VASAVI COLLEGE OF ENGINEERING
(AUTONOMOUS)
(Affiliated to Osmania University)
Hyderabad - 500 031.

DEPARTMENT OF : CSE

NAME OF THE LABORATORY : DBMS

Name K·S·I·SIVANI   Roll No. −O52   Page No. 67

WEEK-8   PL|SQL PROGRAMS:

1) Write a PL|SQL block to check the given number is even (or) odd:

```
DECLARE
num    number(5);
rem    number;
BEGIN
num := &num;
rem := mod(num,2);
if rem = 0
then
dbms_output.put_line ('Number' || num || 'is Even');
else
dbms_output.put_line ('Number' || num || 'is Odd');
end if;
end;
```

OUTPUT:

Enter value for num: 12

Number 12 is even

VASAVI COLLEGE OF ENGINEERING
(AUTONOMOUS)
(Affiliated to Osmania University)
Hyderabad - 500 031.

DEPARTMENT OF : CSE

NAME OF THE LABORATORY : DBMS

Name K·S·I·SIVANI _____ Roll No. —052 _____ Page No. 68

2) Write a PL|SQL block to find sum of digits of a given number:

```
DECLARE
num    number(5);
rem    number(5);
sm     number(5):=0;
num1   number(5);
BEGIN
 num:= &num;
 num1:= num;
 while (num>0)
 loop
 rem:= mod(num,10);
 sm:= sm+rem;
 num:= trunc(num/10);
 end loop;
 dbms_output.put_line('Sum of digits of '||num1||
                                    'is:"||sm);
 end;
 /
```

O|P:

Enter value for num:121

Sum of digits of 121 is:4

VASAVI COLLEGE OF ENGINEERING
(AUTONOMOUS)
(Affiliated to Osmania University)
Hyderabad - 500 031.

DEPARTMENT OF : CSE

NAME OF THE LABORATORY : DBMS

Name K·S·T·SIVANI   Roll No. -052   Page No. 69

3) Write a PL|SQL block to find the factorial of a given number:

```
DECLARE
num   number(5);
fact  number(5):=1;
k     number(5);
BEGIN
num: = & num;
k := num;
while (num > 0)
loop
fact := fact * num;
num: = num - 1;
end loop;
dbms_output.put_line ('Factorial of '|| k ||' is '|| fact);
end;
```

O|P:

Enter value for num: 7

Factorial of 7 is 5040.

VASAVI COLLEGE OF ENGINEERING
(AUTONOMOUS)
(Affiliated to Osmania University)
Hyderabad - 500 031.

DEPARTMENT OF : CSE

NAME OF THE LABORATORY : DBMS

Name K·S·I· SIVANI   Roll No. —052   Page No. 70

4) Write a PL/SQL block to generate Fibonacci Series:

```
DECLARE
num   number(5);
f1    number(5): = 0;
f2    number(5): = 1;
f3    number(5);
i     number(5): = 3;
BEGIN
num: = &num;
dbms_output.put_line ('The Fibonacci Series is:');
dbms_output.put_line (f1);
dbms_output.put_line (f2);
while (i <= num)
loop
f3: = f1 + f2;
dbms_output.put_line (f3);
f1: = f2;
f2: = f3;
i: = i+1;
end loop;
end;
```

O/P:

Enter Value for num: 8

The Fibonacci Series is:

0
1
1
2
3
5
8
13

VASAVI COLLEGE OF ENGINEERING

(AUTONOMOUS)
(Affiliated to Osmania University)
Hyderabad - 500 031.

DEPARTMENT OF : CSE

NAME OF THE LABORATORY : DBMS

Name K. S. I. SIVANI   Roll No. −052   Page No. 71

5) Write a PL/SQL program to check number is prime (or) not:

```
DECLARE
num  INTEGER := 23;        (crossed out)
isPrime  BOOLEAN := TRUE   (crossed out)

DECLARE
num    number (5);
 i     number (5) := 2;
 c     number (5) := 0;

BEGIN
num := &num;
while i < num
 loop
if  mod (num, i) = 0.
then
c := 1;  EXIT;
end if;
i := i + 1;  end loop;
if c = 0  then
dbms_output.put_line ('Number '||num||' is Prime');
else
dbms_output.put_line ('Number '||num||' is not Prime');
end if;  end;
```

Output:

Enter value for num: 7

Number 7 is prime

Enter value for num: 9

Number 9 is not prime.

VASAVI COLLEGE OF ENGINEERING
(AUTONOMOUS)
(Affiliated to Osmania University)
Hyderabad - 500 031.

DEPARTMENT OF : CSE

NAME OF THE LABORATORY : DBMS

Name K·S·I· SIVANI   Roll No. —052.   Page No. 72

6) Write a PL|SQL program to check palindrome:

```
DECLARE
num     number(5);
new     number(5):=0;
rem     number(5):=0;
k       number(5);
BEGIN
num:=&num;
k:=num;
while(k!=0)
loop
 rem:= mod(k,10);
 new:=new*10+rem;
 k:=TRUNC(k/10);
 end loop;
if new=num.
 then
dbms_output.put_line('Number'||num||'is a Palindrome');
else
dbms_output.put_line('Number'||num||'is not a
                                    Palindrome');
end if;
end;
```

O|P:

Enter value for num:12321

Number 12321 is a
        palindrome.

Enter value for num:52

Number 52 is not
    a palindrome.

VASAVI COLLEGE OF ENGINEERING
(AUTONOMOUS)
(Affiliated to Osmania University)
Hyderabad - 500 031.

DEPARTMENT OF : CSE

NAME OF THE LABORATORY : DBMS

Name K·S·I· SIVANI   Roll No. -052   Page No. 73

7) Write PL|SQL program to check Armstrong number.

```
DECLARE
num   number(5);
new   number(5):=0;
rem   number(5):=0;
k number(5);
BEGIN
num:=&num;
k:=num;
while (k!=0)
loop
 rem:=mod(k,10);
 new:=new + POWER(rem,3);
 k:=TRUNC(k|10);
end loop;
if new=num  then
dbms_output·put_line(num||' is an armstrong number);
else
dbms_output·put_line(num||' is not an armstrong number)
end if;
end;
```

Output:

Enter value for num:
153

153 is an armstrong number.

Enter value for num:4

4 is not an armstrongnumber.

Output:

Enter value for num1 =5
Enter value for num2 = 7
Before swapping:
num1 =5
num2 = 7
After swapping:
num1 = 7
num2 = 5.

VASAVI COLLEGE OF ENGINEERING
(AUTONOMOUS)
(Affiliated to Osmania University)
Hyderabad - 500 031.
DEPARTMENT OF : CSE
NAME OF THE LABORATORY : DBMS
Name K·S·I· SIVANI   Roll No.─052   Page No. 94

8) Write a PL/SQL program to swap numbers without using temp variable:

```
DECLARE
  num1  number(5);
  num2  number(5);
BEGIN
  num1: = &num1;
  num2: = &num2;
  dbms_output. put_line ('Before swapping:');
  dbms_output. put_line ('num1 = ' || num1);
  dbms_output. put_line ('num2 =' || num2);
  num1: = num1 + num2;
  num2 : = num1 - num2;
  num1: = num1 - num2;
  dbms_output. put_line ('After swapping:');
  dbms_output. put_line ('num1 = ' || num1);
  dbms_output.put_line ('num2 = ' || num2);
end;
```