

Program 1

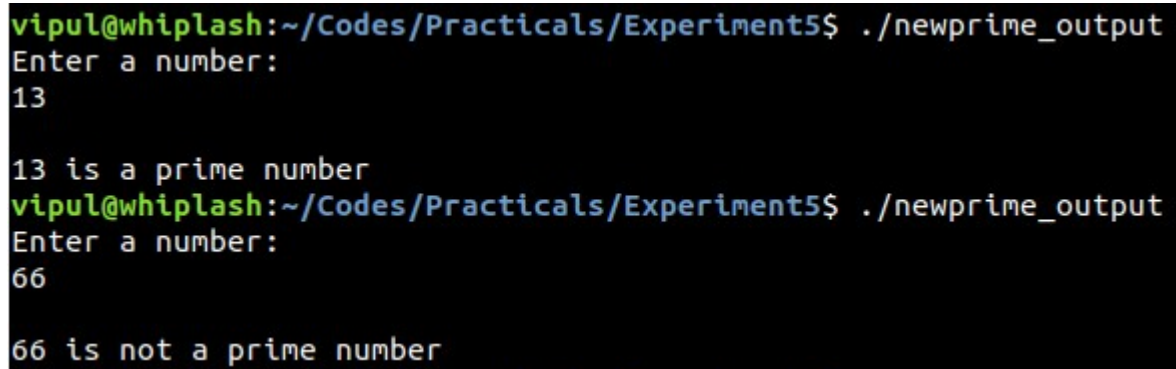
//Program to find if number is a prime number or not via While loop.

```
#include<stdio.h>
int main(){
    int i=0,num,ctr=0;
    printf("Enter a number:\n");
    scanf("%d",&num);
    if(num==1)
        printf("\n1 is not a prime number\n");

    while(i<=(num/2)){
        if(num%i==0)
            ctr++;

        if(ctr>=2){
            printf("\n%d is not a prime number\n",num);
            break;
        }

        i++;
    }
    if(ctr<2 && num!=1)
        printf("\n%d is a prime number\n",num);
}
```



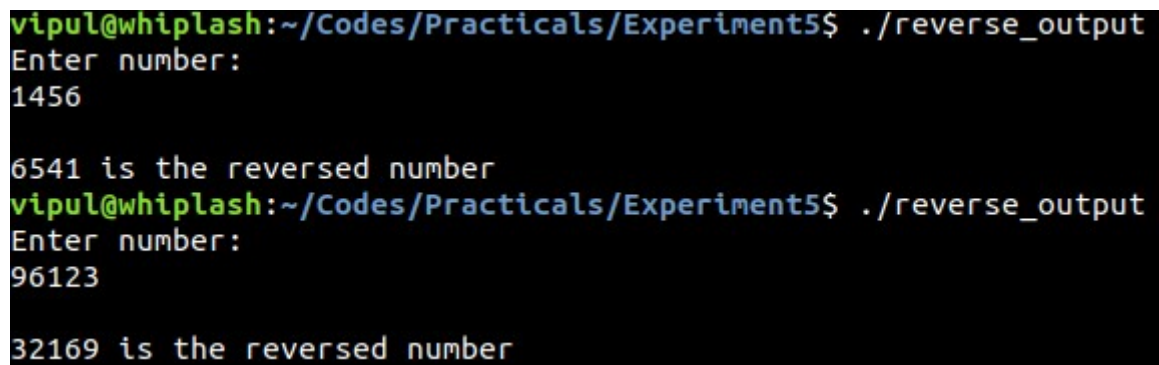
The terminal screenshot shows the program being executed twice. In the first run, the user enters 13, and the program outputs "13 is a prime number". In the second run, the user enters 66, and the program outputs "66 is not a prime number". The prompt "vipul@whiplash:~/Codes/Practicals/Experiment5\$" is visible at the start of each command line.

```
vipul@whiplash:~/Codes/Practicals/Experiment5$ ./newprime_output
Enter a number:
13
13 is a prime number
vipul@whiplash:~/Codes/Practicals/Experiment5$ ./newprime_output
Enter a number:
66
66 is not a prime number
```

Program 2

// Program to reverse a number via For loop.

```
#include<stdio.h>
int main(){
    int num, rev=0;
    printf("Enter number:\n");
    scanf("%d",&num);
    for(;num>0;){
        rev=rev*10+num%10;
        num/=10;
    }
    printf("\n%d is the reversed number\n",rev);
}
```



