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# SOFTWARE REQUIREMENTS SPECIFICATION

for

## IIITG PORTAL

Version 1.0

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January 23, 2023

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# 1 Introduction

## 1.1 Purpose

This is very much difficult to maintain all the data of a course as a hard copy. Any data can be changed, deleted, or added at any time. Such as - A new teacher can be assigned to a course, and he also can be changed, And so many students are getting admitted every semester. So, "IITG PORTAL" is the solution. "IITG PORTAL" is an official website based on marking and resulting system of IITG authorized. The main concept of "IITG PORTAL" is to devitalize Btech courses, their students and teachers' data maintenance.

## 1.2 Intended Audience and Reading Suggestions

This SRS is for developers, project managers, users, and testers. Further the discussion will provide all the internal, external, functional and also non-functional informations about "IITG PORTAL".

## 1.3 Project Scope

"IITG PORTAL" creates a space for Director, Teachers, Students and Office Staffs for maintaining particular programs like - Btech.

After getting admitted to a programs a student has been given a registration number, by using which he/she can inter from-fill-up page. It will take his/her personal informations, admitted fee informations. He will be added as a student of that particuler programs after completing his/her payment process. After that he/she can select course of the program and then pay the fee for that. Student profile will contain all his personal informations, past results, recent result and notifications.

Office staff only post result publicly and also notice. But off course with the permission of Director.

Directors' main work is to assign teachers to the courses they will take, create teachers profile and approve mark-sheet. He can move a teacher from one course to another. He also can be a teacher and can also can take the courses and perform all the functionality of teacher like- marking papers. He can also directly post notice to the website, teachers and also students.

Teachers' account are created by director. They (Teachers) entry marks of the students, can view all the marks of the students and change it after submitted it to the director. Every student of that particular course will be under the teacher who is assigned to that

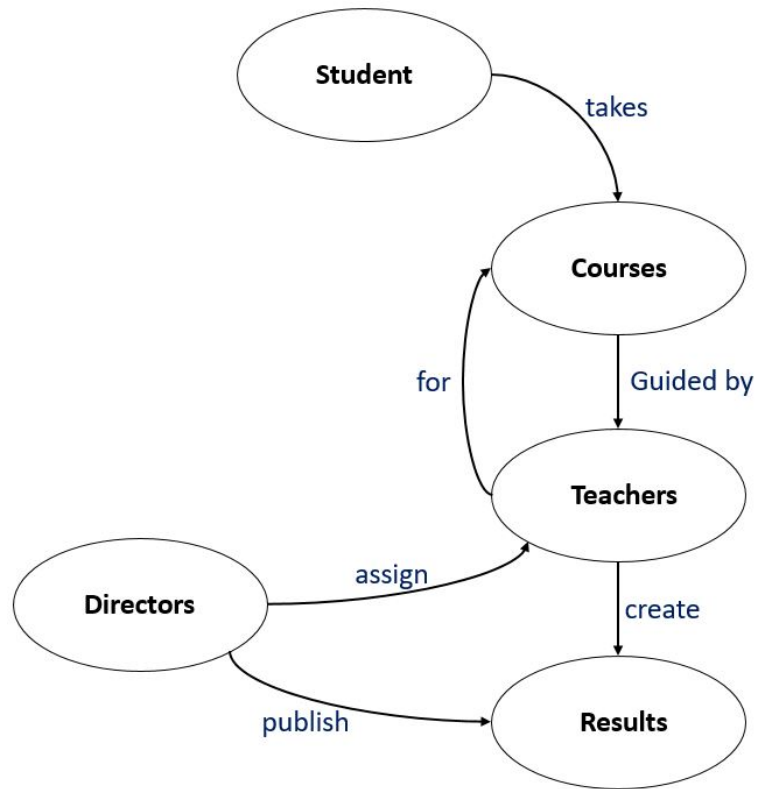


Figure 1.1: Entire work-flow

course.

Figure 1.1 (Entire work-flow) is the overview of the project. Connection of all the entities are dependable to each others. This gives the simple idea about the functional activities of the project.

Student cycle, In the Figure 1.1 "Student" takes "Courses" ; "Courses" is guided by "Teachers"; "Teachers" creates "Results".

