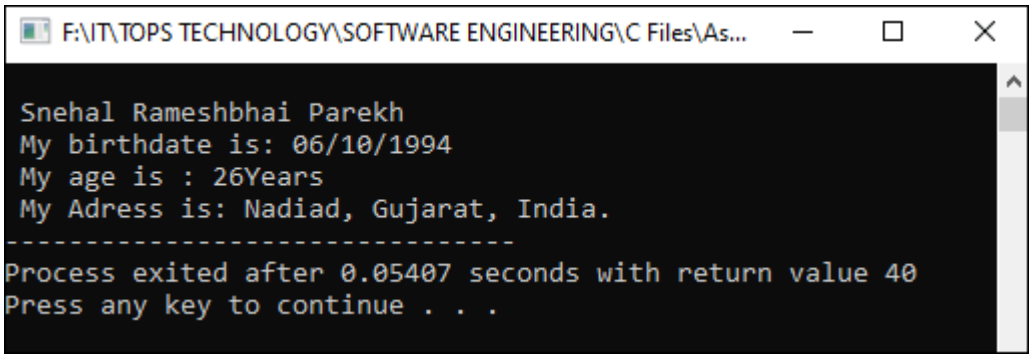
B1.Display This Information using printf

- Your Name
- Your Birth date
- Your Age
- Your Address

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
 {
printf("\n Snehal Rameshbhai Parekh");
printf("\n My birthdate is: 06/10/1994");
printf("\n My age is : 26Years");
printf("\n My Adress is: Nadiad, Gujarat, India. ");
}
```

→**Output**



B2.Write a program to make addition, Subtraction, Multiplication and Division of Two Numbers.

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
float a,b,c,d;
printf("Enter value of a ");
scanf("%f",&a);
printf("Enter value of b ");
scanf("%f",&b);
c = a + b;
printf("the Addition is %.0f\n", c);
d = a - b;
printf("the Substraction is %.0f\n", d);
d = a * b;
printf("the Multiplication is %.0f\n", d);
c = a / b;
printf("the Dvision is %f", c);             }
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\B2.exe
Enter value of a 5
Enter value of b 4
the Addition is 9
the Substraction is 1
the Multiplication is 20
the Dvision is 1.250000
--------------------------------
Process exited after 1.627 seconds with return value 23
Press any key to continue . . .
```

B3. Write a program to make a square and cube of number.

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int a=5,b,c;
      b = a*a;
      printf("Square of number a is :%d\n", b);
      c = a*a*a; //or c =b*a;
      printf("cube of number a is :%d\n", c);
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\B3.exe
Square of number a is :25
cube of number a is :125

--------------------------------
Process exited after 0.04957 seconds with return value 25
Press any key to continue . . .
```

B4. Write a program to find the Area of Circle

→**Input**

```
//formula = pie*r*r
#include<stdio.h>
#include<conio.h>
void main()
{
      float area,r,pie;
      pie = 3.14159;
      printf("Enter radius of circle:\n");
      scanf("%f",&r);
```

```
      area = pie*r*r;
      printf("Area of Circle is:%f",area);
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\B4.exe
Enter radius of circle:
4
Area of Circle is:50.265442
--------------------------------
Process exited after 0.9556 seconds with return value 27
Press any key to continue . . .
```

B5. Write a program to find the Area of Triangle

→**Input**

```
//formula = (base*height)/2
#include<stdio.h>
#include<conio.h>
void main()
{
      float base,height,area;
      printf("\nEnter Base value of triangle:");
      scanf("%f",&base);
      printf("\nEnter Height value of triangle:");
      scanf("%f",&height);
      area = (base*height)/2;
      printf("\narea of triangle is:%f",area);
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\B5.exe

Enter Base value of triangle:5

Enter Height value of triangle:5

area of triangle is:12.500000
--------------------------------
Process exited after 3.687 seconds with return value 30
Press any key to continue . . .
```

B6. Write a program to find the simple Interest.

→**Input**

```
formula = (P*R*T)/100
 where P= Principle amount R = Rate of Interest , T = Total years */
```

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int P,R,T,interest;
      printf("Enter total amount:");
      scanf("%d",&P);
      printf("Enter Rate of interest:");
      scanf("%d",&R);
      printf("Enter total year:");
      scanf("%d",&T);
      interest = (P*R*T)/100;
      printf("Total amount of interest is: %d",interest);
      }
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\B6.exe
Enter total amount:10000
Enter Rate of interest:5
Enter total year:2
Total amount of interest is: 1000
--------------------------------
Process exited after 9.222 seconds with return value 33
Press any key to continue . . .
```

B7. Write a program to convert temperature from degree centigrade to Fahrenheit.

→**Input**

```
//formula = (celsius*1.8)+32
#include<stdio.h>
#include<conio.h>
void main()
{
      int celsius;
      float Fahrenheit;
      printf("Enter temprature in celsius:");
      scanf("%d",&celsius);
      Fahrenheit = (celsius*1.8)+32;
      printf("\nTemprature in Fahrenheit:%f",Fahrenheit);
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\B7.exe
Enter temprature in celsius:50

Temprature in Fahrenheit:122.000000
--------------------------------
Process exited after 2.578 seconds with return value 36
Press any key to continue . . .
```

B8.Write a program to calculate sum of 5 subjects & find the percentage. Subject marks entered by user.

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int maths, sci, eng, guj, comp,total;
      float perc;
      printf("Enter five Subjects marks out of hundred:");
      scanf("%d%d%d%d%d",&maths,&sci,&eng,&guj,&comp);
      printf("\nMaths=%d Scieence=%d English=%d Gujrati=%d
Computer=%d",maths,sci,eng,guj,comp);

      total = 500;
      perc = ((maths+sci+eng+guj+comp)*100)/total;
      printf("\nObtained Percentage of Student is:%.2f",perc);

}
```

→**Output**

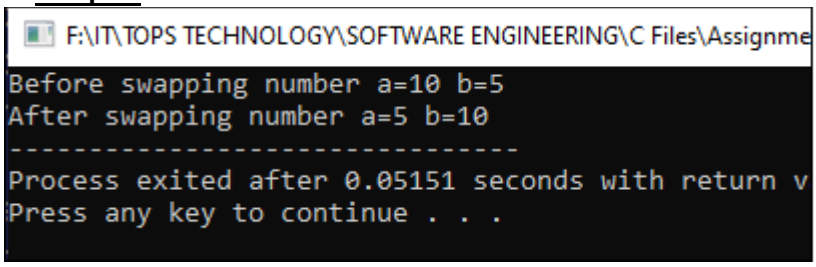
```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\B8.exe
Enter five Subjects marks out of hundred:78
78
98
56
12