The image shows a terminal window with a black background and green text. It displays two runs of the program. In the first run, the user enters '1456' and the program outputs '6541 is the reversed number'. In the second run, the user enters '96123' and the program outputs '32169 is the reversed number'.

```
vipul@whiplash:~/Codes/Practicals/Experiment5$ ./reverse_output
Enter number:
1456

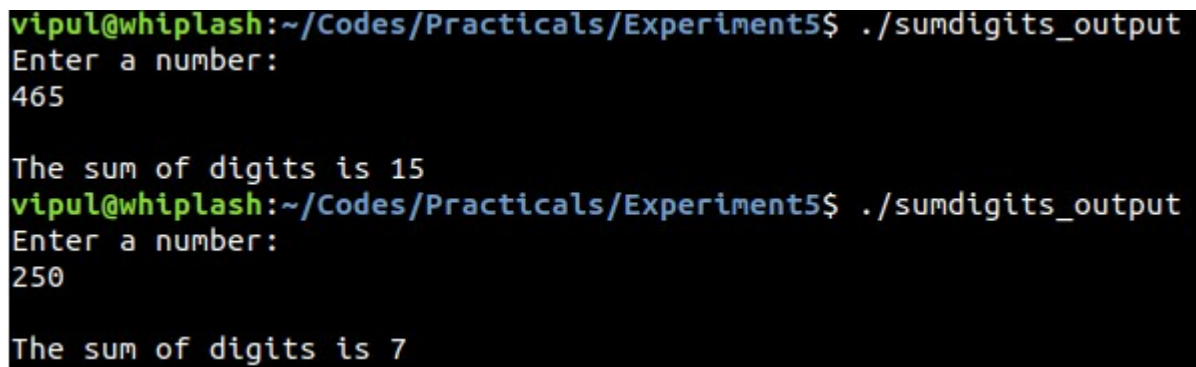
6541 is the reversed number
vipul@whiplash:~/Codes/Practicals/Experiment5$ ./reverse_output
Enter number:
96123

32169 is the reversed number
```

Program 3

// Program to find sum of digits via While loop

```
#include<stdio.h>
int main(){
    int num,sum=0;
    printf("Enter a number:\n");
    scanf("%d",&num);
    while(num>0){
        sum+=num%10;
        num/=10;
    }
    printf("\nThe sum of digits is %d\n",sum);
}
```



The screenshot shows a terminal window with the following text:

```
vipul@whiplash:~/Codes/Practicals/Experiment5$ ./sumdigits_output
Enter a number:
465

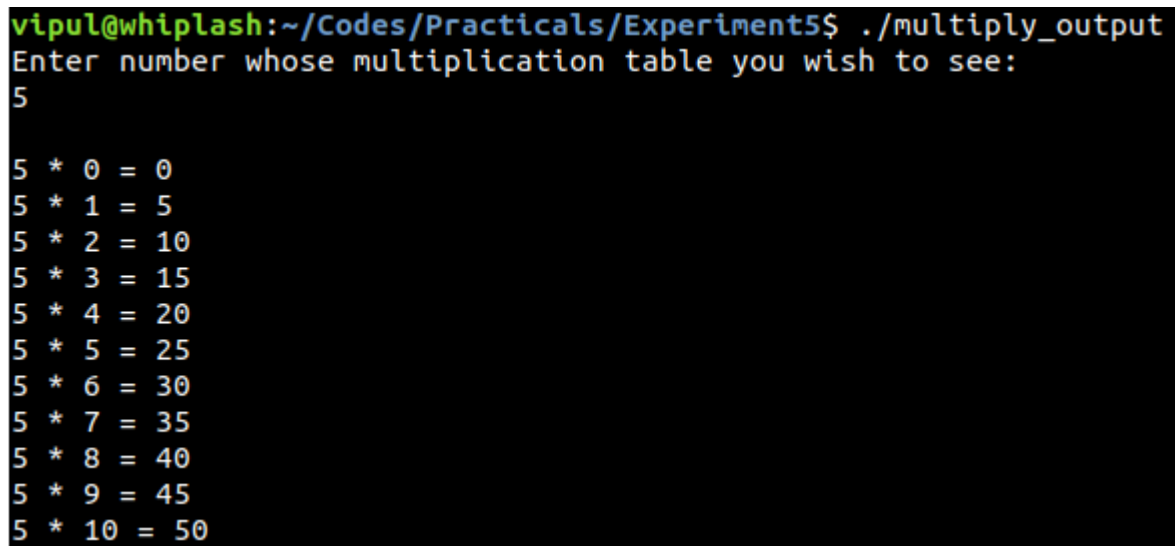
The sum of digits is 15
vipul@whiplash:~/Codes/Practicals/Experiment5$ ./sumdigits_output
Enter a number:
250

The sum of digits is 7
```

Program 4

// Program to print multiplication table via For loop

```
#include<stdio.h>
int main(){
    int num;
    printf("Enter number whose multiplication table you wish to see:\n");
    scanf("%d",&num);
    printf("\n");
    for(int i=0;i<=10;i++)
        printf("%d * %d = %d\n",num,i,num*i);
}
```