Teacher cycle, In the Figure 1.1 "Director" assign "Teachers"; "Teachers" for particular "Courses"; "Director" publish "Results".

So, every entity is vary much interactive with each other.

## 2 Overall Description

### 2.1 Product Perspective

"IIITG PORTAL" is the replacement of the manual hard copy result process. The data have been stored in the hard file or papers, this website will store all of those in the website. Main goal of this project is to minimize the work and maximize the result of this result processing system.

### 2.2 User Classes and Characteristics

"IIITG PORTAL" has basically 4 types of users.

- Teachers
  - Director
  - Course Teacher
- Students
- Official Staff

Teacher has 2 types - Director defines the course teachers who will take the courses. Student fulfill all the requirements like- fees, informations can take advantages of the website.

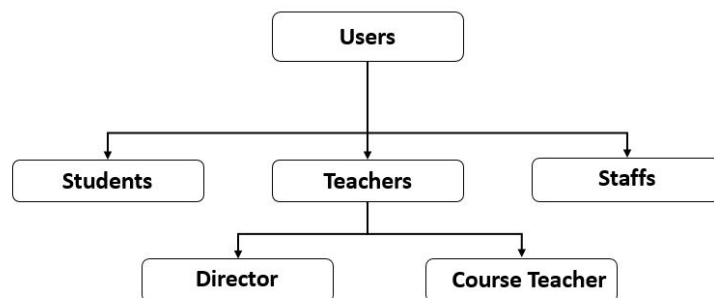


Figure 2.1: type of users

## 2.3 Product Functions

”IIITG PORTAL” store all the results of the students of program PGD, MIT. Also others programs can be included if necessary. Before using the main function of the software

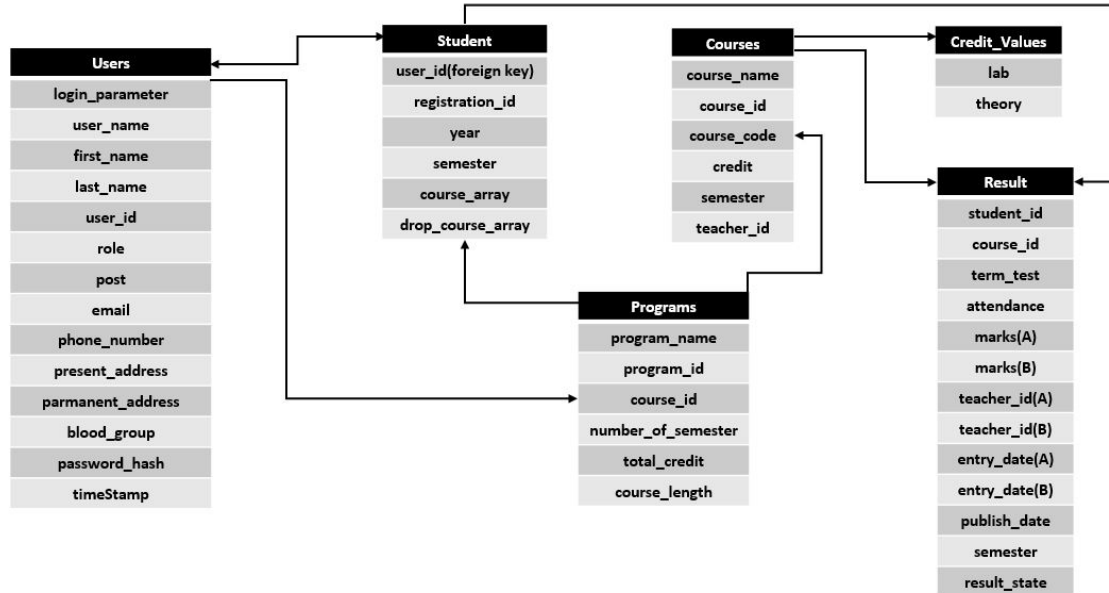


Figure 2.2: Data Flow Diagram

result process, users have to be registered.