Maths=78 Scieence=78 English=98 Gujrati=56 Computer=12
Obtained Percentage of Student is:64.00
--------------------------------
Process exited after 9.386 seconds with return value 40
Press any key to continue . . .
```

B9.Write a Program to show swap of two No's without using third variable.

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int a=10, b=5;
      printf("Before swapping number a=%d b=%d",a,b);
      a=a+b;      //a=15
      b=a-b;      //b=10
      a=a-b;      //a=5

      printf("\nAfter swapping number a=%d b=%d",a,b);
}
```

→**Output**

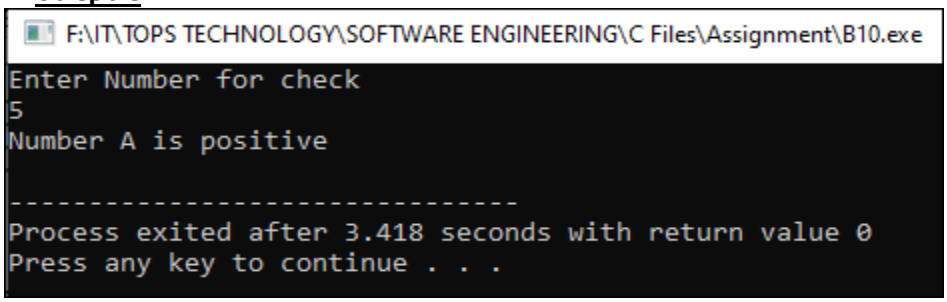


B10.Write a Program to check the given number is Positive, Negative.

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int a;
      printf("Enter Number for check\n");
      scanf("%d",&a);
      if(a>0)
      {
            printf("Number A is positive\n");
      }
            else if(a<0)
            {
            printf("Number A is Negative");
            }
            else
            {
            printf("You entered Zero");
            }
}
```

→**Output**



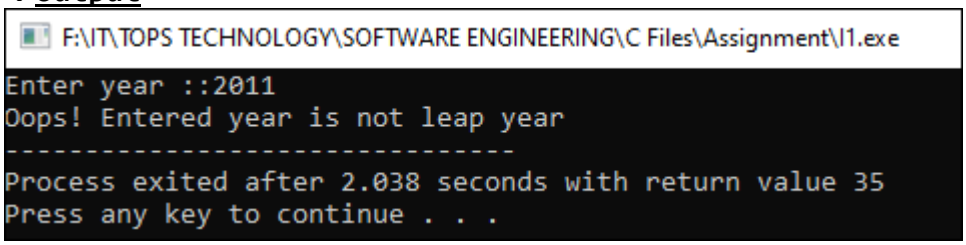
I1.Write a Program to check the given year is leap year or not.

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int year;
      printf("Enter year ::");
```

```
	scanf("%d",&year);
	if(year%4==0 && year%100==0 && year%400==0)
	{
		printf("Yeah! Entered year is leap year");
	}
	else if(year%4==0 && year%100!=0)
	{
		printf("Yeah! Enter yeared is leap year");
	}
	else if(year%4==0 && year%100==0 && year%400!=0)
	{
		printf("Oops! Entered year is not leap year");
	}
	else if(year%4!=0)
		{
		printf("Oops! Entered year is not leap year");
	}
}
```

→**Output**



I2.Write a Program to check the given number is prime or not prime.

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int a;
	printf("<-- Enter a Number for checking -->\n");
	scanf("%d",&a);
	if(a>2 && a%2 == 0)
	{
		printf("This number is Prime number");
	}
	else
	{
		printf("This number is not Prime number");
	}
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\I2.exe
<-- Enter a Number for checking -->
5
This number is not Prime number
--------------------------------
Process exited after 2.458 seconds with return value 31
Press any key to continue . . .
```

I3.Write a program to find the Max number from the given three number using Nested If

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int a,b,c;
	printf("Enter three numbers\n");
	scanf("%d%d%d",&a,&b,&c);
	printf("First number a:%d, Second Number:%d, Third Number:%d
\n",a,b,c);
	if(a<b)
	{
		if(c<b)
		{
			printf("Second number b is max number : %d",b);
		}
		else
		printf("Third number c is max number : %d",c);
	}
	else if(a<c)
	{
		printf("Third number c is max number : %d",c);
	}
	else
	{
		printf("First number a is max number : %d",a);
	}
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\I3.exe
Enter three numbers
44
52
11
First number a:44, Second Number:52, Third Number:11
Second number b is max number : 52
--------------------------------
Process exited after 3.687 seconds with return value 34
Press any key to continue . . .
```

I4.Write a program to find the Max number from the given three number using Ternary Operator

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int a,b,c,max;
	printf("Enter First numbers a:");
	scanf("%d",&a);
	printf("Enter Second numbers b:");
	scanf("%d",&b);
	printf("Enter Third numbers c:");
	scanf("%d",&c);
	max = (a>b)?printf("\nA is max") : (b>c)?printf("\nB is max")
: printf("\nC is max");
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\I4.exe
Enter First numbers a:5
Enter Second numbers b:7
Enter Third numbers c:8

