CHANDIGARH UNIVERSITY

Discover. Learn. Empower.

Assignment-1

Name : Kumar Saurabh

UID:19MCA8068

CLASS:MCA2(LEET)

SUBJECT: Advanced Database and Programming

<------ SUBMITTED TO ------>

Ms. Sandeep Kaur

1.Write a program that computes the perimeter and the area of a rectangle. Define your own values for the length and width. (Assuming that L and W are the length and width of the rectangle, Perimeter =2*(L+W) and Area = L*W. Display the output on the screen using dbms_output.put_line.

SOL:

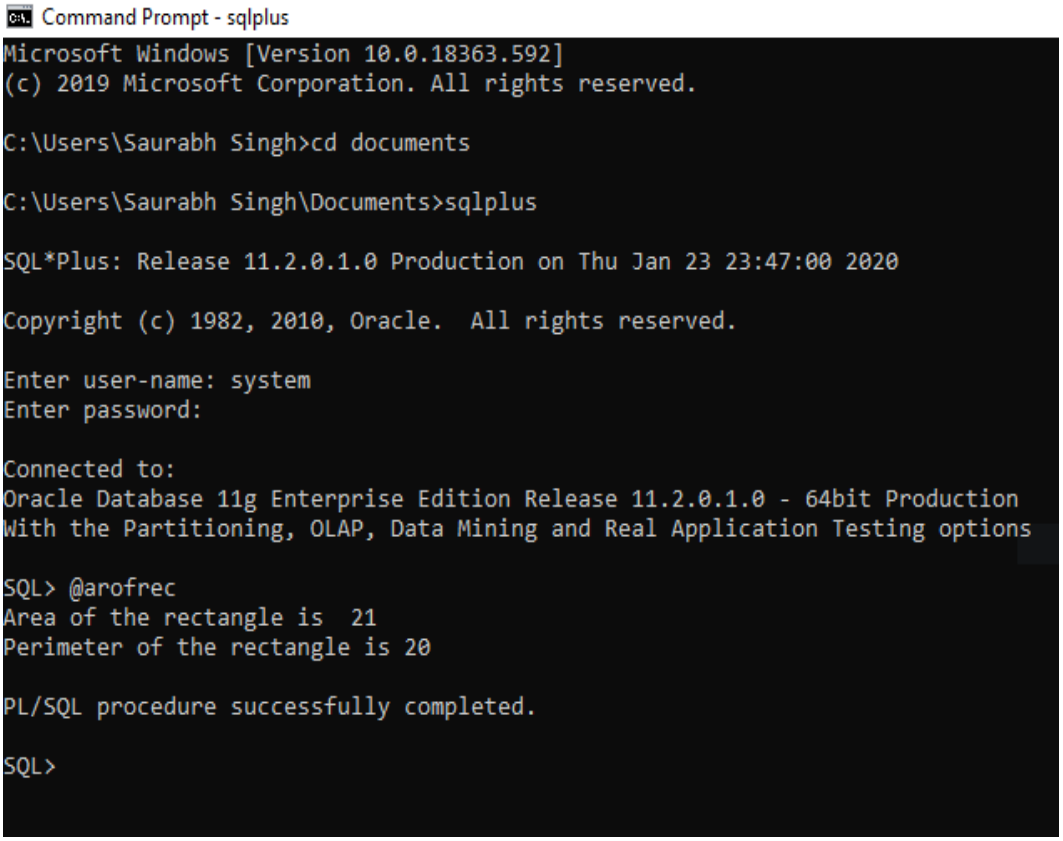
```
set serveroutput on;

DECLARE
  -- Declaration of length and assigning values
  length NUMBER(4, 2) := 3;
  --Declaration of breadth and assigning values
  width NUMBER(4, 2) := 7;
  --Declaration of a variable for Area of rectangle
  area NUMBER(4, 2);

  --Declaration of a variable for perimeter
  perimeter NUMBER(4, 2);
BEGIN

  -- calculate area and perimeter
  area := length * width;
  perimeter := 2 * (length + width);

  --Display result
  dbms_output.Put_line('Area of the rectangle is  '
  || area);
  dbms_output.Put_line('Perimeter of the rectangle is '
  || perimeter);
END;
/
Output:
```



2. Write a program that declares an integer variable called num, assigns a value to it, and computes and inserts into the temp table the value of the variable itself, its square, and its cube.

