//Ass_1001_Q1: Check whether a number is strong//

```
#include <stdio.h>
void main()
{
   int n,temp,digit,sum=0,fact,i;
   printf("Enter a number: ");
   scanf("%d", &n);

   temp = n;

   while(temp > 0)
   {
      digit = temp % 10;
      fact = 1;
      for(i = 1; i <= digit; i++)
         fact =fact*i;
         sum =sum+fact;
         temp =temp/10;
   }

   if(sum==n)
   {
      printf("%d is a Strong number.",n);
   }
   else
   {
      printf("%d is not a Strong number.",n);
   }
}
```

Output :-

```
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ gcc ass_1001_01.c -o  ass_1001_01
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ ./ass_1001_01
Enter a number: 5
5 is not a Strong number.bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ gcc ass_1001_01.c -o  ass_1001_01
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ ./ass_1001_01
Enter a number: 145
145 is a Strong number.bscit-15@bscit-15-H610M-K-DDR4:~/jemish$
```

//Ass_1001_Q2:Convert kilometers to miles//

```
#include <stdio.h>
void main()
{
 float kilometer,miles;
 printf("Enter the value of kilometres:-");
 scanf("%f",&kilometer);

 miles=kilometer*0.621371;

 printf("%f kilometres=%f miles",kilometer,miles);
}
```

Output :-

```
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ gcc ass_1001_02.c -o  ass_1001_02
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ ./ass_1001_02
Enter the value of kilometres:-1
1.000000 kilometres=0.621371 milesbscit-15@bscit-15-H610M-K-DDR4:~/jemish$
```

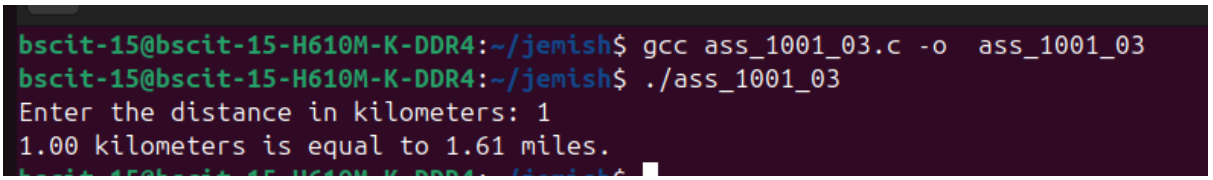
// Ass_1001_Q3: Convert miles to kilometers//

```
#include <stdio.h>
void main()
{
   float kilometers,miles;
   printf("Enter the distance in kilometers: ");
   scanf("%f", &kilometers);

   miles = kilometers *  1.60934;

   printf("%.2f kilometers is equal to %.2f miles.\n", kilometers, miles);
}
```

Output :-



//Ass_1001_Q4: Convert meters to centimeters//

```
#include <stdio.h>
void main()
{
   int meters,centimeters;
   printf("Enter the value of meters:-");
   scanf("%d",&meters);

   centimeters = meters * 100;

   printf("%d meters = %d centimeters.\n", meters, centimeters);
}
```

Output :-

```
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ gcc ass_1001_04.c -o  ass_1001_04
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ ./ass_1001_04
Enter the value of meters:-5
5 meters = 500 centimeters.
```

//Ass_1001_Q5. Print the first N even numbers//

```
#include<stdio.h>
void main()
{
  int n,i;
  printf("Enter a number:- ");
  scanf("%d",&n);

  for(i=0;i<=n;i=i+1)
  {
    printf(" %d ",i*2);
  }
}
```

Output :-

```
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ gcc ass_1001_05.c -o  ass_1001_05
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ ./ass_1001_05
Enter a number:- 10
0 2 4 6 8 10 12 14 16 18 20 bscit-15@bscit-15-H610M-K-DDR4:~/jemish$
```

.

//Ass_1001_Q6: Check whether a number is a perfect square//

```
#include<stdio.h>
void main()
{
   int n,i;
   printf("enter value of n : ");
   scanf("%d",&n);
   for(i=1;i<=n;i++)
   {
      if(i*i==n)
      {
         printf("\n%d is a perfect square",n);
         return;
      }
   }
   printf("\n%d is a not perfect square",n);
}
```

Output :-

// Ass_1001_Q7: Check whether a number is perfect//

```
#include <stdio.h>
void main()
{
  int i,num,sum=0;
  printf("Enter a number: ");
  scanf("%d",&num);

  for(i = 1; i <  num; i++)
  {
    if(num % i == 0)
    {
      sum += i;
    }
  }
  if(sum == num)
  {
     printf("%d is a perfect number", num);
  }
   else
  {
     printf("%d is not a perfect number", num);
  }
}
```

Output :-

```
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ gcc ass_1001_07.c -o  ass_1001_07
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ ./ass_1001_07
Enter a number: 8
8 is not a perfect numberbscit-15@bscit-15-H610M-K-DDR4:~/jemish$ gcc ass_1001_07.c -o  ass_1001_07
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ ./ass_1001_07
Enter a number: 6
6 is a perfect numberbscit-15@bscit-15-H610M-K-DDR4:~/jemish$
```