C is max
--------------------------------
Process exited after 4.38 seconds with return value 9
Press any key to continue . . .
```

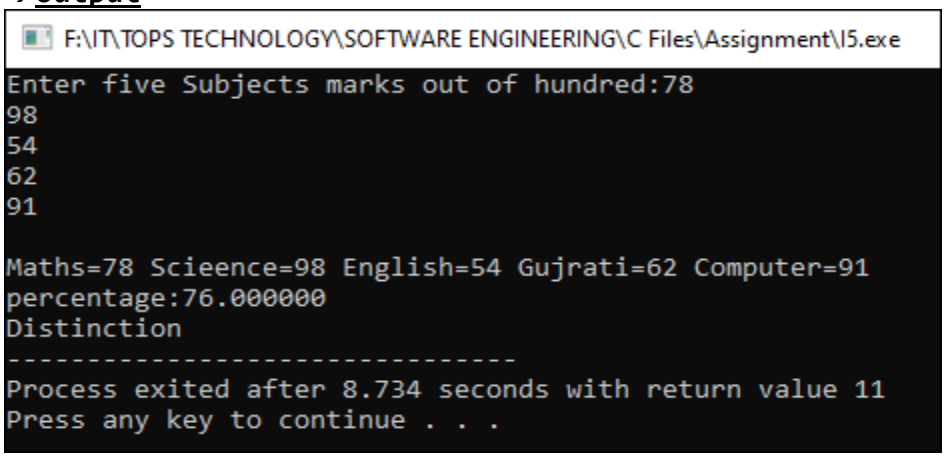
I5.Write a program user enter the 5 subjects mark. You have to make a total and find the percentage.
Percentage > 75 you have to print “Distinction”
Percentage > 60 and percentage <= 75 you have to print “First class”
Percentage >50 and percentage <= 60 you have to print “Second class”
Percentage > 35 and percentage <= 50 you have to print “Pass class”
Otherwise print “Fail”

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int maths, sci, eng, guj, comp,total;
	float perc;
	printf("Enter five Subjects marks out of hundred:");
	scanf("%d%d%d%d%d",&maths,&sci,&eng,&guj,&comp);
```

```
      printf("\nMaths=%d Scieence=%d English=%d Gujrati=%d
Computer=%d\n",maths,sci,eng,guj,comp);

      total = 500;
      perc = ((maths+sci+eng+guj+comp)*100)/total;
      printf("percentage:%f\n",perc);
      if(perc>75)
      {
            printf("Distinction");
      }
      else if(60<perc && perc<=75)
      {
            printf("First Class");
      }
      else if(50<perc && perc<=60)
      {
            printf("Second Class");
      }
      else if(35<perc && perc<=50)
      {
            printf("Pass Class");
      }
      else
      {
            printf("fail");
      }           }
```

→**Output**



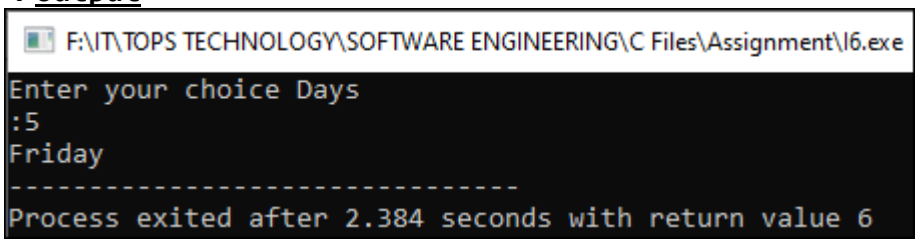
I6. Write Program use switch statement. Display Monday to Sunday

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int day;
      printf("Enter your choice Days\n:");
      scanf("%d",&day);
```

```
	switch(day)
	{
	case 1:
		printf("Monday");
		break;

	case 2:
		printf("Tuesday");
		break;

	case 3:
		printf("Wednesday");
		break;

	case 4:
		printf("Thursday");
		break;

	case 5:
		printf("Friday");
		break;

	case 6:
		printf("Saturday");
		break;

	case 7:
		printf("Sunday");
		break;

	default:
		printf("Day Invalid");
	}
}
```

→**Output**



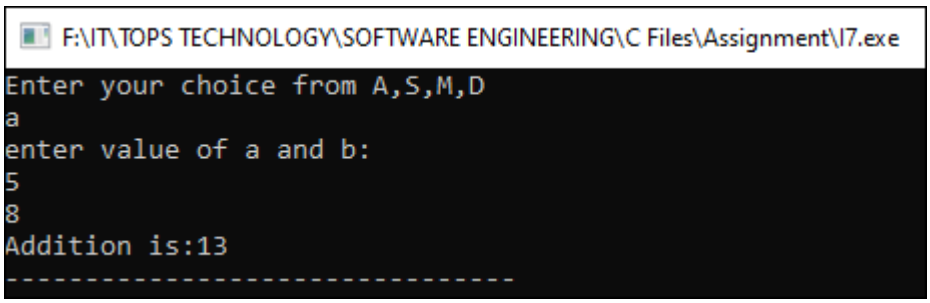
I7.Write a Program of Addition, Subtraction ,Multiplication and Division using Switch case.(Must Be Menu Driven)

→**Input**

```
#include<stdio.h>
#include<conio.h>
```

```
void main()
{
	int a,b,c;
	char operation;
	printf("Enter your choice from A,S,M,D\n");
	scanf("%c",&operation);
	switch((char)operation)
	{
	case 'a':
		printf("enter value of a and b:");
		scanf("%d%d",&a,&b);
		c = a + b;
		printf("Addition is:%d",c);
		break;
	case 's':
		printf("enter value of a and b:");
		scanf("%d%d",&a,&b);
		c = a - b;
		printf("Subtraction is:%d",c);
		break;
	case 'd':
		printf("enter value of a and b:");
		scanf("%d%d",&a,&b);
		c = a / b;
		printf("Division is:%d",c);
		break;
	case 'm':
		printf("enter value of a and b:");
		scanf("%d%d",&a,&b);
		c = a * b;
		printf("Multiplication is:%d",c);
		break;
	default:
		printf("this calculation is not supported");
	}
}
```

→**Output**

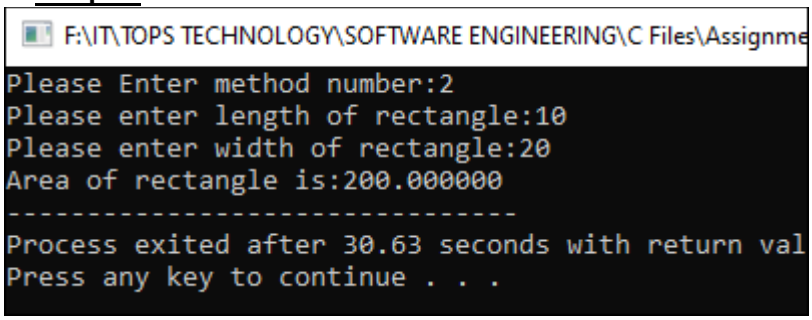


I8.Write a program of to find out the Area of Triangle, Rectangle and Circle using If Condition.(Must Be Menu Driven)

→Input