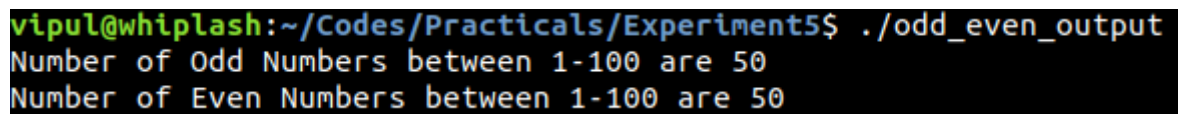


```
vipul@whiplash:~/Codes/Practicals/Experiment5$ ./multiply_output
Enter number whose multiplication table you wish to see:
5
5 * 0 = 0
5 * 1 = 5
5 * 2 = 10
5 * 3 = 15
5 * 4 = 20
5 * 5 = 25
5 * 6 = 30
5 * 7 = 35
5 * 8 = 40
5 * 9 = 45
5 * 10 = 50
```

Program 5

// Program to count number of odd and even numbers between 1-100 using for loop.

```
#include<stdio.h>
int main()
{
    int even=0,odd;
    for(int i=1;i<=100;i++){
        if(i%2==0)
            even++;
    }
    odd=100-even;
    printf("Number of Odd Numbers between 1-100 are %d\nNumber of Even Numbers
between 1-100 are %d\n",odd,even);
}
```

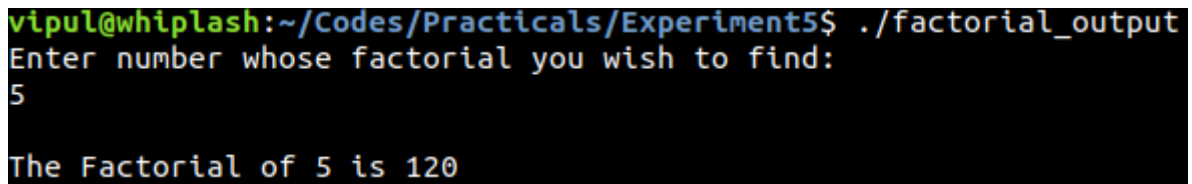
A terminal window with a black background and green text. The prompt is 'vipul@whiplash:~/Codes/Practicals/Experiment5\$'. The command './odd_even_output' has been executed, resulting in two lines of output: 'Number of Odd Numbers between 1-100 are 50' and 'Number of Even Numbers between 1-100 are 50'.

```
vipul@whiplash:~/Codes/Practicals/Experiment5$ ./odd_even_output
Number of Odd Numbers between 1-100 are 50
Number of Even Numbers between 1-100 are 50
```

Program 6

// Program to find factorial of a number using For loop.

```
#include<stdio.h>
int main(){
    int num,fact=1;
    printf("Enter number whose factorial you wish to find:\n");
    scanf("%d",&num);
    for(int i=1;i<=num;i++)
        fact*=i;
    printf("\nThe Factorial of %d is %d\n",num,fact);
}
```

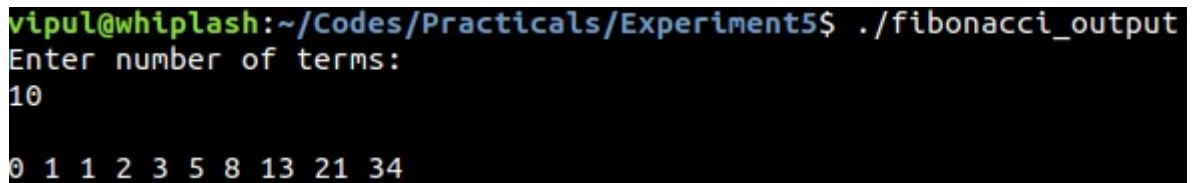
A terminal window with a black background and green text. The prompt is 'vipul@whiplash:~/Codes/Practicals/Experiment5\$'. The user has run './factorial_output'. The program prompts 'Enter number whose factorial you wish to find:' and the user has entered '5'. The program then outputs 'The Factorial of 5 is 120'.

```
vipul@whiplash:~/Codes/Practicals/Experiment5$ ./factorial_output
Enter number whose factorial you wish to find:
5
The Factorial of 5 is 120
```

Program 7

//Program to find fibonacci series using For loop.

```
#include<stdio.h>
int main()
{
    int n,f=0,s=1,sum=0;
    printf("Enter number of terms:\n");
    scanf("%d",&n);
    printf("\n");
    for(int i=1;i<=n;i++){
        printf("%d ",f);
        sum=f+s;
        f=s;
        s=sum;
    }
    printf("\n");
}
```



A terminal window with a black background and green text. The prompt is 'vipul@whiplash:~/Codes/Practicals/Experiment5\$'. The user has run './fibonacci_output'. The program prompts 'Enter number of terms:' and the user has entered '10'. The output shows the Fibonacci sequence: '0 1 1 2 3 5 8 13 21 34'.

```
vipul@whiplash:~/Codes/Practicals/Experiment5$ ./fibonacci_output
Enter number of terms:
10
0 1 1 2 3 5 8 13 21 34
```