

Experiment -10

Write a PL/ SQL program for calculating the factorial of a given number.

```
C:\Windows\system32\cmd.exe - sqlplus
Microsoft Windows [Version 10.0.19045.2728]
(c) Microsoft Corporation. All rights reserved.

C:\Users\HP>sqlplus

SQL*Plus: Release 21.0.0.0.0 - Production on Thu Nov 30 19:28:41 2023
Version 21.3.0.0.0

Copyright (c) 1982, 2021, Oracle. All rights reserved.

Enter user-name: system
Enter password:
Last Successful login time: Wed Nov 29 2023 21:03:10 -05:00

Connected to:
Oracle Database 21c Express Edition Release 21.0.0.0.0 - Production
Version 21.3.0.0.0

SQL>
```

```
File Edit Format View Help
DECLARE
fac NUMBER :=1;
n NUMBER := 10;
BEGIN
WHILE n > 0 LOOP
fac:=n*fac;
n:=n-1;
END LOOP;
DBMS_OUTPUT.PUT_LINE(FAC);
END;
/|
```

```
SQL> SET SERVEROUT ON
SQL>
```

```
SQL> SET SERVEROUT ON  
SQL> edit ex10
```


```
SQL> @ex10  
3628800  
  
PL/SQL procedure successfully completed.  
  
SQL>
```

Experiment -11

Write a PL/SQL program for finding the given number is prime number or not.

```
Microsoft Windows [Version 10.0.19045.2728]  
(c) Microsoft Corporation. All rights reserved.  
  
C:\Users\HP>sqlplus  
  
SQL*Plus: Release 21.0.0.0.0 - Production on Thu Nov 30 19:36:06 2023  
Version 21.3.0.0.0  
  
Copyright (c) 1982, 2021, Oracle. All rights reserved.  
  
Enter user-name: system  
Enter password:  
Last Successful login time: Thu Nov 30 2023 19:33:16 -05:00  
  
Connected to:  
Oracle Database 21c Express Edition Release 21.0.0.0.0 - Production  
Version 21.3.0.0.0
```

```
SQL> SET SERVEROUT ON  
SQL> edit experiment11
```

 experiment11 - Notepad

File Edit Format View Help

```
DECLARE
n NUMBER;
i NUMBER;
temp NUMBER;
BEGIN
n := 13;
i := 2;
temp := 1;
FOR i IN 2..n/2
LOOP
IF MOD(n, i) = 0
THEN
temp := 0;
EXIT;
END IF;
END LOOP;
IF temp = 1
THEN
DBMS_OUTPUT.PUT_LINE(n||' is a prime number');
ELSE
DBMS_OUTPUT.PUT_LINE(n||' is not a prime number');
END IF;
END;
```

SQL> @experiment11

13 is a prime number

PL/SQL procedure successfully completed.

Experiment -12

Write a PL/SQL program for displaying the Fibonacci series up to an integer.

```
C:\Users\HP>sqlplus


SQL*Plus: Release 21.0.0.0.0 - Production on Thu Nov 30 19:36:06 2023
Version 21.3.0.0.0

Copyright (c) 1982, 2021, Oracle. All rights reserved.

Enter user-name: system
Enter password:
Last Successful login time: Thu Nov 30 2023 19:33:16 -05:00

Connected to:
Oracle Database 21c Express Edition Release 21.0.0.0.0 - Production
Version 21.3.0.0.0
```

```
SQL> SET SERVEROUT ON
SQL> edit experiment12
```

 experiment12 - Notepad

File Edit Format View Help

```
DECLARE
FIRST NUMBER := 0;
SECOND NUMBER := 1;
TEMP NUMBER;
N NUMBER := 5;
I NUMBER;
BEGIN
DBMS_OUTPUT.PUT_LINE('SERIES:');
DBMS_OUTPUT.PUT_LINE(FIRST);
DBMS_OUTPUT.PUT_LINE(SECOND);
FOR I IN 2..N
LOOP
TEMP:=FIRST+SECOND;
FIRST := SECOND;
SECOND := TEMP;
DBMS_OUTPUT.PUT_LINE(TEMP);
END LOOP;
END;
/
```

```
SQL> @experiment12
```

```
SERIES:
```

```
0
```

```
1
```

```
1
```

```
2
```

```
3
```

```
5
```

```
PL/SQL procedure successfully completed.
```

```
SQL>
```