```
/* area of triangle = (hieght*base)/2
area of rectangle = length*width
area of circle = pie*r*r    */
#include<stdio.h>
#include<conio.h>
void main()
{
      int a;
      printf("Please Enter method number:");
      scanf("%d",&a);
      if(a == 1)
      {
      float base,height,area;
      printf("\nEnter Base value of triangle:");
      scanf("%f",&base);
      printf("\nEnter Height value of triangle:");
      scanf("%f",&height);
      area = (base*height)/2;
      printf("\narea of triangle is:%f",area);
      }
      else if(a == 3)
      {
      float area,r,pie;
      pie = 3.14159;
      printf("Enter radius of circle:\n");
      scanf("%f",&r);
      area = pie*r*r;
      printf("Area of Circle is:%f",area);
      }
      else if(a == 2)
      {
      float length, width, area;
      printf("Please enter length of rectangle:");
      scanf("%f",&length);
      printf("Please enter width of rectangle:");
      scanf("%f",&width);
      area = length * width;
      printf("Area of rectangle is:%f",area);
      }
      else
      {
            printf("please select supported method for our program");
      }
}
```

→**Output**



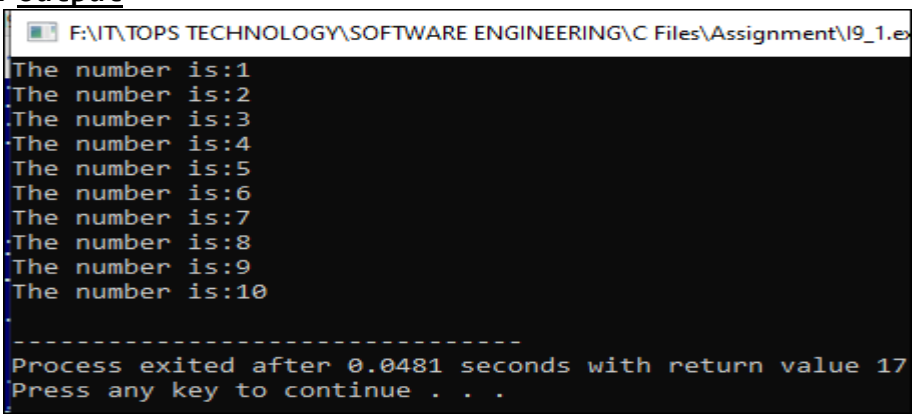
I9.Looping Programs

• Write a program to print the 1 to 10 using for loop.

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i;
	for(i=1;i<=10;i++)
	{
		printf("The number is:%d\n",i);
	}
}
```

→**Output**

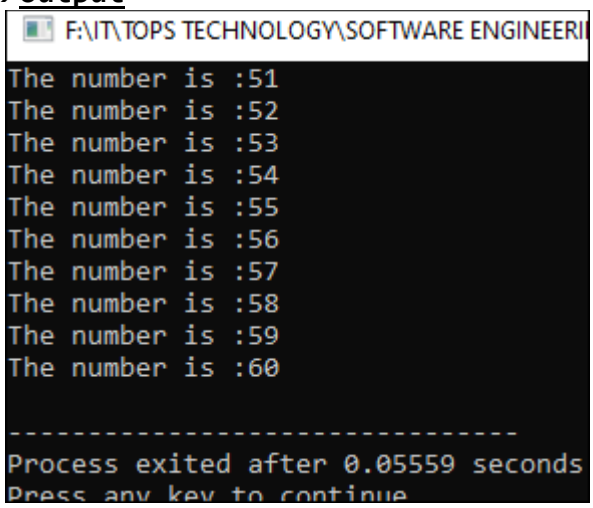


• Write a Program to print the 51 to 60 using while loop

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i=51;
	while(i<=60)
	{
		printf("The number is :%d\n",i);
		i++;
	}
}
```

→**Output**

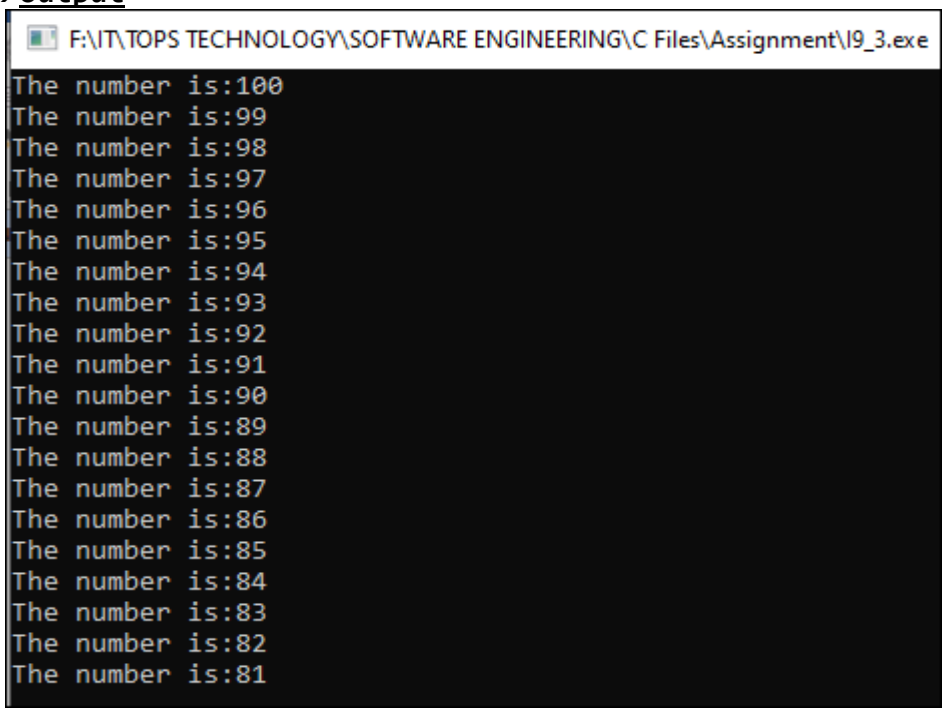


- write a program to print the 100 to 81 using do while loop

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i=100;
	do
	{
		printf("The number is:%d\n",i);
		i--;
	}
	while(i>80);
}
```

→**Output**

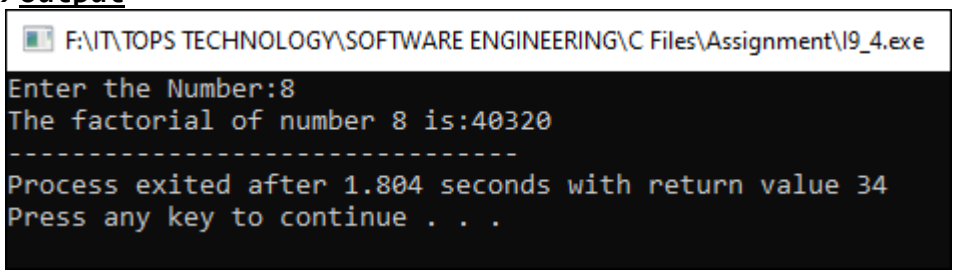


d .write a program you have to find the factorial of given number.

