Rafat Munshi

Aysha Khan

**Student Registration System**

Software Design Document

Name (s): Lab Section: Workstation:

Date: (mm/dd/yyyy)

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**1. INTRODUCTION**

**1.1 Purpose**

This document outlines the Software Design Specifications as part of the design plan and specifications for developing a web based application for Student Registration System for AMU.

This document expands the functionality described by the features in the Software Requirements Specifications (SRS). Each feature discussed will describe the variables, database query and methods to be implemented.

**1.2 Scope**

This document takes the features as outlined in the SRS and expands each of the features to include the design issues of user interface, data flow, process analysis and then module design. The design document with take a Feature based approach to the design document. The structure is discussed and described in the Entity Relationship Diagram(ERD) for the main Use-Case in the Software Requirement Specifications(SRS). The interfaces are illustrated in the dataflow and the sequence diagrams. The Graphical User Interfaces are discussed and illustrated with mock ups of the panels to be implemented. The application data is addressed in the discussion of the dataflow diagrams.

**1.4 Reference Material**

*IEEE Recommended Practice for Software Design Descriptions*, IEEE Std 1016-1998 (Revision of IEEE Std 1016-1987) Available at http://web.nps.navy.mil/~nschneid/is3020/PDF/1016-1998.pdf

**2. SYSTEM OVERVIEW**

Student Registration System is a web based application built with php and mysql database for students to register in a course in a particular semester of the university and view and edit their details. An administrator of the system can retrieve data about all students in the course semesters and view and update any student details as well as remove student/s from the system database.

**3. SYSTEM ARCHITECTURE**

**3.1 Architectural Design**

**DFD level 0**

**3.2 Decomposition Description**

This section of this report decomposes use-case features as provided in the SRS document into its data flow processes by examining its data flow diagram and its process flow through the use of sequence diagrams.

### 3.5.2. Data Flow Description

DFD level 1

DFD level 2

### 3.5.3. *Process Analyses*

The following sequence diagram shows an actual process involved in registering new student.

**Sequence diagram for registering student**

### 4. Dependency Description

## 4.2 Interprocess Dependencies

The interprocess dependencies are illustrated in the data flow diagrams of the features. These will be reviewed and incorporated within the same directory of files.

## 4.3 Data Dependencies

The data dependencies are very limited in this design.

**6. HUMAN INTERFACE DESIGN**

**6.1 Overview of all the files required**

Based on the data flow diagram and the sequence diagram above, a detailed description of the required files and their description along with their UI mockup is shown below.

|  |  |  |
| --- | --- | --- |
| File name | Description | Mock up |
| home\_page.php | The UI is supposed to be created according to this mock up with html5, css3 and jquery library of javascript. It should take inputs as shown in the figure. It should contain all the validation of the input fields as specified in the SRS. |  |
|  | An alert box in case enrolment id trying to be registered already exists. |  |
|  | The second tab for the student is the login box. Here the fields are required and should be validated with the database for the details of the student. If no such id and password exist then alert the user for wrong id and password. If id and password are correct then store the id and password in the session and direct to det.php. |  |
| complete\_regis.php | All the front end validations as specified in the SRS should be incorporated in this page using javascript.  Here the course and semester selected should be checked whether max limit is reached. If so an alert box should be shown with message of course semester registration is over. The student should be allowed to register in another course semester. The image should be validated for its extension and if another extension is used then alert the user the allowed extension detail and reset the field to No file chosen. Only .jpg extension images should be uploaded. The course options are populated from the database with the cid as values and course names as display names. |  |
| Upload.php | to be called on complete\_regis.php form action. The image should be uploaded in the file system of the server with the name of the enrolment id of the student. All the details should be updated in the database. |  |
|  | A pdf generator- fpdf should be used to generate and upload this pdf in the file system of the server with the name being the enrolment id of the student. |  |
| Det.php | All the details of the student should be fetched from the database and be displayed here using the session variable of enrolment id and password for student and only enrolment id for admin. All the boxes are editable. On click of update button, all details should be updated in the database and if a new file is selected as image, that should override the previous image in the directory of images. The course options are populated from the database with the cid as values and course names as display names and default value selected is the course of the student.  On click of update button upload.php should be called hence need to put in the form action of det.php |  |
| admin\_page.php | Both fields are required. The course options are populated from the database with the cid as values and course names as display names.  A fetch of all students enrolled in the course and semester of the university should be done from the database on click of submit button. |  |
|  | validate for presence of enrolment id of the student from the database. If no enrolement id as that exists then alert user that no such student exists. If it exists then get all the details of the student from the database and display on det.php. On the click of add/remove student link, there should be redirect to addremovestudent.php |  |
| Course\_details.php | The image of the student should be fetched from the file system and displayed with the other details. |  |
| Addremovestudent.php | Add student tab same as in home\_page.php. On the click of back link, there should be redirect to admin\_page.php |  |
|  | validate for presence of enrolment id of the student from the database. If no enrolement id as that exists then alert user that no such student exists. If it exists then remove the student details from the database and alert a confirmation message of student deleted to the user. On the click of back link, there should be redirect to admin\_page.php |  |