All users have - login\_parameter, user\_name, first\_name, last\_name, user\_id, role, post, email, phone\_number, present\_address, parmanent\_address, blood\_group, password\_hash and timeStamp.

Students have some extra informations after complete his/her registration , such as - user\_id(foreign key), registration\_id, year, semester, course\_array and drop\_course\_array. These are the information that contains his/her result of his taken courses and program. Each programs has some data - program\_name, program\_id, course\_id, nunnumber\_of\_semester, total\_credit and course\_length. There will be onew or many course\_id in each programs.

Courses table contains - course\_name, course\_id, course\_code, credit, semester and teacher\_id.

Every course has its own Credit Values. Those have been 2 types - lab, theory.

Result is the main feature of all. It contains the values of all the exams of a particular student. It has data field - student\_id, course\_id, term\_test, attendance, marks(A), marks(B), teacher\_id(A), teacher\_id(B), entry\_date(A), entry\_date(B), publish\_date, semester and result\_state.

## 2.4 Operating Environment

The website will be operate in any Operating Environment - Mac, Windows, Linux etc.

## 2.5 Design

Student activities have 3 steps -

- From Fill Up Process
- Courses Payment
- Student Profile

Top selected Student first fill his/her form, bank payment. After verification, student pays for their selected courses. Then he can enter his profile.

Every student profile contains his/her personal information, results, taken courses, dropped courses and notice.

Notice will contain all the news of IIITG .

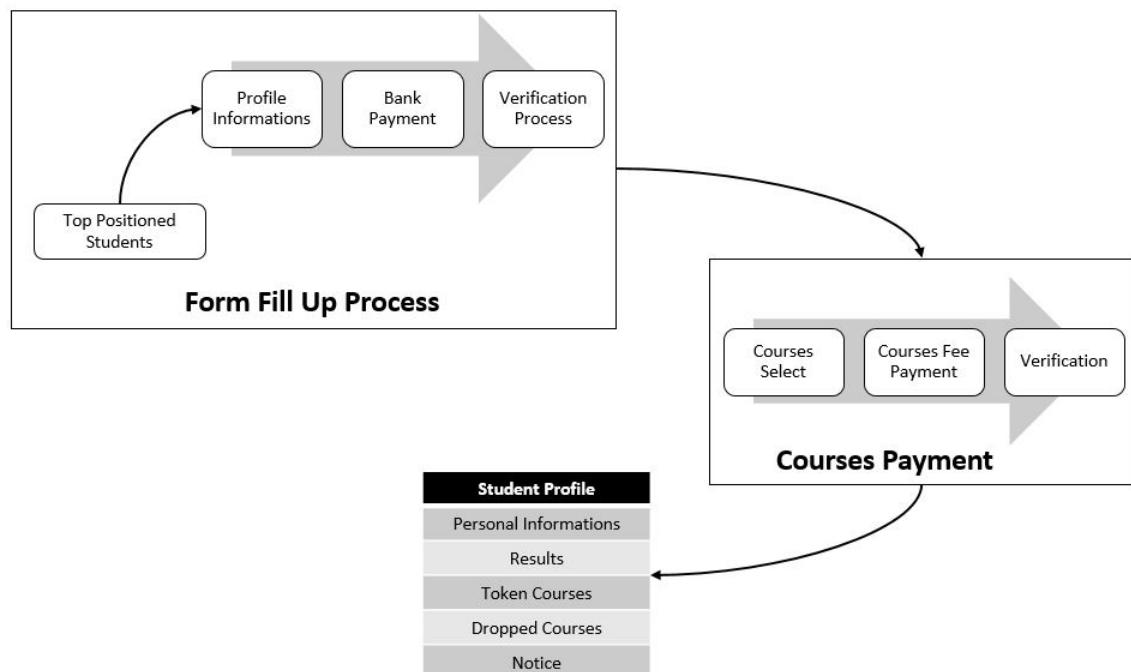


Figure 2.3: Student Activities

Teacher activities have 2 steps -

- Director
- Course Teacher

Director can re-view the result, publish result, give notice and also create teacher. He can also perform course teacher activities.

Teacher creates results, view students and create notice.

