Subject

Programming and Data Structures using C

Assignment 6

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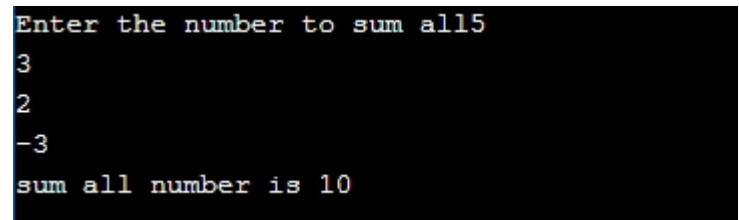**Write a C Program for the following problem statements**

Q1. calculate the sum of numbers (10 numbers max) & If the user enters a negative number, the loop terminates.

```c
#include <stdio.h>

int main()
{    int a,n;
     printf("Enter the number to sum all");
     for(int e=1;e<11;e++){
          scanf("%d",&a);
          if(a<0)
          break;
          n=n+a;
     }
     printf("sum all number is %d",n);

     return 0;
}
```

Output

```
Enter the number to sum all5
3
2
-3
sum all number is 10
```

Q2. calculate the sum of numbers (10 numbers max) & If the user enters a negative number, it's not added to the result.

```c
#include <stdio.h>

int main()
{    int a,n;
     printf("Enter the number to sum all");
     for(int e=1;e<11;e++){
         scanf("%d",&a);
         if(a>0)

         n=n+a;
     }
     printf("sum all number is %d",n);

     return 0;
}
```
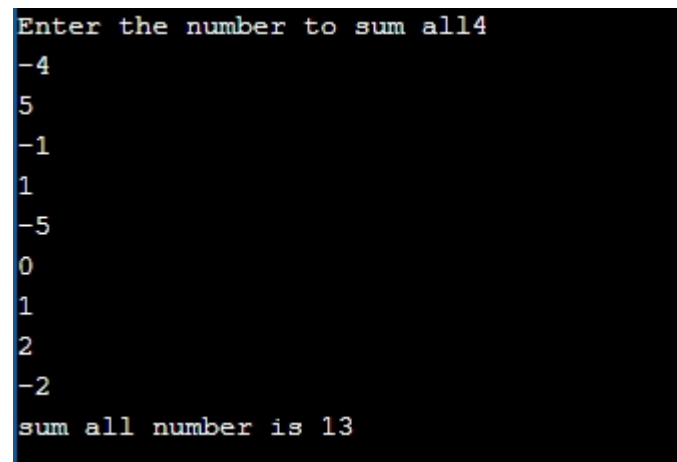
Output

Q3. take input from the user until he/she enters zero. (Using Break)

```c
#include <stdio.h>

int main()
{     char a;
      printf("enter zero '0' to exit");
      for(;;){
            scanf("%c",&a);
            if( a == '0' )
            break;

      }


      return 0;
}
```
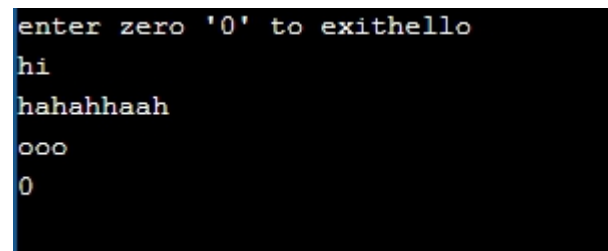
Output

Q4. check whether the given number is prime or not.(Using Break)

```c
#include <stdio.h>

int main()
{    int a,g;
      printf("enter number:");
      scanf("%d",&a);
      for(int e=2;e<a/2;e++){
            if( a%e==0 ){
            g=1;
            break;
            }
       }
    if(g==0)
    printf("given number is prime number.");
    else printf("given number is not prime number.");

      return 0;
}
```