SOL:

```
--Creating temp table
CREATE TABLE temp ( item number, square number, CUBE number
);
set serveroutput on;

DECLARE
-- Declaration of num and accepting values from user
num number:=&num;

 BEGIN
  --Inserting value into tempp table
INSERT INTO temp
VALUES(num,
```

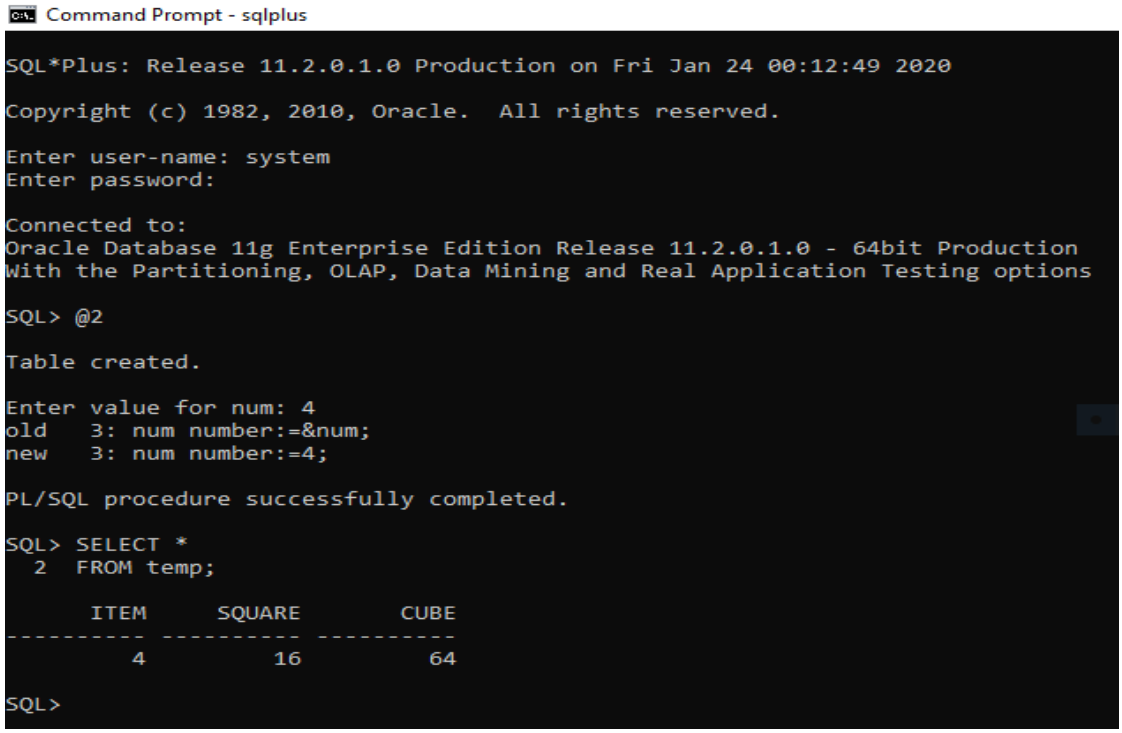
```
        num*num,
        num*num*num);

 END;
/
```

-- In cmd executing command to display value of temp table

Select * from temp;

OUTPU:



3. Convert a temperature in Fahrenheit (F) to its equivalent in Celsius (C) and vice versa. The required formulae are:-

C= (F-32)*5/9 F= 9/5*C + 32

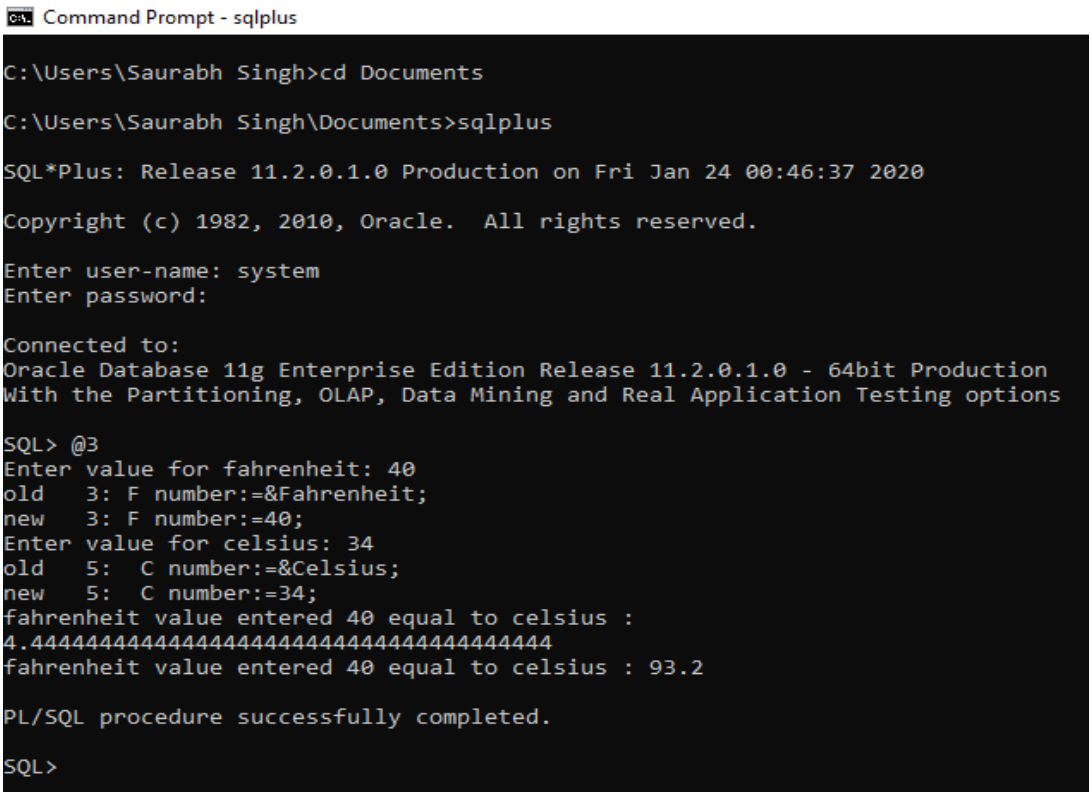
Display the output on the screen using dbms_output.put_line. Data has to be input by the user.