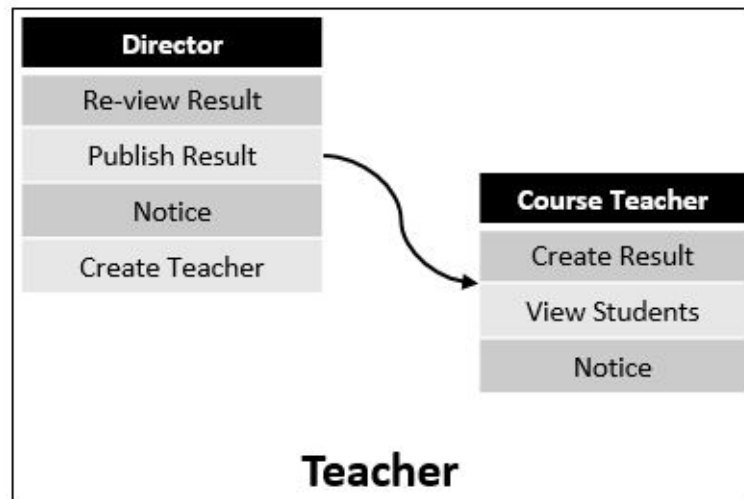


Figure 2.4: Teacher Activities

Staff has only one activity -

- Notice

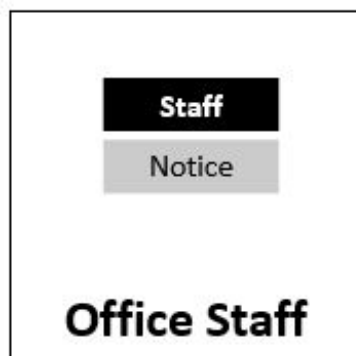


Figure 2.5: Staff Activities



## 3 System Features

"IIITG PORTAL" is a result processing web software. So the main art of this product is to enter data of results and publish.

### 3.1 Functional Requirements

"IIITG PORTAL" has features that are main and also some are sub. But all the feature is necessary for this software.

The features with priority up to down -

1. Result Creation : This is the goal feature of this software. It is been operated by teachers. They input the results of the students.
2. Result Re-view : This is done by director.
3. Result Publish : It is basically notice. This is mainly done by director or sometimes by staffs commanded by director.
4. Teacher : Teacher takes the courses and create the results.
5. Student : Student takes the courses of a program.
6. Staff : Their only work is to post notice.

### 3.2 Development Environment

The "IIITG PORTAL" website is being built on Django framework, Python language, HTML, CSS, JavaScript and MySQL.

Back-End - Django framework, Python language.

Font-End - HTML, CSS, JavaScript.

Database - MySQL.

## **4 Other Nonfunctional Requirements**

### **4.1 Performance Requirements**

"IIITG PORTAL" will be used for result system of IIITG programs, like - Btech. So for more interaction Django framework, Python language and MySQL is used.

### **4.2 Security Requirements**

No one without registered users can inter to the website. One particular user of a section only can perform his/her particular actions.

### **4.3 Software Quality Attributes**

In the development phase also testing and conferences of users is been continued. So that the quality of the software is been maintained and all the requirements are been fulfilled.

Database, logical and also UI test is required.

### **4.4 Business Rules**

"IIITG PORTAL" is for storing students results and publish those results of particular programs.

Basically save working time and pressure.

# Decision Tree and Diagram

”IIITG PORTAL” needs maintenance as it is a long process software. It will need re-factoring and further the requirements can be changed as the field is changing frequently.

The decision tree and decision table are attached as follows.

