Atal Bihari Vajpayee

Indian Institute of Information Technology

Decision Making Expert System Project

On

Student Result Management System (SRMS)

Submitted by:

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Again we would like to thank Anurag Sir for his support and corporation, without whom this project wouldn't have been possible.

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Introduction of the Project SRMS:

The "Student Result Management System" has been developed to override the problems prevailing in the practicing manual system. This software is supported to eliminate and, in some cases, reduce the hardships faced by this existing system, Moreover. This system is designed for the particular need of the company to carry out operations in a smooth and effective manner,

The application is reduced as much as possible to avoid errors while entering the data. I**t also provides error message while entering invalid data,** No formal knowledge is needed for the user to use this system Thus by this all it proves it is user-friendly-Student Result Management System. As described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources, every organization, whether big or small has challenges to overcome and managing the information of Result, Student Class, Subject,

Every Student Result Management System has different Student needs. Therefore, we design exclusive employee management systems that are adapted to your managerial requirements. This is designed to assist in strategic planning. And will help you ensure that your organization is equipped with the right level of information and details for your future goals. Also, for those busy executive who are always on the go, our system comes with remote access features, which will allow you to manage your workforce anytime. At all times. These systems will ultimately allow you to better manage resources,

Abstract:

The purpose of Student Result Management System is to automate the existing manual system by the help of computerized equipment and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. The required software and hardware are easily available and easy to work with, Student Result Management System. As described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources. The organization can maintain computerized records without redundant entries. That means that one need not be distracted by information that is not relevant, while being able to reach the information. The aim is to automate its existing manual system by the help of computerized equipment and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. Basically the project describes how to manage for good performance and better services for the clients.

Objective:

Main aim of this Project on SRMS is to deal with the subtleties of Student, Result, Subject, Class, Section. It deals with all the data about Student, Result, Subject, Subject. The venture is completely worked at managerial and along these lines just the overseer is ensured the entrance. The motivation behind the project is to manufacture a web app to decrease the work for dealing with the Student , Result , Subject , Subject. It tracks all the insights regarding the Subject, Class.

Functionalities provided by Student Result Management System are as follows:

- Provides the searching facilities based on various factors, Such as Student, Subject, Class,Section
- Student Result Management System also manage the Subject details online tor Class details, Section details, Student
- It tracks all the information of Result, Subject, Class etc
- Manage the information of Result
- Shows the Information and description of the Student, Subject
- To Increase efficiency of managing the Student, Result
- It deals with monitoring the information and transactions of Class
- Manage the information of Student
- Editing:- Adding and updating of Records Is Improved which results In proper resource management of Student data,
- Manage the information of Class
- Integration of all records of Section

Scope of the project SRMS

It might assist gathering with idealizing the executives in subtleties. In a brief time, the assortment will be seen , straightforward and reasonable. It will help an individual with knowing the administration of spent year distinctively. It will be additionally decreased the expense of gathering the administration, assortment system will go on easily.