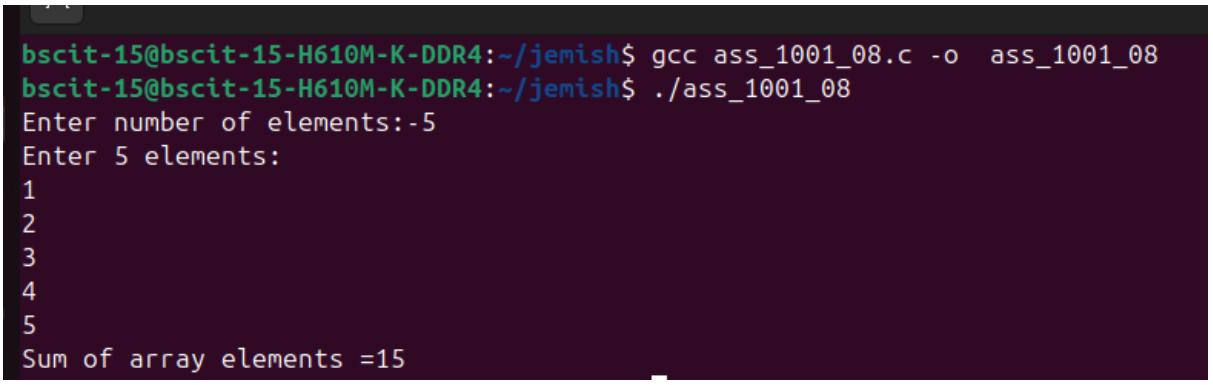
// Ass_1001_Q8: Compute the sum of elements in a 1D array//

```
#include <stdio.h>
void main()
{
   int n,i,arr[100],sum = 0;
   printf("Enter number of elements:-");
   scanf("%d",&n);

   printf("Enter %d elements:\n",n);

   for(i=0;i<n;i++)
   {
      scanf("%d",&arr[i]);
      sum += arr[i];
   }
    printf("Sum of array elements =%d\n", sum);
}
```

Output :-



//Ass_1001_ Q9: Compute the sum of even elements in an array//

```
#include <stdio.h>
void main()
{
   int n,i,a[100],sum=0;
   printf("Enter a arr size:-");
   scanf("%d",&n);
   for(i=1; i<=n; i++)
   {
      printf("Enter a arr[%d]:-",i);
      scanf("%d",&a[i]);
   }
   for(i=1; i<=n; i++)
   {
      if(a[i]%2==0)
      sum=sum+a[i];
   }
   printf("sum of even number:-%d",sum);
}
```

Output :-

```
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ gcc ass_1001_09.c -o  ass_1001_09
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ ./ass_1001_09
Enter a arr size:-4
Enter a arr[1]:-2
Enter a arr[2]:-4
Enter a arr[3]:-6
Enter a arr[4]:-8
sum of even number:-20bscit-15@bscit-15-H610M-K-DDR4:~/jemish$
```

// Ass_1001_Q10: Count vowels in a string//

```
#include <stdio.h>
void main()
{
   char name[100];
   int vowels = 0,i;
   printf("Enter a name:- ");
   fgets(name, sizeof(name), stdin);
   puts(name);

   for (int i = 0; name[i] != '\0'; i++)
   {
      if (name[i] == 'a' || name[i] == 'e' || name[i] == 'i' || name[i] == 'o' || name[i] == 'u'||
name[i] == 'A'|| name[i] == 'E'|| name[i] == 'I'|| name[i] == 'O'|| name[i] == 'U')
      {
         vowels++;
      }
   }
   printf("there are %d vowels",vowels);
}
```

Output :-

```
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ gcc ass_1001_10.c -o  ass_1001_10
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ ./ass_1001_10
Enter a name:- jemish
jemish

there are 2 vowelsbscit-15@bscit-15-H610M-K-DDR4:~/jemish$
```

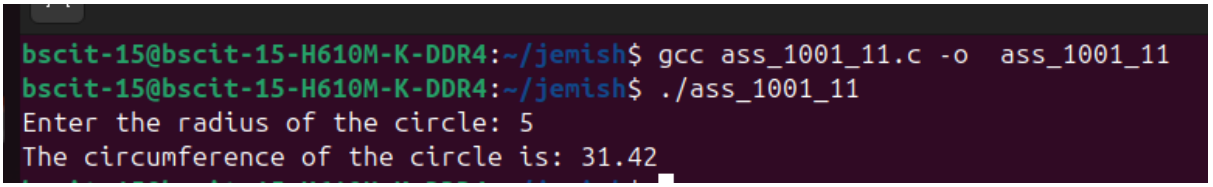
// Ass_1001_Q11: Calculate the circumference of a circle//

```
#include <stdio.h>
void main()
 {
   float radius,circumference,PI = 3.14159;
   printf("Enter the radius of the circle: ");
   scanf("%f", &radius);

   circumference = 2 * PI * radius;

   printf("The circumference of the circle is: %.2f\n", circumference);
}
```