→**Input**

```
//factorial example of 5 = 1*2*3*4*5
#include<stdio.h>
#include<conio.h>
void main()
{
      int i,fact,number;
      fact=1;
      printf("Enter the Number:");
      scanf("%d",&number);
      for(i=1;i<=number;i++)
      {
            fact = fact*i;
      }
      printf("The factorial of number %d is:%d", number,fact);
}
```

→**Output**



• Write a program you have to print the Fibonacci series up to user given number

→**Input**

```
/*example of fibonacci series of 20 = 0,1,2,3,5,8,13
f3 = f1+f2
f4 = f2+f3
. .. . .. .. f111 = f109 +f110
logic change the value f1 = f2 & f2 = f3 */
#include<stdio.h>
#include<conio.h>
void main()
{
      int i=0,j=0,fibo,number;
      printf("Please enter the number for find series:");
      scanf("%d",&number);
      printf("fibonacci series: ");
      for(i=0; i<=number ;i++)
      {
            printf(" %d",i);
            fibo = i+j;
            i=j;
```

```
            j=fibo;
}
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\I9_5.exe
Please enter the number for find series:8
fibonacci series:  0 1 1 2 3 5 8
--------------------------------
Process exited after 1.784 seconds with return value 8
Press any key to continue . . .
```

• Write a program you have to print the table of given number.

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int i,tab,num;
      printf("Enter number for table:");
      scanf("%d",&num);
      printf("\nTable of %d is:",num);
      for(i=1;i<=10;i++)
      {
            tab = i*num;
            printf("\n %d*%d=%d", i,num,tab);
      }
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\I9_7.exe
Enter number for table:5

Table of 5 is:
 1*5=5
 2*5=10
 3*5=15
 4*5=20
 5*5=25
 6*5=30
 7*5=35
 8*5=40
 9*5=45
 10*5=50
--------------------------------
Process exited after 0.9952 seconds with return value 9
```

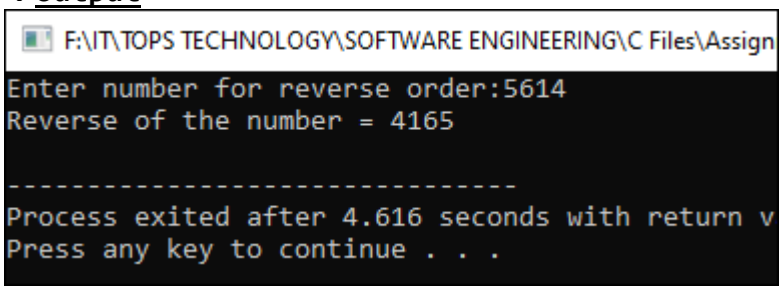
• Write a program to print the number in reverse order.

→**Input**

```
#include<stdio.h>
#include<conio.h>
```

```
void main()
{
      int n,rev=0;
      printf("Enter number for reverse order:");
      scanf("%d",&n);
      while (n != 0)
      {
    rev = rev * 10;
    rev = rev + n%10;
    n = n/10;
  }
  printf("Reverse of the number = %d\n", rev);
}
```

→**Output**



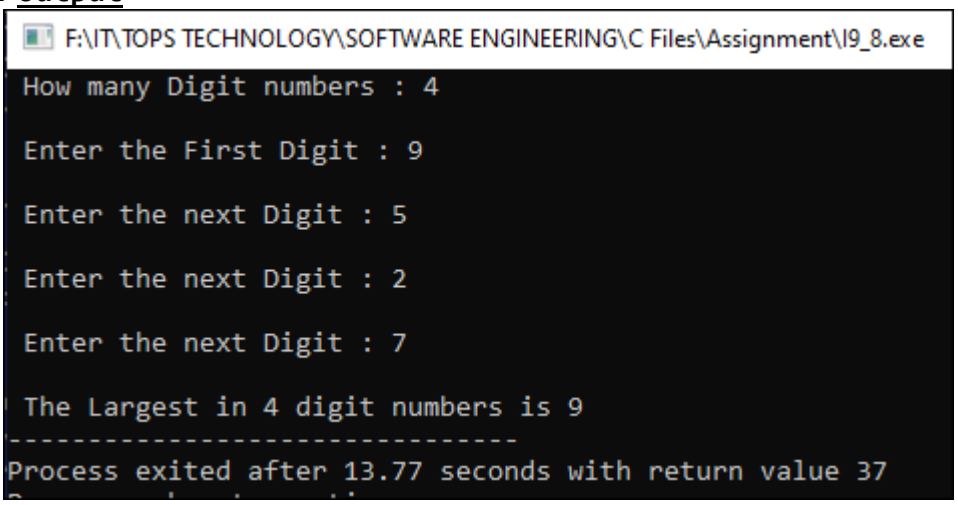
h .Write a program to find out the max from given number (E.g. No: -1562 Max number is 6)

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
      {
    int n, s1, s2, z;
    printf(" How many Digit numbers : ");
    scanf("%d", &n);
    z=n;
    if(n>0)
           {
           printf("\n Enter the First Digit : ");
            scanf("%d", &s1);
            n--;
            if(n>0)
                {
            for(;n>=1; n--)
                {
            printf("\n Enter the next Digit : ");
            scanf("%d", &s2);
            if(s1<s2)
            s1=s2;
            }
        }
```

```
    }
    printf("\n The Largest in %d digit numbers is %d", z, s1);
}
```