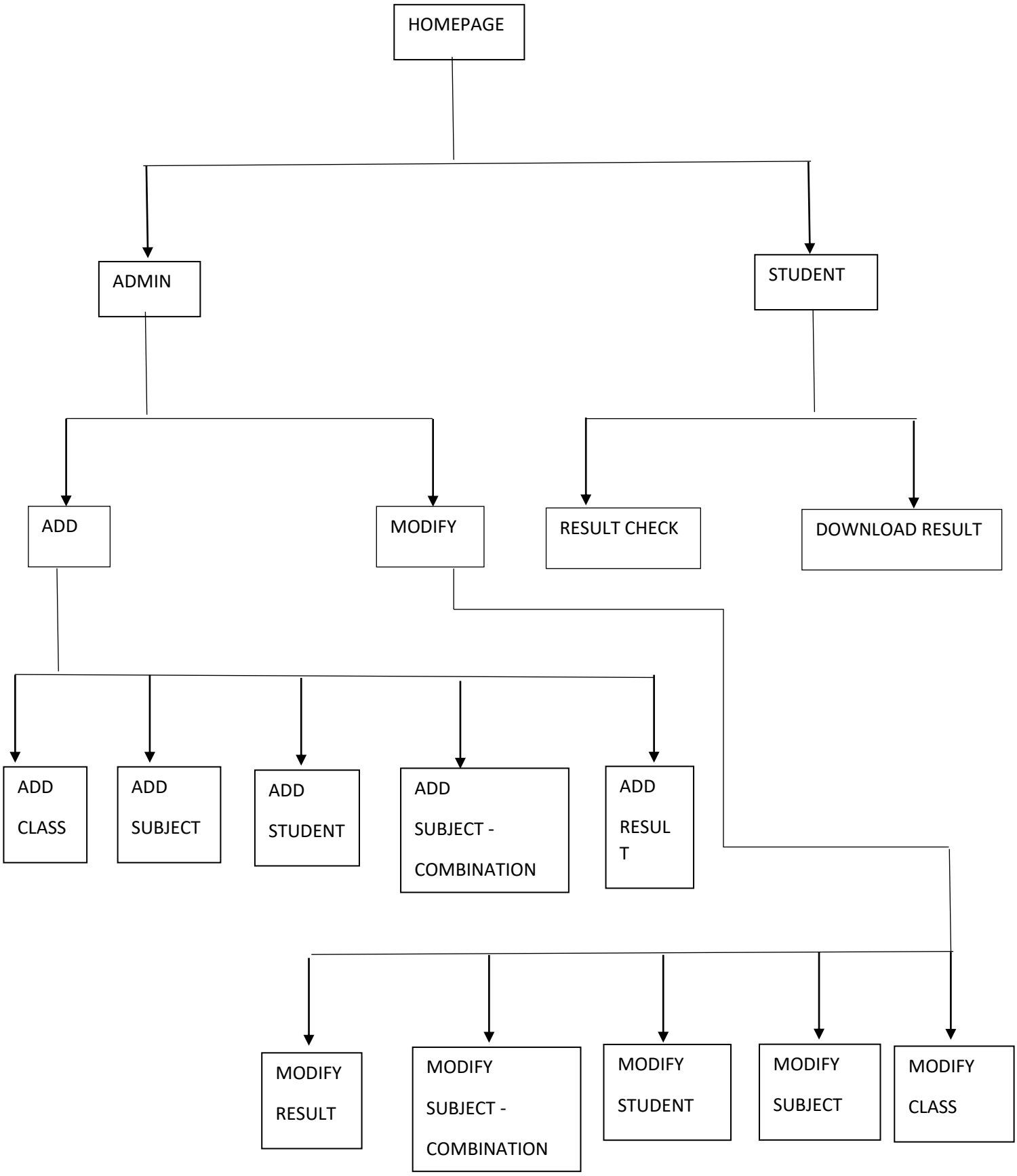
We have tried to computerize various processes of Student Result Management System,

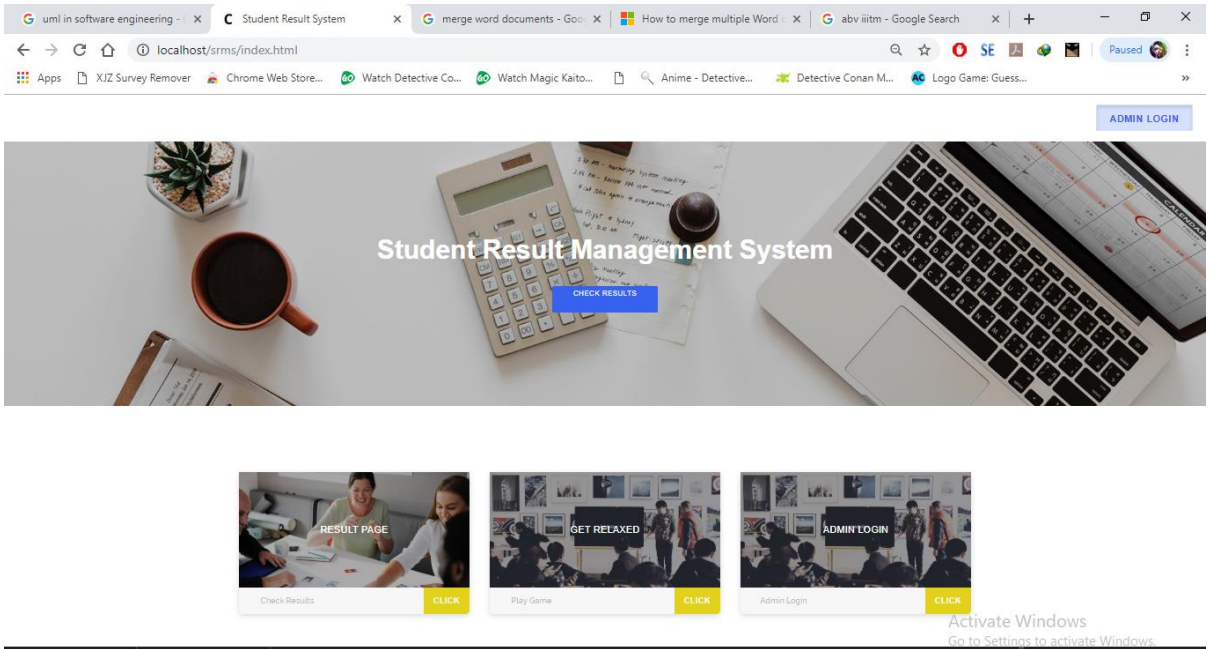
- In computer system the person has to fill the various forms & number of copies of the forms can be easily generated at a time.
- In computer system, it is not necessary to create the manifest but we can directly print it, which saves our time
- To assist the staff in capturing the effort spent on their respective working areas
- To utilize resources in an efficient manner by increasing their productivity through automation, - The system generates types of information that can be used for various purposes
- It satisfies the user requirement
- Be easy to understand by the user and operator
- Be easy to operate
- Have a good user interface
- Be expandable
- Delivered onschedule within the budget

