

IDS517 2015 FALL PROJECT

Group – f15g114

PROJECT DOCUMENT

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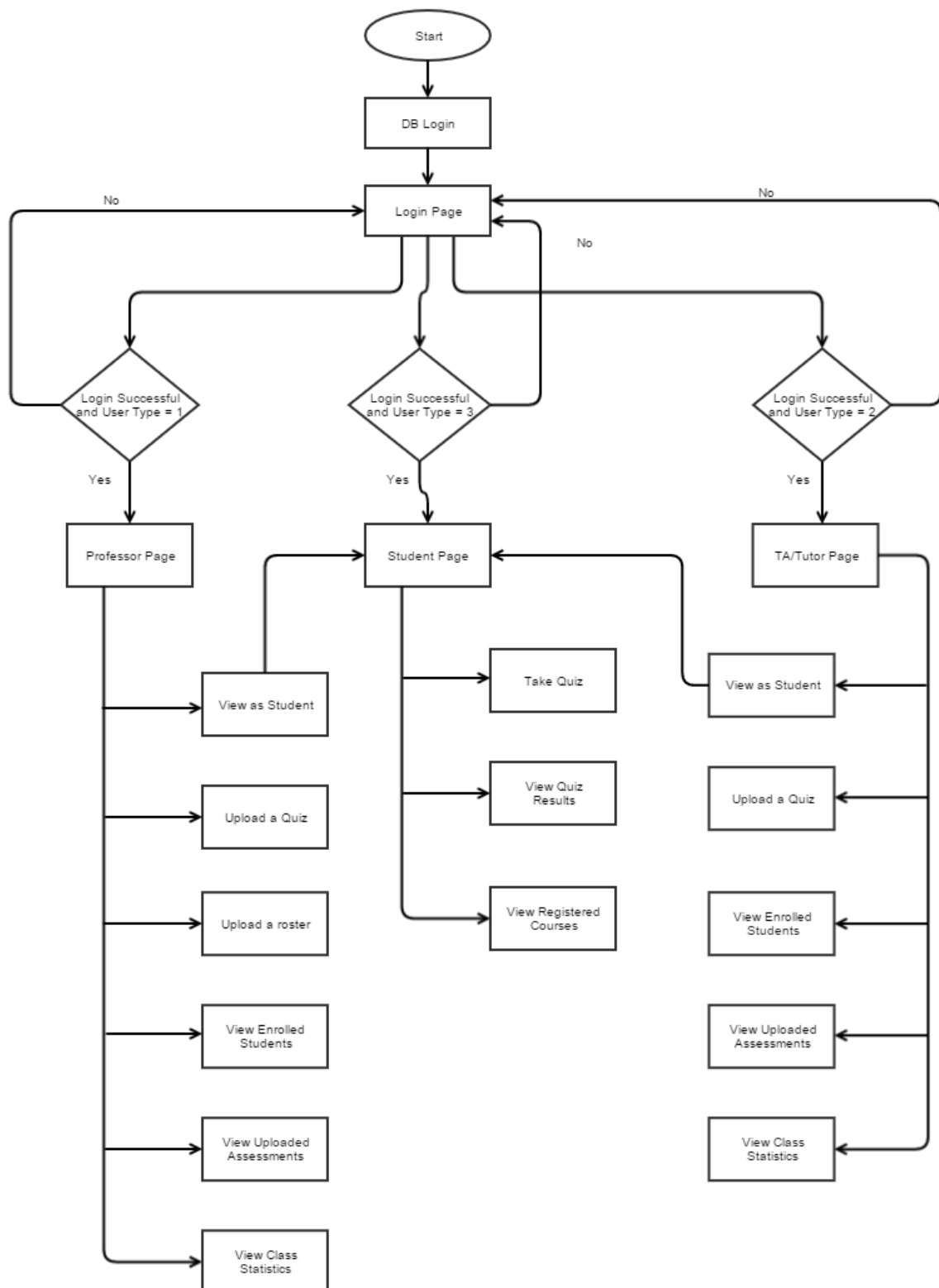
Project Objective

The objective of this project is to develop an online system to facilitate quiz and exam administration and grading for quantitative statistics and math courses. The application allows the professors to upload assessments for the courses they handle. The students respond to the assessment and are provided with real-time course grades helping them know how they are performing in each course. The application also consist of the historical performance of the students helping the professors in assessing the student's performance through statistical analysis and plan for scope of improvement.

