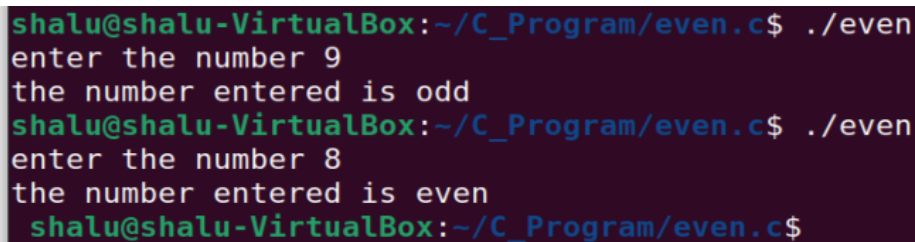


1. Write a program to check whether a given number is odd or even.

```
#include<stdio.h>
int main()
{
    int a;
    printf("enter the number ");
    scanf("%d",&a);
    if((a%2)==0)
        printf("the number entered is even\n ");
    else
        printf("the number entered is odd \n");
    return 0;
}
```

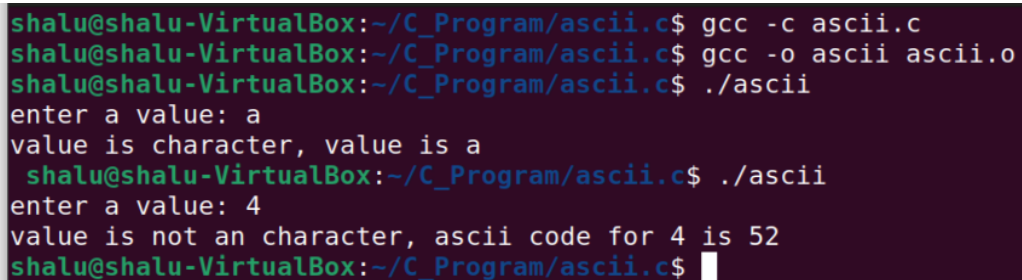


```
shalu@shalu-VirtualBox:~/C_Program/even.c$ ./even
enter the number 9
the number entered is odd
shalu@shalu-VirtualBox:~/C_Program/even.c$ ./even
enter the number 8
the number entered is even
shalu@shalu-VirtualBox:~/C_Program/even.c$
```

2. Write a C program to check whether the input is digit or alphabet. Print the ASCII number if it is a digit.

```
#include<stdio.h>
int main()
{
    char value;
    printf("enter a value: ");
    scanf("%c",&value);

    if(((value<=90)&&(value>=65))||((value<=122)&&(value>=97)))
        printf("value is character, value is %c\n",value);
    else
        printf("value is not an character, ascii code for %c is %d\n",value,value);
    return 0;
}
```



```
shalu@shalu-VirtualBox:~/C_Program/ascii.c$ gcc -c ascii.c
shalu@shalu-VirtualBox:~/C_Program/ascii.c$ gcc -o ascii ascii.o
shalu@shalu-VirtualBox:~/C_Program/ascii.c$ ./ascii
enter a value: a
value is character, value is a
shalu@shalu-VirtualBox:~/C_Program/ascii.c$ ./ascii
enter a value: 4
value is not an character, ascii code for 4 is 52
shalu@shalu-VirtualBox:~/C_Program/ascii.c$
```

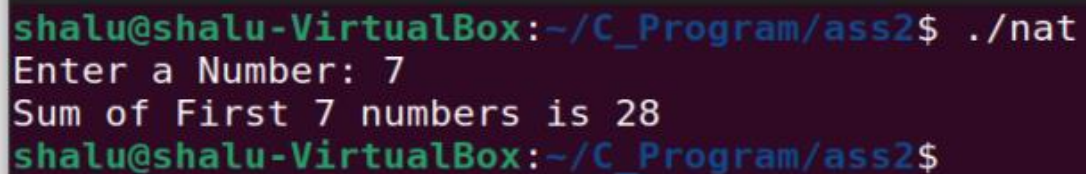
3. Write a program to create a simple calculator to perform Addition, Subtraction, Multiplication and Division using switch statement. Take the required operation as input from the user.

```
#include <stdio.h>
int main()
{
    int a, b;
    int oper;
    printf("Enter two Numbers: ");
    scanf("%d%d", &a, &b);
    printf("Choose the operation \n");
    printf("1 : Addition \n");
    printf("2 : Substraction \n");
    printf("3 : Multiplication \n");
    printf("4 : Division \n Enter your choice: ");
    scanf("%d", &oper);
    switch (oper)
    {
        case 1:
            printf("%d+%d=%d", a, b, a + b);
            break;
        case 2:
            printf("%d-%d=%d", a, b, a - b);
            break;
        case 3:
            printf("%dx%d=%d", a, b, a * b);
            break;
        case 4:
            printf("%d/%d=%d", a, b, a / b);
            break;
        default:
            printf("Wrong Choice %c \n", oper);
    }
    printf("\n");
    return 0;
}
```

```
shalu@shalu-VirtualBox:~/C_Program/ass2$ gcc -c calc.c
shalu@shalu-VirtualBox:~/C_Program/ass2$ gcc -o calc calc.o
shalu@shalu-VirtualBox:~/C_Program/ass2$ ./calc
Enter two Numbers: 3 2
Choose the operation
1 : Addition
2 : Substraction
3 : Multiplication
4 : Division
Enter your choice: 1
3+2=5
shalu@shalu-VirtualBox:~/C_Program/ass2$ ./calc
Enter two Numbers: 9 4
Choose the operation
1 : Addition
2 : Substraction
3 : Multiplication
4 : Division
Enter your choice: 2
9-4=5
shalu@shalu-VirtualBox:~/C_Program/ass2$ ./calc
Enter two Numbers: 8 4
Choose the operation
1 : Addition
2 : Substraction
3 : Multiplication
4 : Division
Enter your choice: 4
8/4=2
shalu@shalu-VirtualBox:~/C_Program/ass2$
```

