

Database Systems

Project 2 Report

We have done this assignment completely on our own. We have not copied it, nor have we given our solution to anyone else. We understand that if we are involved in plagiarism or cheating we will have to sign an official form that we have cheated and that this form will be stored in our official university records. We also understand that we will receive a grade of 0 for the involved assignment and our grades will be reduced by one level (e.g., from A to A- or from B+ to B) for our first offense, and that we will receive a grade of "F" for the course for any additional offense of any kind.

Team Members:

Rahul Verma
Sundar Saravanan
Goutham Ravichandran

Documentation

Package:

- **student_operations** - The package under which we are adding the procedures and functions

Sequence :

- **log_sequence** - It is used to generate log# by incrementing 1 for each tuple entry in logs table

Triggers :

- **ADD_STUDENT**
To add a log entry when a student is registered
- **DELETE_STUDENT**
To deleted all the student enrollments from the G_ENROLLMENTS table and add a log entry when a student is deleted
- **ADD_ENROLLMENT**
To add a log entry when a student is enrolled in a class
- **DELETE_ENROLLMENT**
To add a log entry when a student is removed from a class
- **INCREASE_CLASS_SIZE**
To increase class size of a class in CLASSES table when a new student is enrolled in that class
- **DECREASE_CLASS_SIZE**
To decrease class size of a class in CLASSES table when a student is removed from the class

Functions :

- **isClassAvailable (Class#)**
Returns a count greater than 0 if a class is present in the CLASSES table
- **isStudentRegistered (B#)**
Returns a count greater than 0 if a student is registered in the STUDENTS table
- **isStudentEnrolled (B#, Class#)**
Returns a count greater than 0 if a student is enrolled in a class in the G_ENROLLMENTS table

Procedures :

- **To display all the tuples based on the given table name :**
showTuples (tableName)
- **To show all the students in a class with respect to the classid:**
showClassDetails (Class#)
- **To show prerequisites of a given course based in the courseid :**
listPrerequisites (DeptCode, Course#, gpa)
- **To enroll student into a class :**
enrollStudent (B#, Class#)
- **To delete enrolment of a student in a class :**
deleteStudentEnrollment (B#, Class#)
- **To delete student entry :**
deleteStudent (B#)

Meetings:

Date	Hours	Mode	What was done
04/18/2022	1	In-person	Sequence and Procedures
04/20/2022	1	In-person	Triggers and Procedures
04/22/2022	2	Zoom	Procedures
04/23/2022	2	Zoom	Procedures and functions
04/25/2022	1	Zoom	Text based implementation and GUI
04/26/2022	2	Zoom	Text based implementation and GUI
04/28/2022	1	In-person	Worked on GUI
04/29/2022	1	In-person	Text based implementation and GUI
04/30/2022	2	Zoom	Worked on GUI and Report
05/01/2022	2	Zoom	Fixed text based implementation

Planned Process :

1. Order of completion :
 1. Sequence
 2. Functions
 3. Triggers
 4. Procedures
2. Move the Procedures and functions to a package.
3. Verify PL/SQL part works properly
4. Work on JDBC
5. Work on GUI
6. Create the report

Actual Work:

1. Completed sequence
2. Completed triggers
3. Completed functions
4. Completed Procedures
5. Moved the Procedures and functions to a package.
6. Started working on JDBC
7. Verified PL/SQL part
8. Started report creation
9. Verified JDBC
10. Completed report of the project

Responsibilities :

Rahul Verma

- Procedures
- Triggers
- GUI

Sundar Saravanan

- Sequence
- Triggers
- Text based interface
- GUI
- Report

Goutham Ravichandran

- Functions
- GUI
- Text based interface

Self-Assessment :

- Struggled as a team but made it work eventually
- All of us had different class schedule and finding a common time was difficult but we achieved the goal.