The project is designed using JSF framework. This project follows MVC model. The document contains the following.

- Project Flow Diagram
- Class Diagram
- Database Schema Diagram

Project Flow Diagram



Project Functional Overview

The application has the following functions.

User Login:-

The application can be used by different users such as professor/instructor, TA/Tutor and student. When a user logs into the application, the user is validated based on the user type value in the database and provide only restricted access to each user based on the user type. The login timestamp and IP of each user is logged into the database for security purpose.

Each user should be able to view the last login in the bottom of the welcome page. In case of first time login, default value will be displayed.

Student Functions: -

Take Up Quiz

A student can take up the quiz once it is uploaded by the professor/TA. The responses provided by the students are stored into the response table in the database. The responses are evaluated by comparing the student response with the actual answers based on the tolerance level and graded accordingly.

View Quiz Results

The students can view their quiz results once graded. In addition in viewing their quiz grades, they can also review their answers and compare them with the actual answers.

View Registered Courses

The students can view the courses in which they are enrolled. This will help them in keeping track of all the announcements happening in each courses and reviewing the answers to the assessments.

Professor/TA/Tutor Functions: -

Upload Roster

Professor uploads the roster file consisting of the student information who are newly enrolled in a course. The roster file consists of student's first name, last name, net id and course that they are enrolled. The roster file will be in .csv format.

View as Student

Professor/TA/Tutor will be able to view the application as a student. It helps them in checking the student functionalities like taking up an assessment, view their grades, etc.

Upload a Quiz

Professor/TA/Tutor uploads the assessment file consisting of the quiz information. The assessment file will be in .csv format. The assessment file consists of assessment questions along with the actual answer and tolerance level. Each time an assessment file is uploaded, a new table will be created in the database for the assessment. Also, an entry will be made in assessments table in order to keep track of the user who has uploaded the file along with the course id.

View Enrolled Students

Professor/TA/Tutor would be able to view the student details. It helps them to generate report containing results of numeric and graphic analysis such as descriptive statistics of the class.

View Student Grades

Professor/TA/Tutor can view the student grades along with their responses in each assessment. Here, the professor will be able to provide the feedback based on the performance of the student in the assessment.