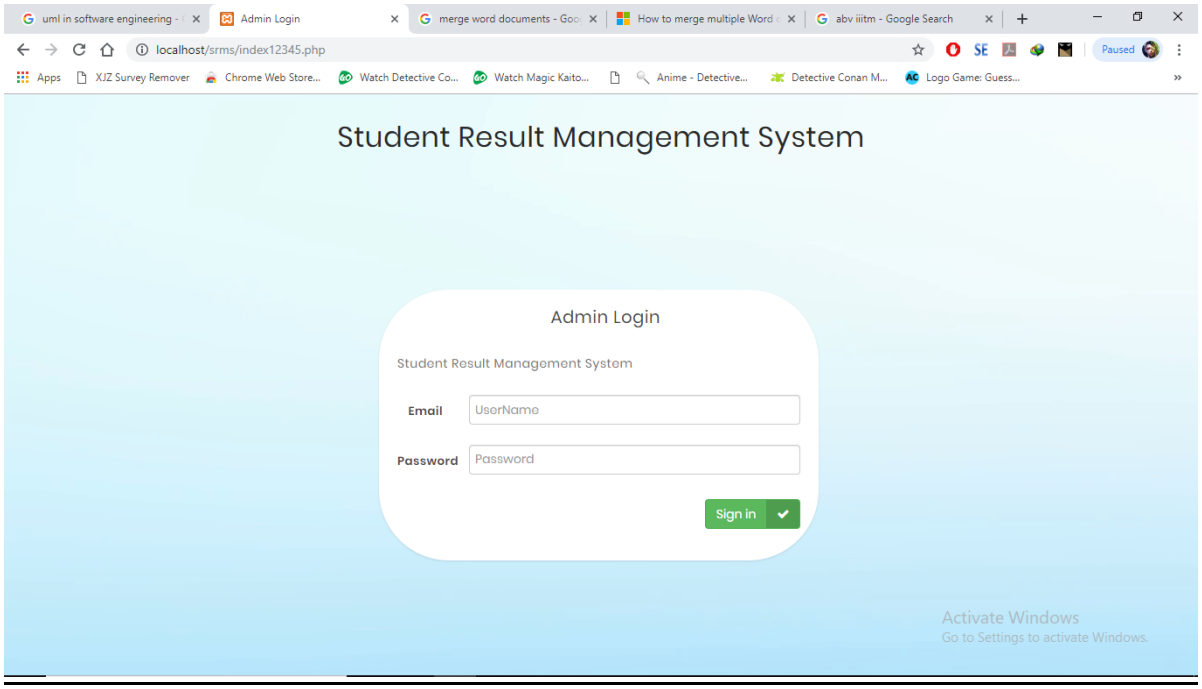
Modules of SRMS:

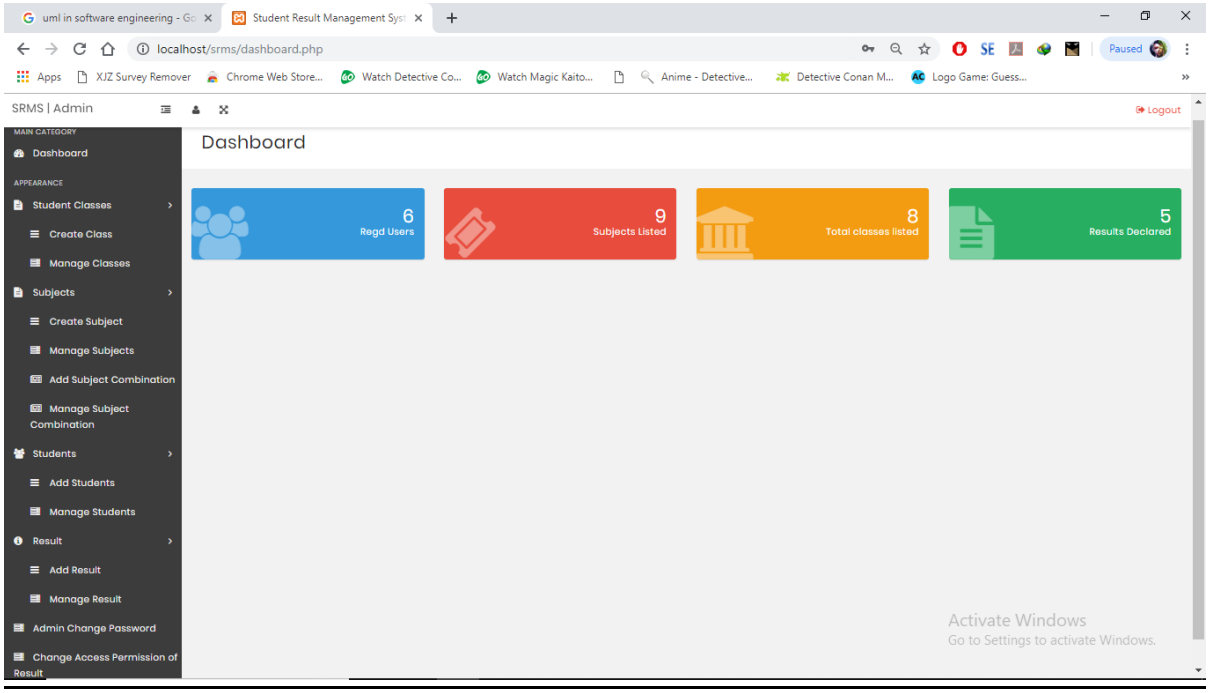
- Student Management Module: Used for managing the Student details
- Section Module: Used for managing the information of Section,
- Subject Module: Used for taking a decision on the info of Subject
- Result Management Module: Used for managing the details of Result,
- Subject Module: Used for managing the Subject details
- Class Module: Used for managing the Class information
- Login Module: Used for managing the login details
- Users Module: Used for managing the users of the system

