



Daffodil International University

CSE-311 (63_L) Class Test-3

Time : 40 min, Marks : 15

Obtained Marks

Name :

ID :

- Design a Trigger named “**grade_change_log**” that mainly occurs when you are updating a grade of a student. For instance if a student’s grade is changing from “C” to “A” a trigger will save the data of the student’s previous grade and new grade alongside the student’s **id** in the **updated_grade** table as a log. Assume that the **updated_grade** table and **student_grade** table is already created.

student_grade: { std_id, course_id, grade}

updated_grade : { std_id, course_id, previous_grade, new_grade}

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NB: If there is no change in grade your trigger should not work.

```
CREATE TRIGGER grade_change_log
AFTER UPDATE ON student_grade
FOR EACH ROW
BEGIN
IF OLD.grade <> NEW.grade THEN
Insert the change log into the updated_grade table INSERT INTO updated_grade
(std_id, course_id, previous_grade, new_grade) VALUES (OLD.std_id,
OLD.course_id, OLD.grade, NEW.grade);
END IF;
END ;
```

2. Create a stored procedure named **All_students_CGPA()** to calculate the CGPA of all the students from the **Student_grade** table. Output Format : std_id, CGPA.

CGPA_formula: $\sum(gpa * credit) / \sum(credit)$

Student_grade : {std_id, course_id, c_credit, grade}

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```
CREATE PROCEDURE All_students_CGPA()
```

```
BEGIN
```

```
SELECT std_id, SUM(c_credit * grade) / SUM(c_credit) FROM Student_grade
Group By std_id;
```

```
END ;
```

3. Create a SQL view named **Avg_Result** that displays the average CGPA of students for each department using the given schema. In the Output it will display

dept_id	dept_name	avg(cgpa)
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Department : { dept_id (PK), dept_name }

Students : { student_id (PK), student_name, dept_id (FK), Cgpa }

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```
CREATE VIEW Avg_Result AS
```

```
SELECT Department.dept_id, Department.dept_name, AVG(s.Cgpa) AS
avg_cgpa
```

```
FROM Department
```

```
Left JOIN
```

```
Students
```

```
ON Department.dept_id = Students.dept_id
```

```
GROUP BY
```

```
Department.dept_id,
```