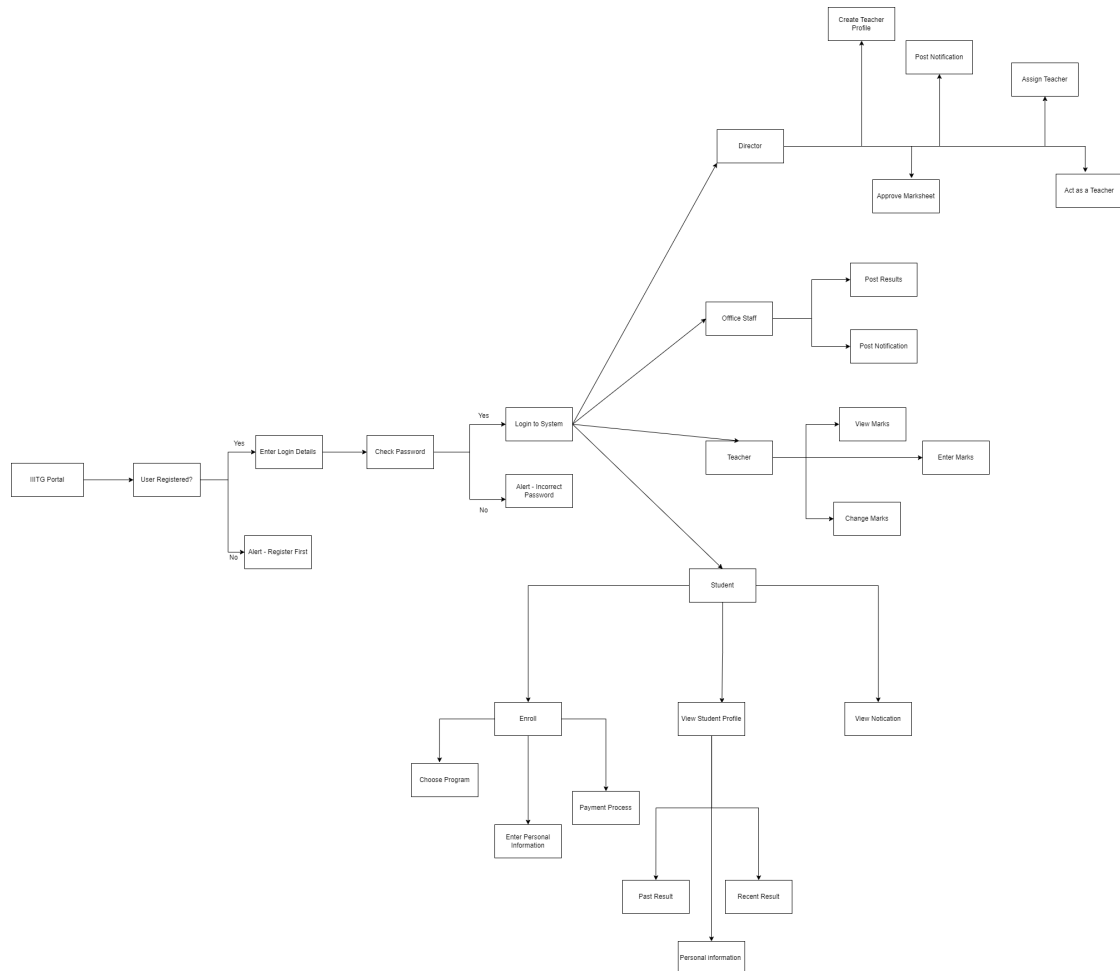


Figure 4.1: Decision Tree

Action	Student	Office Staff	Director	Teacher	Condition
Login/Registration	X	X	X	X	
View program information	X		X	X	User must be registered
Apply for a program	X		X	X	User must be logged in
View personal information	X				User must be logged in
View admitted fee information	X				User must be logged in
Select course	X				User must be logged in and have paid the fee
Pay fee	X				User must be logged in and have completed the registration
View past results	X				User must be logged in
View recent results	X				User must be logged in
View notifications	X				User must be logged in
Post results		X			User must be logged in and authorized by the Director
Post notices		X	X		User must be logged in and authorized by the Director
Assign teachers to courses			X		User must be logged in and authorized as Director
Create teacher profiles			X		User must be logged in and authorized as Director
Approve mark-sheets			X		User must be logged in and authorized as Director
Move teachers between courses			X		User must be logged in and authorized as Director
Act as a teacher			X		User must be logged in and authorized as Director
Directly post notices to website, teachers, and students			X		User must be logged in and authorized as Director
Enter student marks				X	User must be logged in and authorized as Teacher
View all student marks				X	User must be logged in and authorized as Teacher
Change marks after submission to Director				X	User must be logged in and authorized as Teacher