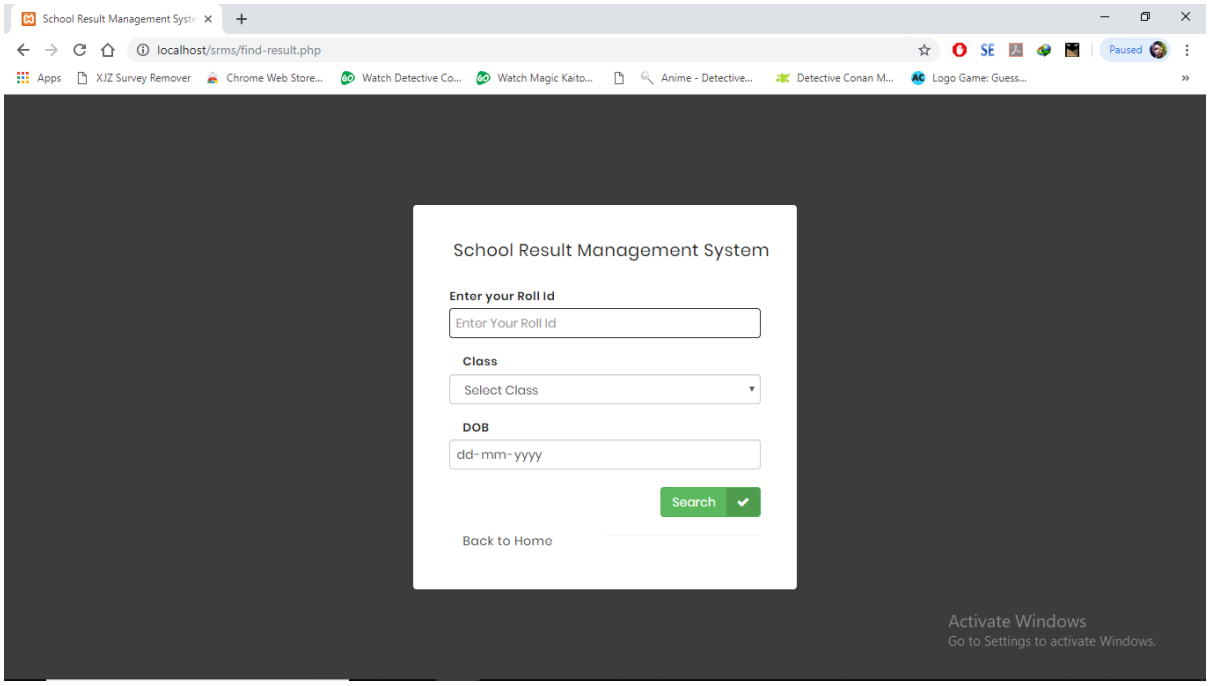
UML DIAGRAM


HOMEPAGE
ADMIN
STUDENT
ADD
MODIFY
RESULT CHECK
DOWNLOAD RESULT
ADD CLASS
ADD SUBJECT
ADD STUDENT
ADD SUBJECT - COMBINATION
ADD RESULT
MODIFY RESULT
MODIFY SUBJECT - COMBINATION
MODIFY STUDENT
MODIFY SUBJECT
MODIFY CLASS


uml in software engineering -
Student Result System
merge word documents - Goo
How to merge multiple Word
abv iiitm - Google Search
localhost/srms/index.html
Paused
Apps
XJZ Survey Remover
Chrome Web Store...
Watch Detective Co...
Watch Magic Kaito...
Anime - Detective...
Detective Conan M...
Logo Game: Guess...
ADMIN LOGIN
Student Result Management System
CHECK RESULTS
RESULT PAGE
Check Results
CLICK
GET RELAXED
Play Game
CLICK
ADMIN LOGIN
Admin Login
CLICK
Activate Windows
Go to Settings to activate Windows.
PHONE: +91 9407338268
EMAIL: chiragjindal2163


Admin Login
localhost/srms/index12345.php
Student Result Management System
Admin Login
Student Result Management System
Email
UserName
Password
Password
Sign in
Activate Windows
Go to Settings to activate Windows.


Student Result Management Sys
localhost/srms/dashboard.php
SRMS | Admin
Logout
MAIN CATEGORY
Dashboard
APPEARANCE
Student Classes
Create Class
Manage Classes
Subjects
Create Subject
Manage Subjects
Add Subject Combination
Manage Subject Combination
Students
Add Students
Manage Students
Result
Add Result
Manage Result
Admin Change Password
Change Access Permission of Result
Dashboard
6
Regd Users
9
Subjects Listed
8
Total classes listed
5
Results Declared
Activate Windows
Go to Settings to activate Windows.



Input Data and Validation of Project on student Result Management System:

- All the fields such as Student, Subject,Section are validated and does not take invalid values
- Each form for Student, Result, Subject cannot accept blank value fields
- Avoiding errors in data
- Controlling amount of Input Integration of all the modules/forms in the system
- Preparation of the test cases
- Preparation of the possible test data with all the validation checks
- Actual testing done manually
- Recording of all the reproduced errors
- Modifications done for the errors found during testing
- Prepared the test result scripts after rectification of the errors
- Functionality of the entire module/forms
- Validations for user Input
- Checking of the Coding standards to be maintained during coding

Software Requirement Specification

The Software Requirements Specification is produced at the culmination of the analysis task. The function and performance allocated to software as part of system engineering are refined by establishing a complete information description. A detailed functional and behavioural description. An indication of performance requirements and design constraints. Appropriate validation criteria. And other data pertinent to requirements.

The proposed system has the following requirements:

- System needs store information about new entry of Student
- System needs to help the internal staff to keep information of Result and find them as per various queues
- System need to maintain quantity record
- System need to keep the record of Subject
- System need to update and delete the record
- System also needs a search area
- It also needs a security system to prevent data

Identification of need:

The old manual system was suffering from a series of drawbacks. Since whole of the system was to be maintained with hands the process of keeping, maintaining and retrieving the information was very tedious and lengthy. The records were never used to be in a systematic order. There used to be lots of difficulties in associating any particular transaction with a particular context. If any information was to be found it was required to go through the different registers, documents there would never exist anything like report generation. There would always be unnecessary consumption of time while entering records and retrieving records. One more problem was that it was very difficult to find errors while entering the records. Once the records were entered it was very difficult to update these records. The reason behind it is that there is lot of information to be maintained and have to be kept in mind while running the business .For this reason we have provided features Present system is partially automated (computerized). Actually existing system is quite laborious as one has to enter same information at three different places.