SOL:

```
set serveroutput on;
```

```
DECLARE
   -- Declaration of number , celsius and accepting values from user
   F number:=&Fahrenheit;
  C number:=&Celsius;
   RESULT number;
   BEGIN RESULT:=(F-32)*5/9;
   -- Display result
dbms_output.put_line('fahrenheit value entered '||F||' equal to
celsius :'||' '||RESULT);
   RESULT:=9/5*C+32;
dbms_output.put_line('fahrenheit value entered '||F||' equal to
celsius :'||' '||RESULT);
   END;
   /
```

OUTPUT:



4. Exemplify the techniques used for data allocation. Elaborate using example.

SOL:

Data collection includes gathering, storing, accessing, and using the original information.

There are different types of data collection, i.e. quantitative information collection, and qualitative information collection. The data collection methods that come under the quantitative type include Surveys and Usage data.

The data collection methods that come under qualitative type include Interviews, Focus Groups, and Document analysis.

Different data collection strategies include Case Studies, Usage data, Checklists, Observation, Interviews, Focus Groups, Surveys, and Document analysis.

Primary data is the data which is collected for the first time by the researcher. It will be the original data and will be relevant to the research topic. The ways used by researchers to collect the primary data include Interviews, Questionnaire, Focus Groups, and Observations.

Data Collection Techniques	Tools Used
Case Studies	Encyclopedia, Grammarly,

Data Collection Techniques	Tools Used
	Quetext.
Usage Data	Suma
Checklists	Canva, Checkli, Forgett.
Interviews	Sony ICD u*560
Focus Groups	Learning Space Tool Kit
Surveys	Google Forms, Zoho Survey.

5. Discuss in detail various types of maintenance provided to a DB during its life cycle.

SOL:

Types of maintenance

There are five types of maintenance have been distinguished, which are differentiated by the nature of the tasks that they include:

- Corrective maintenance: The set of tasks is destined to correct the defects to be found in the different equipment and that are communicated to the maintenance department by users of the same equipment.

- Preventive Maintenance: Its mission is to maintain a level of certain service on equipment, programming the interventions of their vulnerabilities in the most opportune time. It is used to be a systematic character, that is, the equipment is inspected even if it has not given any symptoms of having a problem.
- Predictive Maintenance: It pursues constantly know and report the status and operational capacity of the installations by knowing the values of certain variables, which represent such state and operational ability. To apply this maintenance, it is necessary to identify physical variables. Which variation is indicative of problems that may be appearing on the equipment. This maintenance it is the most technical, since it requires advanced technical resources, and at times of strong mathematical, physical and / or technical knowledge.
- Zero Hours Maintenance (Overhaul): The set of tasks whose goal is to review the equipment at scheduled intervals before appearing any failure, either when the reliability of the equipment has decreased considerably so it is risky to make forecasts of production capacity . This review is based on leaving the equipment to zero hours of operation, that is, as if the equipment were new. These reviews will replace or repair all items subject to wear. The aim is to ensure, with high probability, a good working time fixed in advance.
- Periodic maintenance (Time Based Maintenance TBM): the basic maintenance of equipment made by the users of it. It consists of a series of elementary tasks for which no extensive training is necessary, but perhaps only a brief training. This type of maintenance is the based on TPM (Total Productive Maintenance).