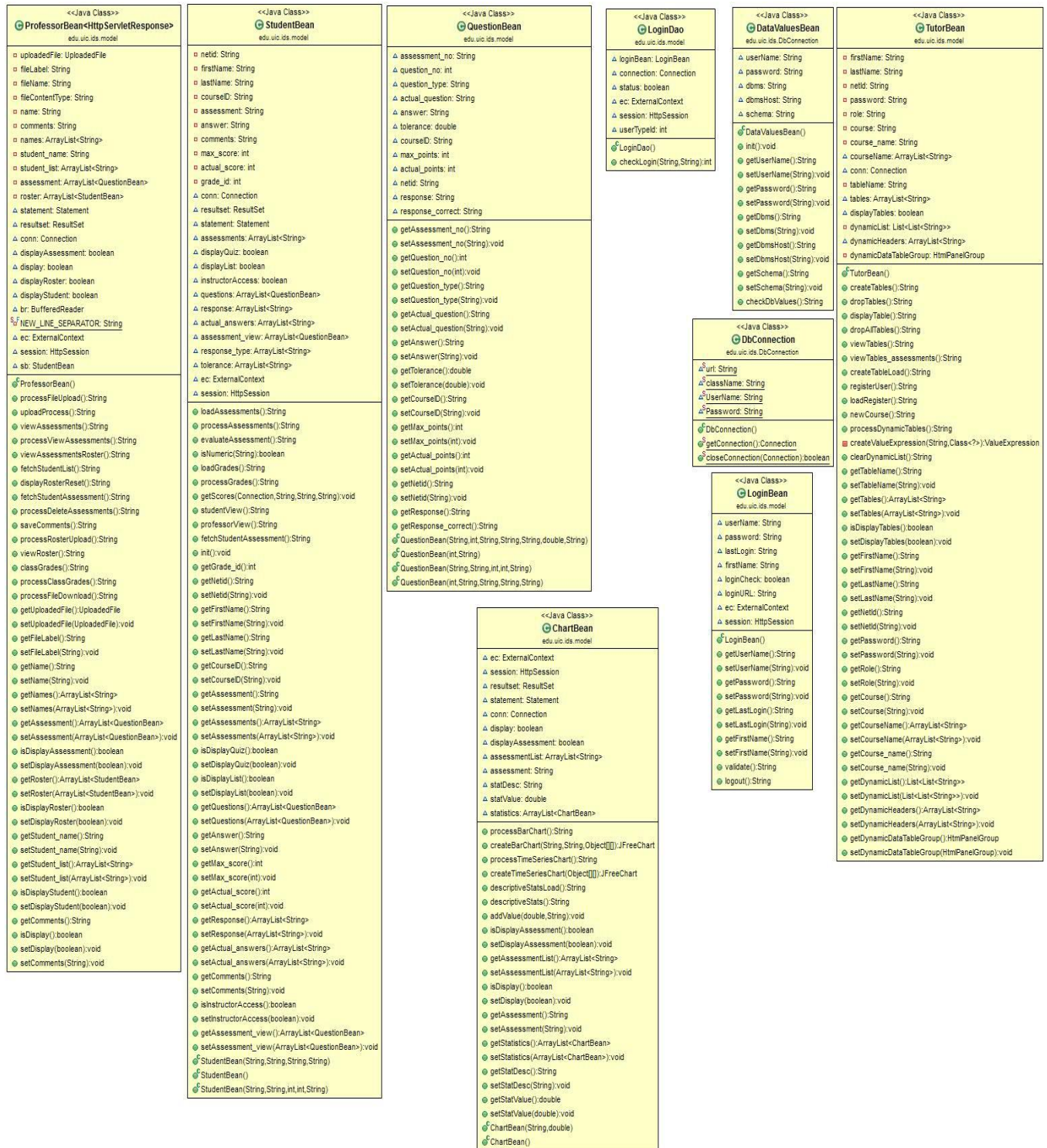
View Uploaded Assessments

Professor/TA/Tutor can view the assessment which they have uploaded in order to verify the assessment file.