Feasibility Study:

After doing the project Student Result Management System, study and analyzing all the existing or required functionalities of the system. The next task is to do the feasibility study for the project. All projects are feasible given unlimited resources and infinite time. Feasibility study includes consideration of all the possible ways to provide a solution to the given problem. The proposed solution should satisfy all the user requirements and should be flexible enough so that future changes can be easily done based on the future upcoming requirements.

A. Economical Feasibility

This is a very important aspect to be considered while developing a project. We decided the technology based on minimum possible cost factor.

- All hardware and software cost has to be borne by the organization.
- Overall we have estimated that the benefits the organization is going to receive from the proposed system will surely overcome the initial costs and the later on running cost for system.

B. Technical Feasibility

This included the study of function, performance and constraints that may affect the ability to achieve an acceptable system, for this feasibility study, we studied complete functionality to be provided in the system. As described in the System Requirement Specification (SRS). And checked if everything was possible using different type of frontend and backend platforms.

Preliminary Product Description:

The initial phase in the framework improvement life cycle is the fundamental examination to decide the plausibility of the framework. The motivation behind the starter examination is to assess venture demands. It's anything but a plan study nor does it incorporate the assortment of subtleties to depict the business framework in all regard, rather. It is the gathering of data that encourages board of trustees' individuals to assess the benefits of the undertaking solicitation and make an educated judgment about the possibility regarding the proposed venture.

Analysts working on the preliminary Investigation should accomplish the following objectives: -

- Clarify and understand the project request
- Determine the size of the project
- Assess costs and benefits of alternative approaches
- Determine the technical and operational feasibility of alternative approaches
- Report the findings to management, with recommendations outlining the acceptance or rejection of the proposal

Benefit to Organization

The association will clearly have the option to pick up advantages, for example, investment funds in working cost, and decrease in administrative work. Better usage of HR and progressively satisfactory picture expanding altruism.

The Initial Cost

The Initial cost of setting up the system will include the cost of hardware software (. Add-on software, utilities) labour (setup & maintenance). The same has to bear by the organization,

Running Cost

Running Cost Besides. The underlying cost the drawn out cost will incorporate the running expense for the framework including the AMC, fixed charges, cost for HR, cost for update/restoration of different related programming.

Cost estimation of the project:

Programming cost contains a little level of by and large PC based framework cost. There are various components, which are thought of. That can influence a definitive expense of the product, for example, human. Specialized, Hardware and Software accessibility and so on.

The central matter that was considered during the cost estimation of undertaking was its measuring. Disregarding total programming measuring, work point and rough lines of code were likewise used to "size" every component of the Software and their costing.

The cost estimation done by us for Project additionally rely on the benchmark measurements gathered from past tasks and these were utilized related to estimation factors to create cost and exertion projections.

We have basically estimated this project mainly on two bases -

1) Effort Estimation - This refers to the total man hours required for the development of the project. It even includes the time required for doing documentation and user manual. We will calculate this using Cocomo model.

2) Hardware Required Estimation - This includes the cost of the PCs and the hardware cost required for development of this project.

COCOMO Model

Cocomo (Constructive Cost Model) is a regression model based on LOC, i.e. **number of Lines of Code**. It is a procedural cost estimate model for software projects and often used as a process of reliably predicting the various parameters associated with making a project such as size, effort, cost, time and quality. It was proposed by Barry Boehm in 1970 and is based on the study of 63 projects, which make it one of the best-documented models.
The key parameters which define the quality of any software products, which are also an outcome of the Cocomo are primarily Effort & Schedule:

- **Effort:** Amount of labour that will be required to complete a task. It is measured in person-months units.
- **Schedule:** Simply means the amount of time required for the completion of the job, which is, of course, proportional to the effort put. It is measured in the units of time such as weeks, months.

Various models of Cocomo have been proposed to foresee the cost estimation at various levels, in light of the measure of exactness and rightness required. These models can be applied to an assortment of activities, whose qualities decide the estimation of steady to be utilized in ensuing computations. These attributes relating to various framework types are referenced underneath.

Estimation of Effort: Calculations –

1. Basic Model –

$E = a*(KLOC)^b$

The above formula is used for the cost estimation of for the basic COCOMO model, and also is used in the subsequent models. The constant values a and b for the Basic Model for the different categories of system:

SOFTWARE PROJECTS	A	B
Organic	2.4	1.05
Semi Detached	3.0	1.12
Embedded	3.6	1.20

The exertion is estimated in Person-Months and as obvious from the equation is subject to Kilo-Lines of code. These recipes are utilized as such in the Basic Model computations, as very little thought of various factors, for example, unwavering quality, aptitude is considered, from this time forward the gauge is harsh.