→**Output**

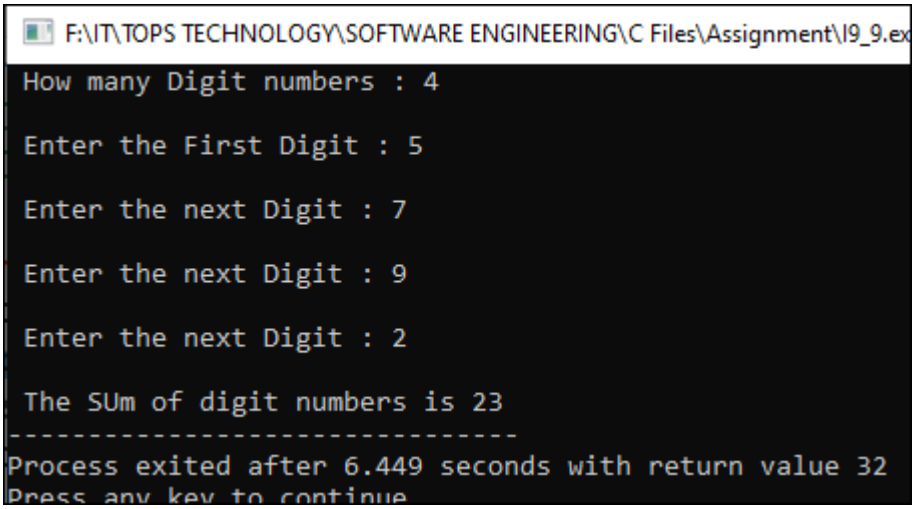


i. Write a program make a summation of given number (E.g. 1523 ans :-11)

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
     {
    int n, s1, s2,z;
    printf(" How many Digit numbers : ");
    scanf("%d", &n);
    if(n>0)
           {
           printf("\n Enter the First Digit : ");
            scanf("%d", &s1);
            n--;
            if(n>0)
                {
            for(;n>=1; n--)
                {
            printf("\n Enter the next Digit : ");
            scanf("%d", &s2);
            s1 = s1+s2;

            }
        }
    }
    printf("\n The SUm of digit numbers is %d", s1);
}
```

→**Output**

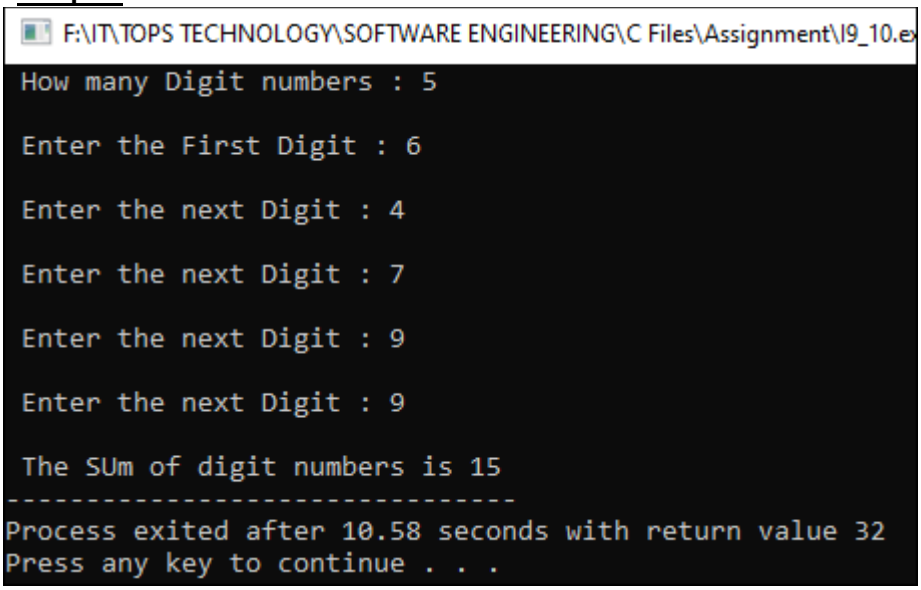


j. Write a program you have to make a summation of first and last Digit. (E.g. 1234 ans:-5)

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
      {
    int n, s1, s2,z;
    printf(" How many Digit numbers : ");
    scanf("%d", &n);
    if(n>0)
           {
           printf("\n Enter the First Digit : ");
            scanf("%d", &s1);
            n--;
            if(n>0)
                {
            for(;n>=1; n--)
                {
            printf("\n Enter the next Digit : ");
            scanf("%d", &s2);

            }
            s1 = s1+s2;
        }
    }
    printf("\n The SUm of digit numbers is %d", s1);
}
```

→**Output**



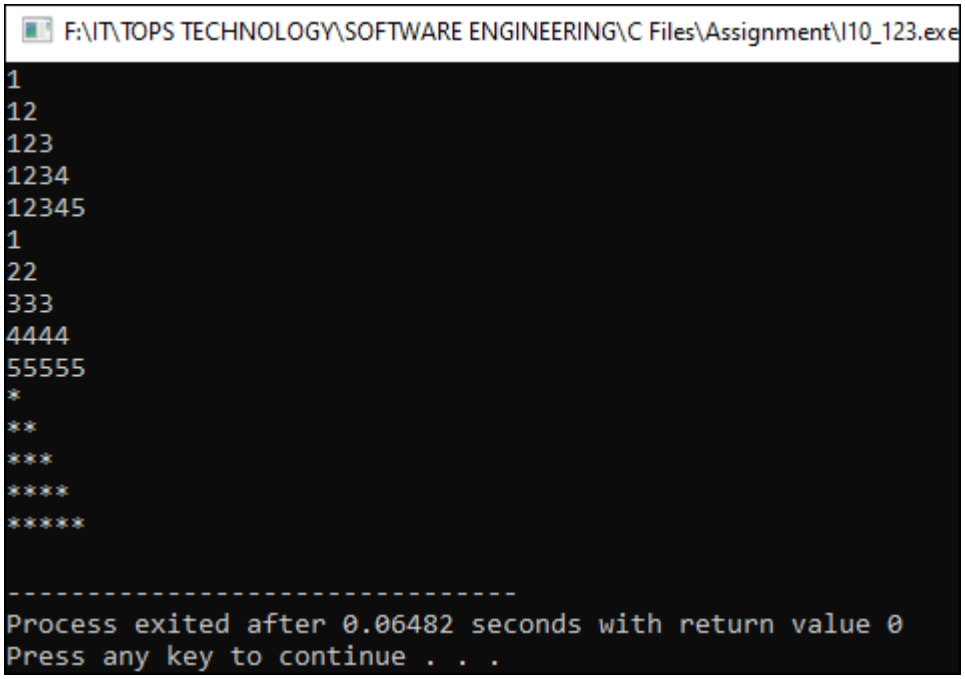
I.10. Pyramid Programs (1 to 16).

