

Assignment 7

* Aim:- write a stored procedure namely proc.grade for the categorization of student. If marks scored by student in examination is ≤ 1500 and marks > 990 then student will be placed in distinction category if marks score are between 989 and 900 category is first class ,if in 889 and 825 category is higher second class.

Write PL/SQL block for using procedure created with above requirement.

Advantages of PL/SQL

* Theory:-

- ① Explain concept of PL/SQL. Write advantages of it.
- i) PL/SQL stands for procedure language/ structure Query language. It is a combination of SQL along with procedural features of programming languages.
- ii) PL/SQL includes procedural language elements as conditions & loops.
- iii) It allows declarations of constants and variables, procedures and functions, types and variables of those types and triggers.
- iv) Arrays are supported involving the use of PL/SQL collections.

- Advantages:-
- i) Tight Integration with SQL.
 - ii) High Performance.
 - iii) High Productivity.
 - iv) Portability.
 - v) Scalability.
 - vi) Support for object-oriented Programming.

Explain use of 'if' & 'elsif' & 'loop' & 'while'.

- The PL/SQL 'IF' statement allows you to execute a sequence of statements conditionally.

(Syntax:-) IF condition THEN

sequence of statements;

END IF;

QUESTION

In addition, similarly, MySQL supports 'IF-THEN-ELSEIF' statement to allow

and Oracle allows you to execute a sequence of statements based on multiple conditions.

If condition is true, then the sequence of statements is executed.

If condition 1 is false, then the sequence of statements 2 is executed.

order after having nothing sequence of statements 2 is executed.

ELSE

sequence of statements 3

END IF;

WHILE :- Repeat statement or group of statements while a given condition is true, it tests condition before executing loop body.

Syntax:- WHILE Expression NOT TRUE DO

③ To control looping BEGIN block, use the following basic statements:

statements;loop; statements;

loop; end loop; END; and branching column FOR IN

END DO; which has similarities to SQL variables and loops. It can

explain check clause is to validate data constraints.

→ A check constraint / clause in SQL allows you to specify a condition

on each row in a table.

- ① A check clause can NOT be defined on SQL view.
- ② The check clause defined on table must refer to only columns in that table.

Syntax:

check (column_name condition);

Example of check clause in trigger

CREATE TABLE employee

(empid number NOT NULL, name integer);

To validate employee name varchar(20) NOT NULL; insert into employee

CONSTRAINT check_employee_id CHECK

CHECK (emp.id BETWEEN 1 and 1000)

)
; IT GIVES

④ How to execute stored procedure?

→ stored procedure is a group of SQL statements which can be executed repeatedly. Parameters are important part of procedures. The parameters make the stored procedure more flexible & useful.

Syntax:-

CREATE procedure procedure-name ([parameter])
STATEMENTS

example:-

```
CREATE PROCEDURE display (IN r number(3))
BEGIN
    select * from students WHERE rno=r;
END;
```

/

Execution of procedure:-

To execute stored procedure we can use EXEC statements.

Above example can be called as,

EXEC display (5);

It will give the details of students whose rno=5.