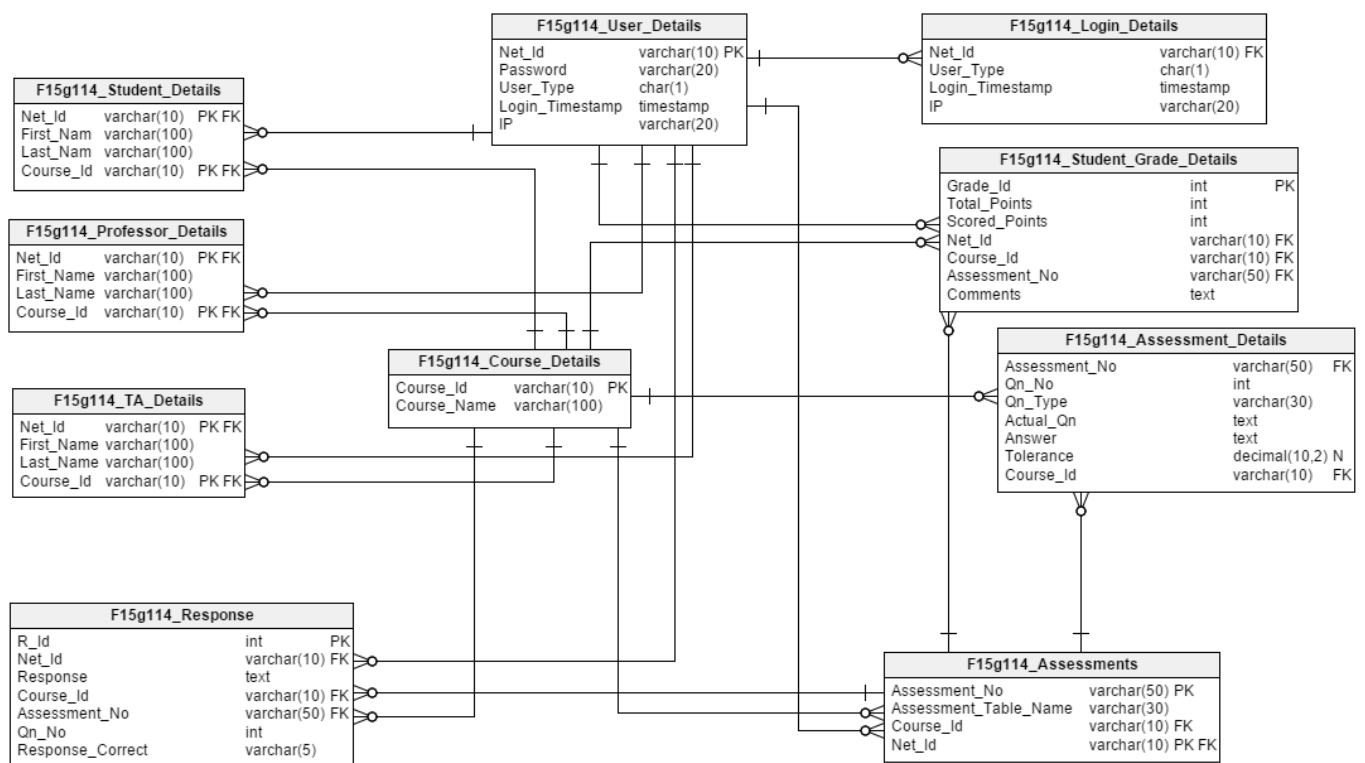
View Class Statistics

Professor/TA/Tutor can view the class statistics to assess the student's performance in each assessment. It enables for graphic analysis capability such as histogram, bar chart and pie chart distribution of scores. The instructor plan for scope for improvement in the course structure as well as for the student based on the score distribution.

Class Diagram



Database Schema Diagram



F15g114_User_Details: -

The F15g114_user_details table stores the login information of all the users who login into the application. It stores the user id of the user who has logged in, type of the user (restrict access based on the user type) and IP address of the user.

F15g114_Login_Details: -

The F15g114_Login_Details table stores the login information of all the users who are logging into the application. It stores the history of user login details along with the IP address and login time.

F15g114_Student_Details: -

The F15g114_student_details table has all the student information such as their first name, last name and net id. This table allows the student to check and view their profile information. This table refers the course details table and gives information on the courses enrolled by the student.

F15g114_Professor_Details: -

The F15g114_professor_details table has all the professor information such as their first name, last name and net id. This table allows the professor to check and view their profile information. This table refers the course details table and gives information on the courses taught by the professor.

F15g114_TA_Details: -

The F15g114_ta_details table has all the teaching assistant information such as their first name, last name and

net id. This table allows the teaching assistant to check and view their profile information. This table refers the course details table and gives information on the courses enrolled by the teaching assistant.

F15g114_Course_Details: -

The F15g114_course_details table has the details on the total number of courses available in the institution. A student can register in a course only if the course is available in this table.

F15g114_Assessments: -

The F15g114_assessments table consists of the assessment details such as the assessment number, table name of the new assessment uploaded, uploaded professor net id and the course id for which the assessment has been uploaded. It keeps tracks of all the uploaded assessments.

F15g114_Assessment_Details: -

The F15g114_assessment_details table will be created each time the professor/TA uploads an assessment into the application. It consist of the assessment questions along with the actual answer and the tolerance level.

F15g114_Response:-

The F15g114_response table stores the response provided by the students for each assessments. It has the student net id who provide the response along with the course id and assessment number.

F15g114_Student_Grade_Details: -

The F15g114_student_grade_details table has the grade details for each of the student. It consists of the grades along with the course id and assessment number of the graded course with professor comments.