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Div: C   Batch: C4   Course Code: BCE4409

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Problem Statement:

Named PL/SQL Block: PL/SQL Stored Procedure and Stored Function.

Write a Stored Procedure namely proc_Grade for the categorization of student. If marks scored by students in examination is <=1500 and marks>=990 then student will be placed in distinction category if marks scored are between 989 and900 category is first class, if marks 899 and 825category is Higher Second Class

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

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Output:

```
SQL> create table Stud_Marks
  2  (
  3  Roll_no number primary key,
  4  Name varchar2(15),
  5  Total_marks number
  6  );

Table created.

SQL> insert into Stud_Marks values(101,'Vinayak',1200);

1 row created.

SQL> insert into Stud_Marks values(102,'Sakshi',1500);

1 row created.

SQL> insert into Stud_Marks values(103,'Janhavi',920);

1 row created.

SQL> insert into Stud_Marks values(104,'Pranav',850);

1 row created.

SQL> insert into Stud_Marks values(105,'Ritish',830);

1 row created.

SQL> create table Result
  2  (
  3  Roll_No number,
  4  Name varchar2(15),
  5  Class varchar2(30)
  6  );

Table created.

SQL>
```

Stud_Marks Table

```
SQL> select *from Stud_Marks;

   ROLL_NO NAME              TOTAL_MARKS
---------- ---------------- -----------
       101 Vinayak                 1200
       102 Sakshi                  1500
       103 Janhavi                  920
       104 Pranav                   850
       105 Ritish                   830
```

Result Table:

```
SQL> select *from Result;

no rows selected

SQL>
```

Executing the Named Block:

1)Stored Procedure➔

```
SQL> create or replace procedure proc_Grade(mroll IN number,mmarks IN number,mname IN varchar2)
  2  IS
  3  mClass varchar2(30);
  4  BEGIN
  5  if mmarks<=1500 and mmarks>=990 then
  6  mClass:='Distinction';
  7  elsif mmarks<=989 and mmarks>=900 then
  8  mClass:='First Class';
  9  elsif mmarks<=899 and mmarks>=825 then
 10  mClass:='Higher Second Class';
 11  else
 12  mClass:='Fail';
 13  end if;
 14  insert into Result values(mroll,mname,mClass);
 15  END;
 16  /

Procedure created.

SQL>
```

Calling the above stored procedure:

```
SQL> DECLARE
  2  mmarks int;
  3  mname varchar2(15);
  4  mroll int;
  5  mmroll int;
  6  BEGIN
  7  mroll:=&mroll;
  8  select Roll_no,Name,Total_marks into mmroll,mname,mmarks from Stud_Marks where Roll_no = mroll;
  9  proc_Grade(mmroll,mmarks,mname);
 10  END;
 11  /
Enter value for mroll: 101
old   7: mroll:=&mroll;
new   7: mroll:=101;

PL/SQL procedure successfully completed.

SQL> select *from Result;

   ROLL_NO NAME             CLASS
---------- --------------- -----------------------------
       101 Vinayak         Distinction

SQL>
```

Executing the same procedure for all Students:

```
SQL> select *from Result;

   ROLL_NO NAME             CLASS
---------- --------------- -----------------------------
       101 Vinayak         Distinction
       102 Sakshi          Distinction
       103 Janhavi         First Class
       104 Pranav          Higher Second Class
       105 Ritish          Higher Second Class

SQL>
```

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2) Stored Function ➔

```
SQL> select *from Result;

no rows selected

SQL>
```

```
SQL> create or replace function func_Grade(mroll IN number,mmarks IN number,mname IN varchar2)
  2   return varchar2
  3   IS
  4   mClass varchar2(30);
  5   BEGIN
  6   if mmarks<=1500 and mmarks>=990 then
  7   mClass:='Distinction';
  8   return mClass;
  9   elsif mmarks<=989 and mmarks>=900 then
 10   mClass:='First Class';
 11   return mClass;
 12   elsif mmarks<=899 and mmarks>=825 then
 13   mClass:='Higher Second Class';
 14   return mClass;
 15   else
 16   mClass:='Fail';
 17   return mClass;
 18   end if;
 19   END;
 20   /

Function created.

SQL>
```

Calling the Function:

```
SQL> DECLARE
  2   mmarks int;
  3   mname varchar2(15);
  4   mroll int;
  5   mmroll int;
  6   mClass varchar2(30);
  7   BEGIN
  8   mroll:=&mroll;
  9   select Roll_no,Name,Total_marks into mmroll,mname,mmarks from Stud_Marks where Roll_no = mroll;
 10   mClass:=func_Grade(mmroll,mmarks,mname);
 11   insert into Result values(mroll,mname,mClass);
 12   END;
 13   /
Enter value for mroll: 101
old   8: mroll:=&mroll;
new   8: mroll:=101;

PL/SQL procedure successfully completed.
```

Final Result Table:

```
SQL> select *from Result;

   ROLL_NO NAME            CLASS
---------- --------------- -----------------------------
       101 Vinayak         Distinction
       102 Sakshi          Distinction
       103 Janhavi         First Class
       104 Pranav          Higher Second Class
       105 Ritish          Higher Second Class

SQL>
```

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