Output

```
enter number:7
given number is prime number.
```

Q5. print sum of odd numbers between 0 and 10. (Using Continue)

```c
#include <stdio.h>

int main()
{    int g;

     for(int e=1;e<11;e++){
          if( e%2==0 )
          continue;
          else
          g=g+e;

     }
     printf("sum of all odd number (1 to 10) is : %d",g);

     return 0;
}
```

Output

```
sum of all odd number (1 to 10) is : 25
```

Q6. check whether the given number is prime or not.(Using Continue)

```c
#include <stdio.h>

int main()
{    int a,g;
     printf("enter number:");
     scanf("%d",&a);
     for(int e=2;e<a/2;e++){
          if( a%e!=0 )
          continue;
          else
          g=1;
     }
   if(g==0)
   printf("given number is prime number.");
   else printf("given number is not prime number.");

     return 0;
}
```

Output

```
enter number:10
given number is not prime number.
```

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

```c
#include <stdio.h>

int main()
{    int a,g;
     printf("all even number between 1 to 100 \n");
     for(int e=1;e<101;e++){
         if(e%2!=0)
         continue;
         printf(" %d ",e);
         if(e%26==0)
         printf("\n");
     }
     return 0;
}
```
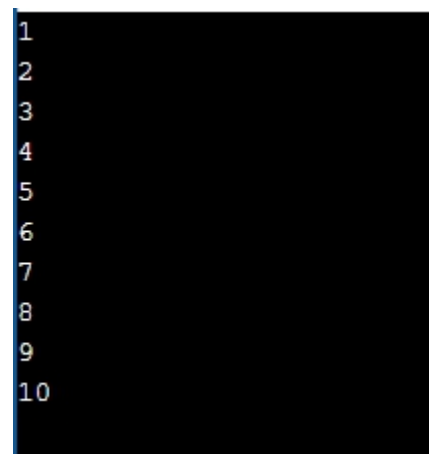
Output

```
all even number between 1 to 100
 2  4  6  8  10  12  14  16  18  20  22  24  26
28  30  32  34  36  38  40  42  44  46  48  50  52
54  56  58  60  62  64  66  68  70  72  74  76  78
80  82  84  86  88  90  92  94  96  98  100
```

Q8. print numbers from 1 to 10 using goto statement. (Using goto)

```c
#include <stdio.h>

int main()
{     int a=1;
here:
printf("%d\n",a);
a++;
if(a<11)
goto here;
      return 0;
}
```
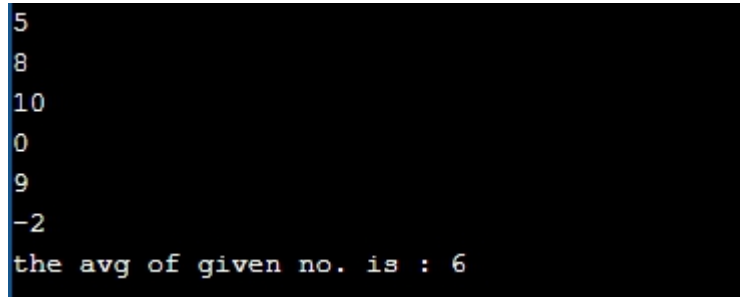
Output

```
1
2
3
4
5
6
7
8
9
10
```

Q9. 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)

```c
#include <stdio.h>

int main()
{    int n=0,e=-1,s=0;
rollback:
e++;
s=s+n;
scanf("%d",&n);
if(n>0)
goto rollback;

printf("the avg of given no. is : %d    ",s/e);
    return 0;
}
```

Output

```
5
8
10
0
9
-2
the avg of given no. is : 6
```

Q10. check if a number is even or not. (Using goto)

```c
#include <stdio.h>

int main()
{    int e;
     printf("enter the number :");
     scanf("%d",&e);
     if(e%2==0)
     goto here;
     else goto there;

     here:
     printf("you enter the even number");
     return 0;
     there:
     printf("you enter the odd number");
     return 0;
}
```

Output

```
enter the number :74327657839524
you enter the even number
```