Output :-



// Ass_1001_Q12: Reverse words in a string//

```
#include <stdio.h>
void main()
{
 int i,len=0;
 char name[100];
 printf("enter your name:-");
 fgets(name, sizeof(name),stdin);

 for(i=0;name[i]!='\0';i++)
 {
  len ++;
 }
 printf("length of the string is %d",len-1);

 for(i=len;i>=0;i--)
 {
  printf("%c",name[i]);
 }
}
```

Output :-

```
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ gcc ass_1001_12.c -o  ass_1001_12
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ ./ass_1001_12
enter your name:-jemish
length of the string is 6
hsimejbscit-15@bscit-15-H610M-K-DDR4:~/jemish$
```

// Ass_1001_Q13: Subtract two matrices//

```
#include <stdio.h>
void main()
 {
   int rows, cols,a[100][100],b[100][100],ans[100][100],i,j;
   printf("Enter the number of rows:- ");
   scanf("%d", &rows);
   printf("Enter the number of columns:- ");
   scanf("%d", &cols);

   printf("\nEnter elements for the first matrix:-\n");
   for ( i = 0; i < rows; i++)
   {
      for ( j = 0; j < cols; j++)
      {
         printf("Enter value of a[%d][%d]:- ", i, j);
         scanf("%d", &a[i][j]);
      }
   }
   printf("\nEnter elements for the second matrix:-\n");
   for ( i = 0; i < rows; i++)
   {
      for ( j = 0; j < cols; j++)
       {
         printf("Enter value of b[%d][%d]:- ", i, j);
         scanf("%d", &b[i][j]);
      }
   }
   for ( i = 0; i < rows; i++)
   {
      for ( j = 0; j < cols; j++)
      {
         ans[i][j] = a[i][j] - b[i][j];
      }
   }

   printf("\na matrix :\n");
   for ( i = 0; i < rows; i++)
    {
      for ( j = 0; j < cols; j++)
      {
         printf("%d\t", a[i][j]);
```

```
        }
        printf("\n");
    }

    printf("\nb matrix :\n");
    for ( i = 0; i < rows; i++)
     {
        for ( j = 0; j < cols; j++)
        {
            printf("%d\t", b[i][j]);
        }
        printf("\n");
    }
    printf("\nans matrix:\n");
    for ( i = 0; i < rows; i++)
     {
        for ( j = 0; j < cols; j++)
        {
            printf("%d\t", ans[i][j]);
        }
        printf("\n");
    }
}
```

Output :

```
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ gcc ass_1001_13.c -o  ass_1001_13
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ ./ass_1001_13
Enter the number of rows:- 2
Enter the number of columns:- 2

Enter elements for the first matrix:-
Enter value of a[0][0]:- 1
Enter value of a[0][1]:- 2
Enter value of a[1][0]:- 3
Enter value of a[1][1]:- 4

Enter elements for the second matrix:-
Enter value of b[0][0]:- 5
Enter value of b[0][1]:- 6
Enter value of b[1][0]:- 7
Enter value of b[1][1]:- 8

a matrix :
1       2
3       4

b matrix :
5       6
7       8

ans matrix:
-4      -4
-4      -4
```

// Ass_1001_Q14: Print the first N natural numbers in reverse//

```
#include<stdio.h>
void main()
{
  int num, i;
  printf ("Enter the number:-");
  scanf("%d",&num);

  for(i=num;i>=0;i--)
  {
     printf("\n%d",i);
  }
}
```

Output :-

```
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ gcc ass_1001_14.c -o  ass_1001_14
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ ./ass_1001_14
Enter the number:-5

5
4
3
2
1
0bscit-15@bscit-15-H610M-K-DDR4:~/jemish$
```

// Ass_1001_Q15: Find the second largest element in an array//

```
#include<stdio.h>
void main()
{
 int arr[100],i,n,temp,j;
 printf("\n How many elements you want:- ");
 scanf("%d",&n);

 for(i=0;i<n;i++)
 {
   printf("Entre arr[%d]:- ",i+1);
   scanf("%d",&arr[i]);
 }
 for(i=0;i<n-1;i++)
 {
   for(j=i+1;j<n;j++)
   {
      if(arr[i]<arr[j])
      {
         temp=arr[i];
         arr[i]=arr[j];
         arr[j]=temp;
      }
   }
 }
 printf("\n second largest element is %d",arr[1]);
 }
```

Output :-

```
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ gcc ass_1001_15.c -o  ass_1001_15
bscit-15@bscit-15-H610M-K-DDR4:~/jemish$ ./ass_1001_15

 How many elements you want:- 4
Entre arr[1]:- 1
Entre arr[2]:- 2
Entre arr[3]:- 3
Entre arr[4]:- 4

 second largest element is 3bscit-15@bscit-15-H610M-K-DDR4:~/jemish$
```