2. **Intermediate Model** –
   The essential Cocomo model accept that the exertion is just an element of the quantity of lines of code and a few constants assessed by the diverse programming framework. Be that as it may, in all actuality, no framework's exertion and timetable can be exclusively determined based on Lines of Code. For that, different factors, for example, dependability, experience, Capability. These components are known as Cost Drivers and the Intermediate Model uses 15 such drivers for cost estimation.

   Classification of Cost Drivers and their attributes:

   (i) Product attributes –
   - Required software reliability extent
   - Size of the application database
   - The complexity of the product

   (ii) Hardware attributes –
   - Run-time performance constraints
   - Memory constraints
   - The volatility of the virtual machine environment
   - Required turnabout time

   (iii) Personnel attributes –
   - Analyst capability
   - Software engineering capability
   - Applications experience
   - Virtual machine experience
   - Programming language experience

   (iv) Project attributes –
   - Use of software tools
   - Application of software engineering methods
   - Required development schedule

Cost Drivers	Ratings					
	Very Low	Low	Nominal	High	Very High	Extra High
Product attributes						
Required software reliability	0.75	0.88	1.00	1.15	1.40	
Size of application database		0.94	1.00	1.08	1.16	
Complexity of the product	0.70	0.85	1.00	1.15	1.30	1.65
Hardware attributes						
Run-time performance constraints			1.00	1.11	1.30	1.66
Memory constraints			1.00	1.06	1.21	1.56
Volatility of the virtual machine environment		0.87	1.00	1.15	1.30	
Required turnabout time		0.87	1.00	1.07	1.15	
Personnel attributes						
Analyst capability	1.46	1.19	1.00	0.86	0.71	
Applications experience	1.29	1.13	1.00	0.91	0.82	
Software engineer capability	1.42	1.17	1.00	0.86	0.70	
Virtual machine experience	1.21	1.10	1.00	0.90		
Programming language experience	1.14	1.07	1.00	0.95		
Project attributes						
Application of software engineering methods	1.24	1.10	1.00	0.91	0.82	
Use of software tools	1.24	1.10	1.00	0.91	0.83	
Required development schedule	1.23	1.08	1.00	1.04	1.10	

Product attributes						
Required software reliability	0.75	0.88	1.00	1.15	1.40	

The project manager is to rate these 15 different parameters for a particular project on a scale of one to three. Then, depending on these ratings, appropriate cost driver values are taken from the above table. These 15 values are then multiplied to calculate the EAF (Effort Adjustment Factor). The Intermediate COCOMO formula now takes the form:

$$E = (a*(KLOC)^B)*EAF$$

The values of A and B in case of the intermediate model are as follows:

SOFTWARE PROJECTS	A	B
Organic	3.2	1.05
Semi Detached	3.0	1.12
Embeddedc	2.8	1.20

4. **Detailed Model** –
   Detailed COCOMO incorporates all characteristics of the intermediate version with an assessment of the cost driver's impact on each step of the software engineering process. The detailed model uses different effort multipliers for each cost driver attribute. In detailed cocomo, the whole software is divided into different modules and then we apply COCOMO in different modules to estimate effort and then sum the effort.

The Six phases of detailed COCOMO are:

1. Planning and requirements
2. System design
3. Detailed design
4. Module code and test
5. Integration and test
6. Cost Constructive model

The effort is calculated as a function of program size and a set of cost drivers are given according to each phase of the software lifecycle.

COST ESTIMATION:

$$E=(a(KLOC)^b)*EAF$$

$a = 3.2$

$b = 1.05$

$KLOC = 5.6$

$EAF = 1.369$

$$E = (3.2(5.6)^{1.05} \times 1.369$$

$$= 26.722$$

Security Testing of the Project

Testing is imperative for the accomplishment of any product, no framework configuration is ever great. Testing is additionally conveyed in 2 modules, first stage is during the product building that is during the module creation, second stage is after the culmination of programming .

White Box Testing:

In this technique. The close examination of the logical parts through the software are tested by cases that exercise species sets of conditions or loops. All logical parts of the software checked once, errors that can be corrected using this technique are typographical errors, logical expressions which should be executed once may be getting executed more than once and error resulting by using wrong controls and loops. When the box testing tests all the independent part within a module a logical decision on their true and the false side are exercised. All loops and bounds within their operational bounds were exercised and internal data structure to ensure their validity were exercised once.

