters phone number field should contain number otherwise it produces an error message similarly in all the forms the fields are validated

Testing results

All the tests should be traceable to customer requirements the focus of testing will shift progressively from programs Exhaustive testing is not possible To be more effective testing should be which has probability of finding errors.
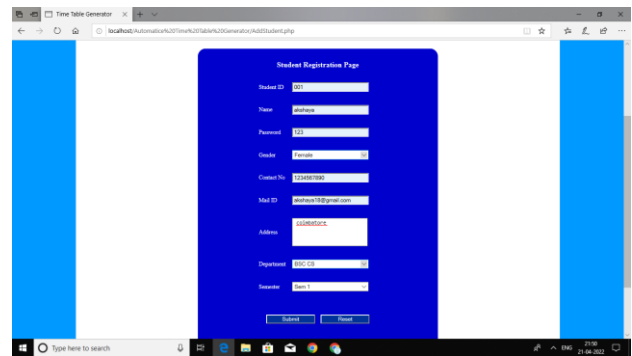
The following are the attributes of good test

1. A good test has a probability of finding a errors

2. A good test should be "best of breeds"

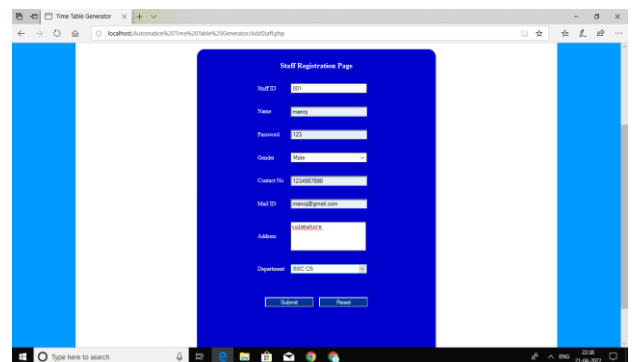3. A good test to neither simple nor too complex

V. EXPERIMENTAL RESULTS

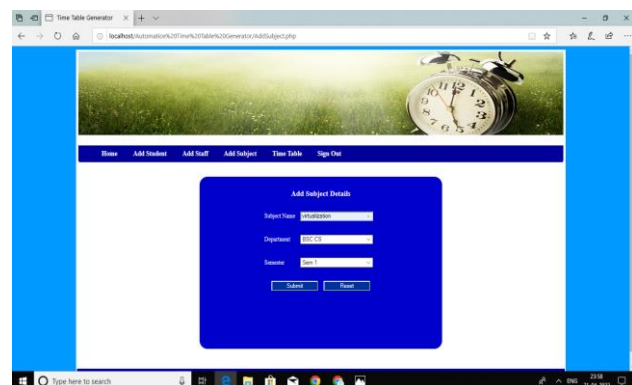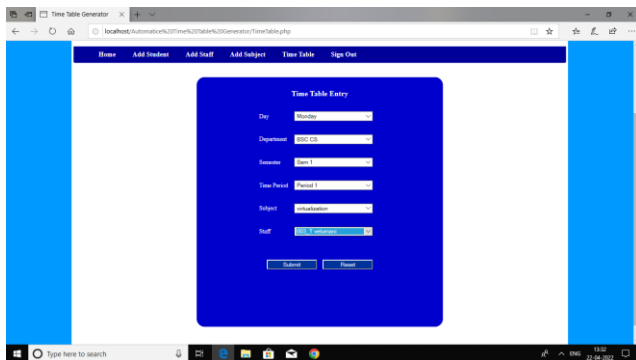### Login Page:
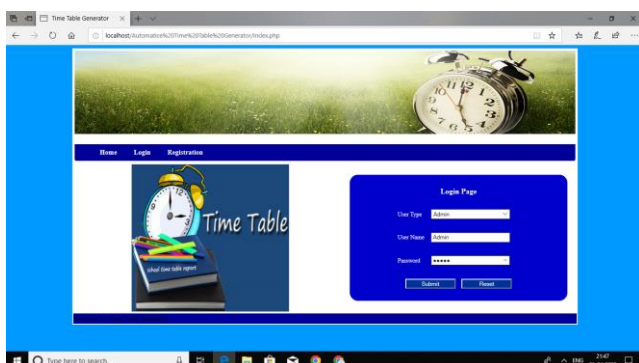
Student Registration Page:

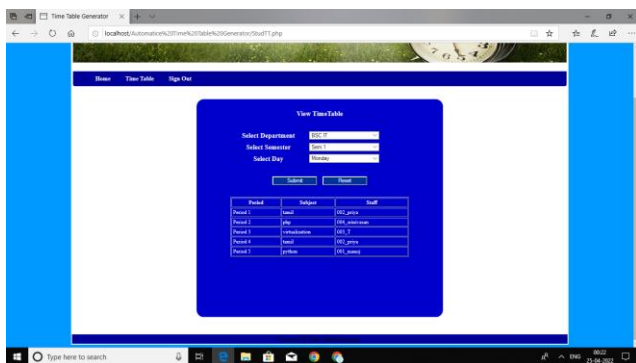### Staff Registration Page:

Add Subject Details:

Time Table Entry:

View Time Table:

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V. CONCLUSION

The "Time Table Generator" has been developed to satisfy all proposed requirements. The process is maintained simpler and easier. The system is highly scalable and user friendly. Almost all the system objectives have been met. The system has been tested under all criteria. The system minimizes the problem arising in the existing manual system and it eliminates the human errors to zero level. The design of the database is flexible ensuring that the system can be implemented. It is implemented and gone through all validation. All phases of development were conceived using methodologies. User with little training can get the required report. The software executes successfully by fulfilling the objectives of the project. Further extensions to this system can be made required with minor modifications.