4. Write a program to find out the sum of first n natural numbers. Take n as input from the user.

```
#include <stdio.h>
int main()
{
    int i, n, total = 0;
    printf("Enter a Number: ");
    scanf("%d", &n);
    for (i = 1; i <= n; i++)
    {
        total = total + i;
    }
    printf("Sum of First %d numbers is %d\n", n, total);
    return 0;
}
```



The screenshot shows a terminal window with a dark background. The prompt is 'shalu@shalu-VirtualBox:~/C_Program/ass2\$'. The user enters './nat'. The program prompts 'Enter a Number: 7'. The program outputs 'Sum of First 7 numbers is 28'. The prompt returns to 'shalu@shalu-VirtualBox:~/C_Program/ass2\$'.

5. Write a program to check whether the given number is perfect number or not.
A number is called as a perfect number if the sum of the factors of that number is equal to the same number. Example: $6 = 1 + 2 + 3$

```
#include <stdio.h>
void main()
{
    int number;
    printf("Enter any Number: ");
    scanf("%d", &number);
    int sum=0;
    for(int i=1;i<=number/2;i++){
        if(number%i==0){
            sum= sum+i;
        }
    }
    if(sum==number){
        printf("%d is perfect Number\n",number);
    }else{
        printf("%d is not a perfect Number\n",number);
    }
}
```

```
shalu@shalu-VirtualBox:~/C_Program/ass2$ ./PerfectNumber
Enter any Number: 6
6 is perfect Number
shalu@shalu-VirtualBox:~/C_Program/ass2$ ./PerfectNumber
Enter any Number: 9
9 is not a perfect Number
shalu@shalu-VirtualBox:~/C_Program/ass2$
```

6. Write a program to find the sum of numbers in a given range.

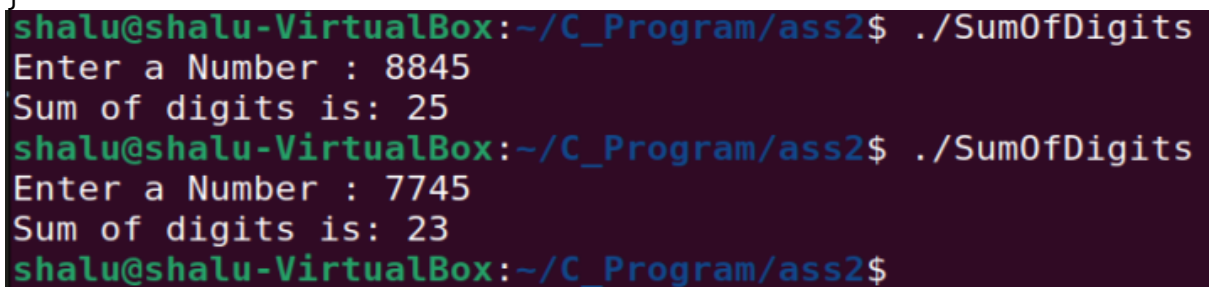
```
#include <stdio.h>
void main()
{
    int n1, n2;
    printf("Enter Range\n(First number should be lower than second
number): ");
    scanf("%d%d", &n1, &n2);
    int sum = 0;
    if (n2 > n1)
    {
        for (int i = n1; i <= n2; i++)
        {
            sum = sum + i;
        }
        printf("Sum of Range(%d, %d) is: %d\n", n1, n2, sum);
    }
    else
    {
        printf("Range is invalid\n");
    }
}
```

```
shalu@shalu-VirtualBox:~/C_Program/ass2$ ./SumOfRange
Enter Range
(First number should be lower than second number): 1 6
Sum of Range(1, 6) is: 21
shalu@shalu-VirtualBox:~/C_Program/ass2$ ./SumOfRange
Enter Range
(First number should be lower than second number): 4 7
Sum of Range(4, 7) is: 22
shalu@shalu-VirtualBox:~/C_Program/ass2$
```

7. Write a program to calculate the sum of the digits of a given number.

```
#include <stdio.h>
void main()
{
    int n;
    printf("Enter a Number : ");
    scanf("%d", &n);
    int sum = 0;
    while (n > 0)
    {
        int rem = n % 10;
        n = n / 10;
        sum = sum + rem;
    }

    printf("Sum of digits is: %d\n", sum);
}
```

A terminal window with a dark background and light-colored text. It shows the execution of a C program. The prompt is 'shalu@shalu-VirtualBox:~/C_Program/ass2\$'. The user enters './SumOfDigits'. The program prompts 'Enter a Number : 8845' and outputs 'Sum of digits is: 25'. The user enters './SumOfDigits' again. The program prompts 'Enter a Number : 7745' and outputs 'Sum of digits is: 23'. The prompt returns to 'shalu@shalu-VirtualBox:~/C_Program/ass2\$'.

```
shalu@shalu-VirtualBox:~/C_Program/ass2$ ./SumOfDigits
Enter a Number : 8845
Sum of digits is: 25
shalu@shalu-VirtualBox:~/C_Program/ass2$ ./SumOfDigits
Enter a Number : 7745
Sum of digits is: 23
shalu@shalu-VirtualBox:~/C_Program/ass2$
```