

EXPERIMENT NO: 4

TITLE: Develop a program to find the reverse of a positive integer and check for palindrome or not. Display appropriate messages.

PROGRAM:

```
#include<stdio.h>
void main()
{
    int num, temp, rem, rev=0;
    printf("Enter a positive integer\n");
    scanf("%d",&num);
    temp=num;
    while(num!=0)
    {
        rem=num%10;
        rev=(rev*10)+rem;
        num=num/10;
    }
    printf("Reverse of the positive integer is %d\n",rev);
    if(temp==rev)
    {
        printf("%d is a palindrome\n",temp);
    }
    else
    {
        printf("%d is not a palindrome\n",temp);
    }
}
```

OUTPUT:

Enter a positive integer

1221

The reverse of positive integer is 1221

1221 is a palindrome

Enter a positive integer

0101

Reverse of the positive integer is 101

101 is a palindrome

Enter a positive integer

123

Reverse of the positive integer is 321

123 is not a palindrome

Enter a positive integer

222222222

Where value of n is out of range for integers in 32 bit machine
(Range of integer in 32bit machine is -2147483648 to 2147483647)

Reverse of the positive integer is xxxxxxxxxx

xxxxxxxxxx is not a palindrome

ALGORITHM:

STEP 1: Start

STEP 2: Read num

STEP 3: Initialize temp=num, rev=0

STEP 4: check (**num!=0**)

 if yes rem = num % 10
 rev = rev * 10 + rem
 num = num / 10
 goto **STEP 4**

STEP 5: display reverse

STEP 6: check (**temp == rev**)

 if yes display “palindrome”
 if no display “not a palindrome”

STEP 7: Stop

FLOWCHART:

