# Ahsanullah University of Science and Technology (AUST)
## Department of Computer Science and Engineering

# Project Report: University Administrative Platform

Course No.: CSE4126

Course Title: Distributed Database Systems Lab

**Semester: Spring 2022**

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## Submitted To-
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## Submitted By-
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Lab Group: A1
Year: 4th
Semester: 1st
Department: CSE

# University Administrative Platform

**Objective**

This project is a university student data management platform which the university will be able to keep track of students and teachers. It will be a distributed database system since it has multiple sites. The platform will work on other sites if one site becomes unavailable. We can see information from every branch together.

**Database Schema**

- **Global Schema**

  Branch(BID, BName,Password)
  Student(SID, SName, SAge, SAddress, SPhone,BID)
  Course(CID, CName, Credit, CDep,PreCName,BID)
  Teacher(TID, TName, Designation, TDep, CID)
  Enrollment(EID, CID, SID)

- **Fragmentation Schema**

  Branch1 = SL (BID = 1) Branch
  Branch2 = SL (BID = 2) Branch

  Student1 = SL(BID=1) Student
  Student2 = SL(BID=2) Student

  Course1 = PJ (CID, CName, BID) Course
  Course2 = SL (CDep="CSE") PJ ( Credit, CDep, PreCName, CID) Course
  Course3 = SL (CDep="EEE") PJ (Credit, CDep, PreCName, CID) Course

  Teacher1 = SL(CDEP="CSE") Teacher
  Teacher2 = SL(CDEP="EEE") Teacher

  Enrollment1 = Enrollment SJ Student1
  Enrollment2 = Enrollment SJ Student2

- **Allocation Schema**

Admin1[1], Admin2[1], Student1[1], Student2[1], Course1[1,2], Course2[1], Course3[2], Teacher1[1], Teacher1[2], Enrollmentt1[1], Enrollmentt2[1]

**Functionalities**

1. Login option for admin.

```
Enter your Username :Dhaka
Enter your password : dhaka

Package created.


Package body created.

Logged In

PL/SQL procedure successfully completed.
```

2. Search student info, teacher info, enrollment info

```
Enter ID Number :2

Package created.


Package body created.

FOUND
Name: Rana      Age: 25        Address: Khilgaon      Phone: 1715571990      Branch ID: 1

PL/SQL procedure successfully completed.

SQL>
```

3. View Course info with Teacher info of the same course.

```
Package body created.

CID     CName   Credit  CDept   PrevCName
2       CN      3       CSE     DCOM

TID     TName   TDesig          TDept
2       Joy     Lecturer        CSE

PL/SQL procedure successfully completed.
```

3. Count total student , total teacher,total course, total enrollment.

```
Package body created.

Total number of CSE courses: 5

PL/SQL procedure successfully completed.
```

4. Insertion and remove course1 values from site 1 to site 2 and in reverse.

```
SQL> @E:\Project_(2)\Course1\Course1Insert.sql
Enter Course name :SD1

Package created.


Package body created.

5
[Site 1] New Course Inserted.
[Site 2] New Course Inserted.

PL/SQL procedure successfully completed.
```

5. One student will have to complete the prerequisite course to enroll for any course which has a prerequisite course. One student can take a maximum of 15 credits.

```
Package created.


Package body created.

1
1
6
DCOM
1
Inserted
```

6. One can view all information of site 2 from site 1 and vice-versa.

```
      SID SNAME                                SAGE SADDRESS                          SPHONE           BID
---------- ------------------------------- ---------- ------------------------------- ----------- ----------
      100 Farhan                              20 Basabo                          1716551990          2
      101 Abid                                25 Khilgaon                        1715661990          2
      102 Abed                                30 Tejgaon                         1719922990          2


      EID        CID        SID
---------- ---------- ----------
        1          1          1
        2          4          2
        4          5          2
        5          2          2
      100        100        100
      101        101        101
      102        102        102

7 rows selected.

      TID TNAME                           DESIG                         TDEP                                   CID
---------- ------------------------------- ----------------------------- ------------------------------- ----------
        1 Shejuti                         Lecturer                      CSE                                      1
        2 Joy                             Lecturer                      CSE                                      2
        3 Belal                           Lecturer                      CSE                                      3
        4 Hasib                           Lecturer                      CSE                                      4
        5 Maruf                           Lecturer                      CSE                                      5
      100 A                               Lecturer                      EEE                                    100
      101 B                               Lecturer                      EEE                                    101
      102 C                               Lecturer                      EEE                                    102
```

7. Insert, update, delete option for student1 table

```
Enter value for id: 3

Package body created.

No errors.
Deleted

PL/SQL procedure successfully completed.
```

8. Insert and delete for Teacher1, Enrollment1, Teacher2, Enrollment2, Course2.
9. Added package, trigger and procedure in all our sql files where it is due.


**Contribution**

ID: 190204003
- ● Course
- ● Search
- ● Union
- ● Trigger, package, exception

ID: 190204012
- ● Enrollment
- ● Student
- ● Teacher
- ● Trigger, package, exception