1.2.3. PROGRAM

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i,j,k,m;
	for(i=1;i<=5;i++)
	{
		for(j=1;j<i;j++)
		{
			printf("%d",j);
		}
		printf("%d\n",i);
	}

	for(i=1;i<=5;i++)
	{
		for(j=1;j<i;j++)
		{
			printf("%d",i);
		}
		printf("%d\n",i);
	}

	for(k=1;k<=5;k++)
	{
		for(m=1;m<k;m++)
		{
```

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

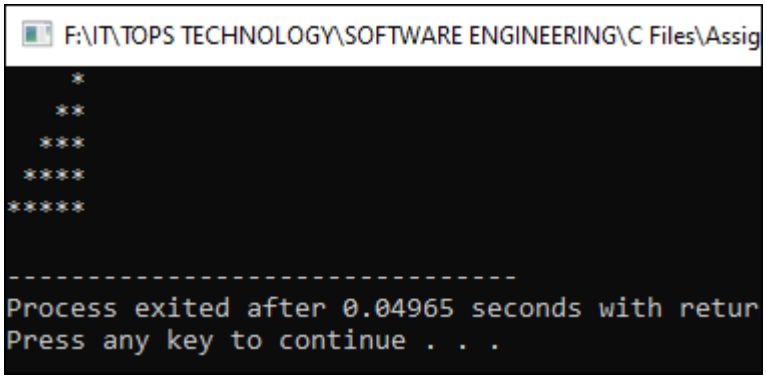
OUTPUT



4. PROGRAM

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int i,j,k,m=0;
for(i=1;i<=5;i++)
      {
      for(j=5;j>i;j--)
      printf(" ");

      for(k=1;k<=m;k++)
      printf("*");

      printf("*\n");
      m++;
      }
 }
```

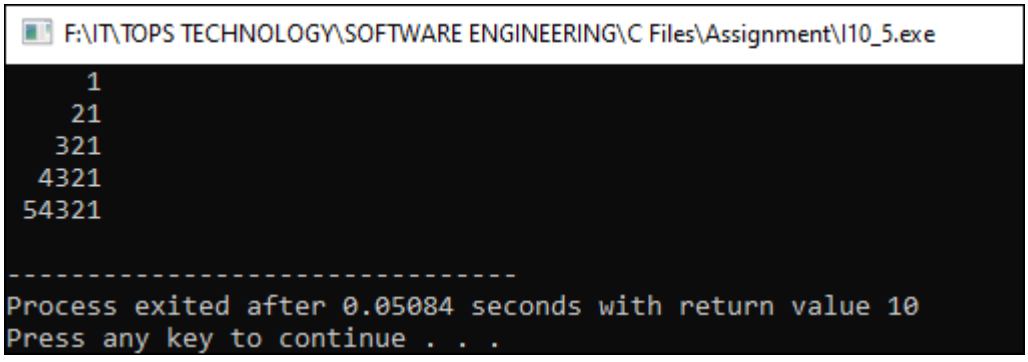
OUTPUT



5. PROGRAM

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int i,j,k;
      for(i=1;i<=5;i++)
      {
            for(k=5;k>=i;k--)
            printf(" ");
            for(j=1;j<=i;j++)
            printf("%d",i-j+1);
      printf("\n");
      }
}
```

OUTPUT



6. PROGRAM

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int i,j,k,m=1;
for(i=1;i<=5;i++)
{
      for(j=5;j>m;j--)
```

```
	{
		printf(" ");
	}
	m++;
	for(k=1;k<i;k++)
	{
		printf("%d",i);
	}
	printf("%d\n",i);
}
}
```

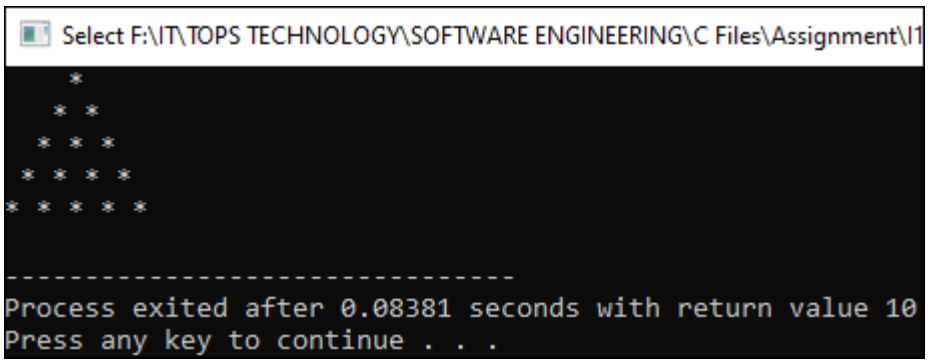
OUTPUT

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\I10_6.exe
    1
   22
  333
 4444
55555

--------------------------------
Process exited after 0.05019 seconds with return value 2
Press any key to continue . . .
```

7. PROGRAM

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i,j,k,m;
	m=1;
for(i=1;i<=5;i++)
{
	for(j=5;j>m;j--)
	{
		printf(" ");
	}
	m++;
	for(k=1;k<=i;k++)
	{
	printf("* ");
	}
	printf("\n");
	}
}
```

