Assignment 6

Write a C Program for the following problem statements

1. calculate the sum of numbers (10 numbers max) & If the user enters a negative number, the loop terminates.

```
#include <stdio.h>
int main()
{
  int i,num,sum;
   for (i = 1; i <= 10; ++i)
{
   printf("Enter value for n%d: ", i);
   scanf("%d", &number);
  if (number < 0.0) {
        break;
  }
 sum += number; // sum = sum + number;
   }
printf("Sum = %d", sum);
    return 0;
}
```

```
Output:
Enter value for n1: 5
Enter value for n2: 4
Enter value for n3: 5
Enter value for n4: -8
Sum = 14
```

2. calculate the sum of numbers (10 numbers max) & If the user enters a negative number, it's not added to the result.

```
#include <stdio.h>
int main()
{
  int i,num,sum;
  for (i = 1; i <= 10; ++i)
```

```
{
   printf("Enter value for n%d: ", i);
   scanf("%d", &number);
   if (number < 0.0) {
         break;
  }
  sum += number; // sum = sum + number;
   }
  printf("Sum = %d", sum);
    return 0;
}
```

```
Output:
Enter value for n1: 5
Enter value for n2: 4
Enter value for n3: 5
Enter value for n4: -8
Enter value for n5: 1
Enter value for n6: 4
Enter value for n7: 8
Enter value for n8: 1
Enter value for n9: 3
Enter value for n10: 4
Sum = 35
```

3. take input from the user until he/she enters zero. (Using Break)
4. check whether the given number is prime or not.(Using Break)

```
#include <stdio.h>
#include <math.h>
int main()
{
  int n, i, flag = 1;
   printf("Enter a number: \n");
   scanf("%d", &n);
  for (i = 2; i <= sqrt(n); i++)
  {
```

```
    if (n % i == 0) {
        flag = 0;
        break;
      }
   }

   if(n<=1)
   flag=0;
   else if(n==2)
   flag=1;

   if (flag == 1) {
      printf("%d is a prime number", n);
   }
   else {
      printf("%d is not a prime number", n);
   }

   return 0;
}
```

```
Output:
Enter a number:3
3 is a prime number
```

5. print sum of odd numbers between 0 and 10. (Using Continue)

```
#include<stdio.h>
int main()
{
int i,sum=0;
for(i=0;i<=10;i++)
{
If((i%2)==0)
{
continue;
}
Sum+=i;
}
```

```
printf
}
}
```

6. check whether the given number is prime or not.(Using Continue)

```
#include <stdio.h>

#include <math.h>

int main()

{

   int n, i, flag = 1;

   printf("Enter a number:”);

 scanf("%d", &n);

  for (i = 2; i <= sqrt(n); i++) {

      if (n % i == 0) {

         flag = 0;

         continue;

      }

   }

   if(n<=1)

   flag=0;

   else if(n==2)

   flag=1;

   if (flag == 1) {

      printf("%d is a prime number", n);
```

```
    }
    else {
        printf("%d is not a prime number", n);
    }
} return 0;
```

```
Output:
Enter a number:3
3 is a prime number
```

7. print all even numbers from 1 to 100. (Using Continue)

```
#include <stdio.h>
#include <math.h>
int main()
{
    int i;
  for( i=1;i<=100;i++)
    {
      if(i%2==0)
        {
            printf("%d\n", i);
            continue;
      } }
```

```
    return 0;
}
```

```
Output:
2
4
6
8
10
12
14
16
18
20
```

8. print numbers from 1 to 10 using goto statement. (Using goto)

```
#include <stdio.h>
int main()
{
    int count,n;

        printf("Enter value of n: ");
        scanf("%d",&n);
        count =1;
        start:
        printf("%d ",count);
                count++;
        if(count<=n)
        {
                goto start;
        }
    return 0;
```

```
}
```

```
Output:
Enter value of n:10
1 2 3 4 5 6 7 8 9 10
```

9. Program to calculate the sum and average of positive numbers, If the user enters a negative number, the sum and average are displayed. (Using goto)

```
int max=100,i;

   double number, average, sum;

   for (i = 1; i <= max; ++i) {
      printf("%d. Enter a number: ", i);
      scanf("%lf", &number);
      if (number < 0.0)
      {
         goto jump;
      }
      sum += number;
   }

jump:
   average = sum / (i - 1);
   printf("Sum = %.2f\n", sum);
   printf("Average = %.2f", average);
return 0;
}
```

```
Output:
1. Enter a number:4
2. Enter a number:5
3. Enter a number:-9
Sum = 9.00
Average = 4.5
```

10. check if a number is even or not. (Using goto)

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
 int num;
    printf("Enter a number\n");
    scanf("%d", &num);

    if (num % 2 == 0)
        goto even;
    else
        goto odd;
even:
    printf("%d is even\n", num);
    exit(0);
odd:
    printf("%d is odd\n", num);

    return 0;
}
```

Output:

```
Enter a number

4

4 is even
```

****