

1. Write a Stored Procedure namely **pro_Grade** for the categorization of student. If marks scored by students in examination is ≤ 1500 and $\text{marks} \geq 990$ then student will be placed in Distinction category, if marks scored are between 989 and 900 then category is First Class, if marks between 899 and 825 category is Higher Second Class.

i. Creating the Stud_Marks Table.

```
> create table Stud_Marks(roll_no int, name varchar(20), total_marks int);
```

ii. Inserting values in the Stud_Marks Table.

```
> insert into Stud_Marks values(11, "Om", 1010);
> insert into Stud_Marks values(22, "Bhagyashree", 945);
> insert into Stud_Marks values(33, "Durvesh", 1367);
> insert into Stud_Marks values(44, "Ayush", 865);
> insert into Stud_Marks values(55, "Atharva", 734);
```

iii. Displaying the Stud_Marks Table.

```
> select * from Stud_Marks;
```

```
+-----+-----+-----+
| roll_no | name   | total_marks |
+-----+-----+-----+
| 11 | Om | 1010 |
| 22 | Bhagyashree | 945 |
| 33 | Durvesh | 1367 |
| 44 | Ayush | 865 |
| 55 | Atharva | 734 |
+-----+-----+-----+
```

iv. Creating the Results Table.

```
> create table Result(Roll int, Name varchar(20), Class varchar(20));
```

v. Proc proc_Grade for categorising the Students as per grades.

```
> create procedure proc_Grade(in marks int, out class varchar(20))
-> BEGIN
```

```

-> if marks < 1500 AND marks > 990 THEN
-> set class = 'Distinction';
-> elseif marks < 989 AND marks > 890 THEN
-> set class = 'First Class';
-> elseif marks < 889 AND marks > 825 THEN
-> set class = 'Higher Second Class';
-> else
-> set class = 'Not Categorized';
-> end if;
-> end;
-> //

```

**2. Write a PL/SQL block to use procedure created with above requirement.
Stud_Marks(name, total_marks) Result(Roll, Name, Class)**

i. Function for calling the procedure and inserting the values in Result table.

```

> create function result(r1 int)
-> returns int
-> READS SQL DATA
-> DETERMINISTIC
-> BEGIN
-> DECLARE stud_name varchar(20);
-> DECLARE marks integer;
-> DECLARE grade varchar(20);
-> select Stud_Marks.total_marks, Stud_Marks.name into marks, stud_name
from Stud_Marks where Stud_Marks.roll_no = r1;
-> call proc_Grade(marks, @grade);
-> insert into Result values(r1, stud_name, @grade);
-> return r1;
-> end;
-> //

```

ii. Calling the result function.

```
> select result(11);
+-----+
| result(11) |
+-----+
|      11 |
+-----+
```

```
> select result(22);
+-----+
| result(22) |
+-----+
|      22 |
+-----+
```

```
> select result(33);
+-----+
| result(33) |
+-----+
|      33 |
+-----+
```

```
> select result(44);
+-----+
| result(44) |
+-----+
|      44 |
+-----+
```

```
> select result(55);
+-----+
| result(55) |
+-----+
|      55 |
+-----+
```

iii. Displaying the Result Table.

> select * from Result;

Roll	Name	Class
11	Om	Distinction
22	Bhagyashree	First Class
33	Durvesh	Distinction
44	Ayush	Higher Second Class
55	Atharva	Not Categorized