Black Box Testing:

This method enables the software engineer to device sets of input techniques that fully exercise all functional requirements for a program. Black box testing tests the input. The output and the external data. It checks whether the input data is correct and whether we are getting the desired output.

Integration Testing:

Integration testing aims at constructing the program structure while at the same constructing tests to uncover errors associated with interfacing the modules, modules are Integrated by using the top down approach.

Validation Testing:

Validation testing was performed to ensure that all the functional and performance requirements are met.

System Testing:

It is executing programs to check Logical changes made in it with intention of funding errors. A system Is tested for online response, volume of transaction, recovery from failure etc, System testing is done to ensure that the system satisfies all the user requirements.

Implementation and Software Specification Testing

Detailed Design of Implementation

This phase of the systems development life cycle refines hardware and software specifications, establishes programming plans. Trains users and implements extensive testing procedures. To evaluate design and operating specifications and/or provide the basis for further modification,

Technical Design

This activity builds upon specifications produced during new system design. Adding detailed technical specifications and documentation.

Test Specifications and Planning

This activity prepares detailed test specifications for individual modules and programs, job streams, subsystems. And for the system as a whole.

Programming and testing

This activity encompasses actual development, writing. And testing of program units or modules.

User Training

This activity encompasses writing user procedure manuals, preparation of user training materials, conducting training programs.

Acceptance Test

A final procedural review to demonstrate a system and secure user approval before a system becomes operational.

Installation Phase

In this phase the new computerized system is install. The conversion to new procedures is fully implemented. And the potential of the new system is explored.

System Analysis:

Framework investigation is a procedure of social event and deciphering realities, diagnosing issues and the data about the SRMS to suggest enhancements for the framework. It is a critical thinking movement that requires serious correspondence between the framework clients and framework designers, System examination or study is a significant period of any framework improvement process. The framework is concentrated to the minutest detail and broke down. The framework investigator assumes the job of the cross examiner and abides profound into the working of the current framework. The framework is seen overall and the contribution to the framework are recognized. The yields from the associations are followed to the different procedures. Framework examination is worried about getting mindful of the issue.

Distinguishing the pertinent and decisional factors, investigating and blending the different factors and deciding an ideal or if nothing else an acceptable solution or program of activity. An itemized investigation of the procedure must be made by different strategies like meetings, surveys and so forth. The information gathered by these sources must be investigated to show up to an end. The end is a comprehension of how the framework capacities. This framework is known as the current framework, presently the current framework is exposed to close investigation and issue regions are recognized. The fashioner now works as a difficult solver and attempts to sift through the difficulties that the venture faces. The arrangements are given as recommendations.

The proposition is then weighed with the current framework systematically and the best one is chosen. The proposition is introduced to the client for an underwriting by the client. The proposition is looked into on client demand and reasonable changes are made. This is circle that closes when the client is happy with proposition. Starter study is the way toward social affair and deciphering realities, utilizing the data for additional examinations on the framework. Starter study is critical thinking action that requires escalated correspondence between the framework clients and framework designers. It does different achievability contemplates. In these examinations, an unpleasant figure of the framework exercises can be acquired, from which

the choice about the methodologies to be followed for successful framework study and investigation can be taken.

BUG REPORT

Bug Section Name	Bug Description	Bug Found Time	Bug Correction Time
Admin Login @index.php	Admin login problem occurs during sign in.	22 April 2020 @11:57 PM	27 April 2020 @04:00 PM
Change Password @change-password.php	Problem in changing password. It did not update database correctly.	02 May 2020 @10:13 AM	02 May 2020 @08:41 PM
Add Student @add-students.php	Input data are not storing correctly on the database.	05 May 2020 @02:10 PM	06 May 2020 @10:00 PM
Add Result @add-result.php	All the students are listed after selecting particular class during adding result.	09 May 2020 @09:30 AM	17 May 2020 @01:10 PM
Search Result @find-result.php	Searching of result query is not working proper.	23 May 2020 @11:00 Am	01 June 2020 @11:40 PM
Download Result @pdf.php	Pdf download button is not giving any required output.	05 June 2020 @03:00 PM	06 June 2020 @05:46 PM
Change Access Permission @access.php	Change user access to see the result of others.	08 June 2020 @02:20 PM	08 June 2020 @06:00 PM