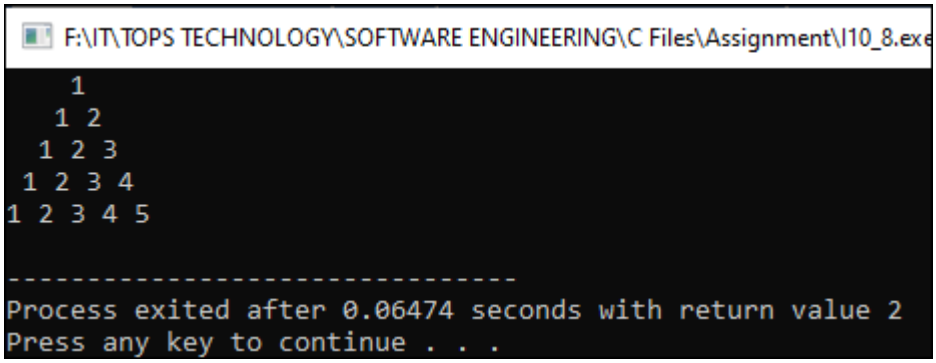
OUTPUT



8. PROGRAM

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int i,j,k,m;
      m=1;
for(i=1;i<=5;i++)
{
      for(j=5;j>m;j--)
      {
            printf(" ");
      }
      m++;
      for(k=1;k<i;k++)
      {
            printf("%d",k);
            printf(" ");
      }
      printf("%d\n",i);
      }
}
```

OUTPUT

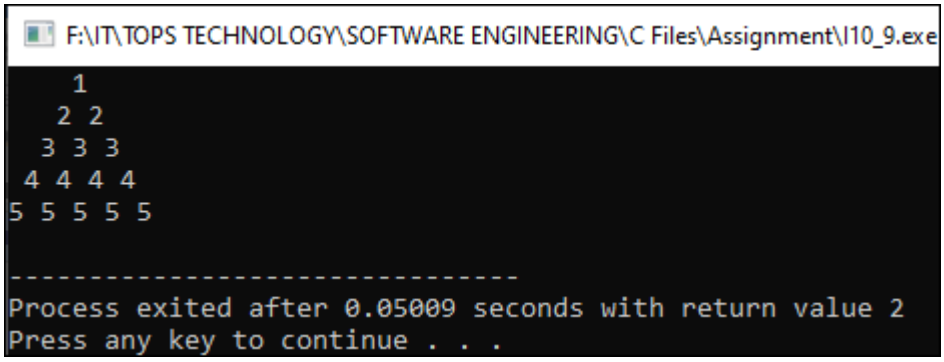


9. PROGRAM

```
#include<stdio.h>
```

```
#include<conio.h>
void main()
{
	int i,j,k,m;
	m=1;
for(i=1;i<=5;i++)
{
	for(j=5;j>m;j--)
	{
		printf(" ");
	}
	m++;
	for(k=1;k<i;k++)
	{
		printf("%d ",i);
	}
	printf("%d\n",i);
	}
}
```

OUTPUT

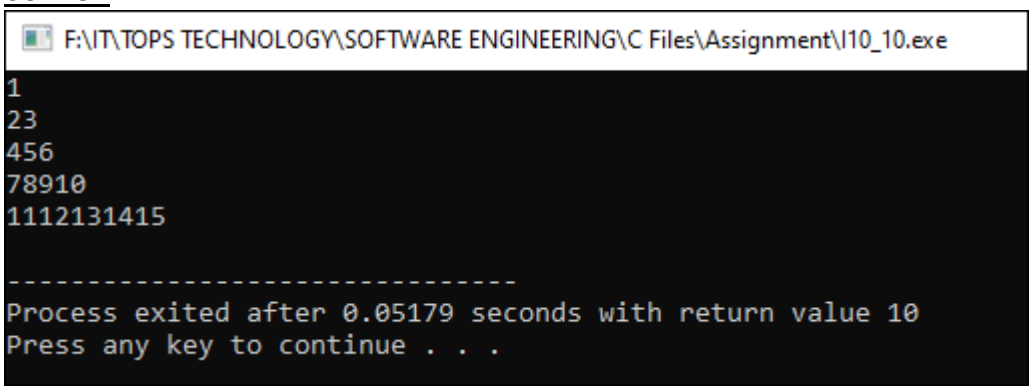


10. PROGRAM

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i,j,k=1;
	for(i=1;i<=5;i++)
	{
		for(j=1;j<=i;j++)
		{
			printf("%d",k);
			k++;
		}
		printf("\n");
	}
```

```
}
```

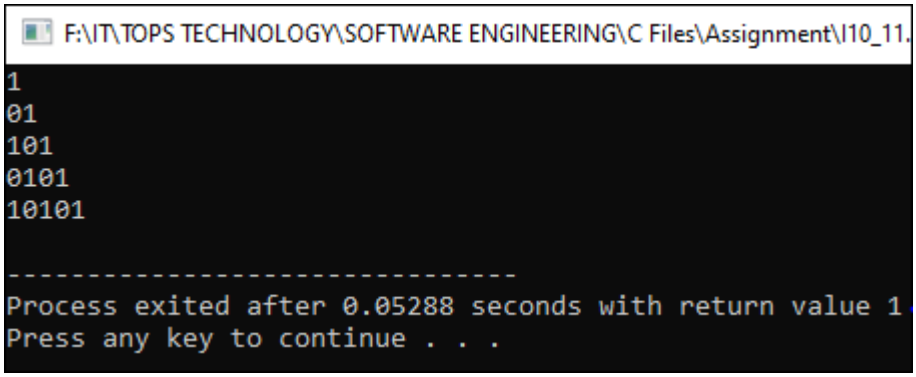
OUTPUT



11. PROGRAM

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int i,j,k=1;
      for(i=1;i<=5;i++)
      {
            for(j=1;j<=i;j++)
            {
                  printf("%d",k%2);
                  k++;
            }
            printf("\n");
      if(i%2==0)
            k = 1;
       else
            k = 0;
       }
}
```

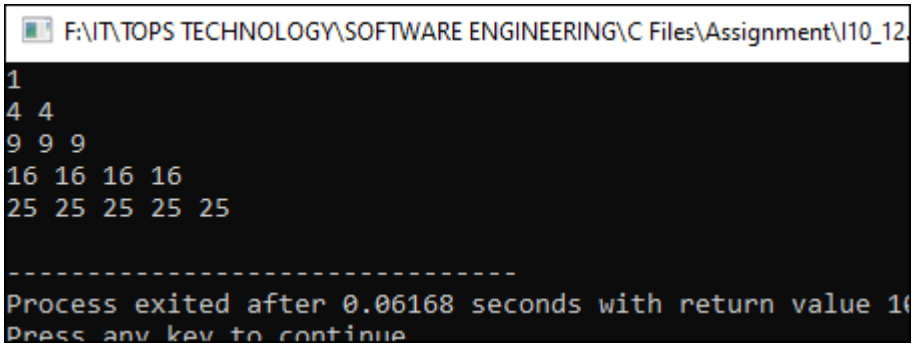
OUTPUT



12. PROGRAM

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int i,j,k,m;
      for(i=1;i<=5;i++)
      {

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

OUTPUT

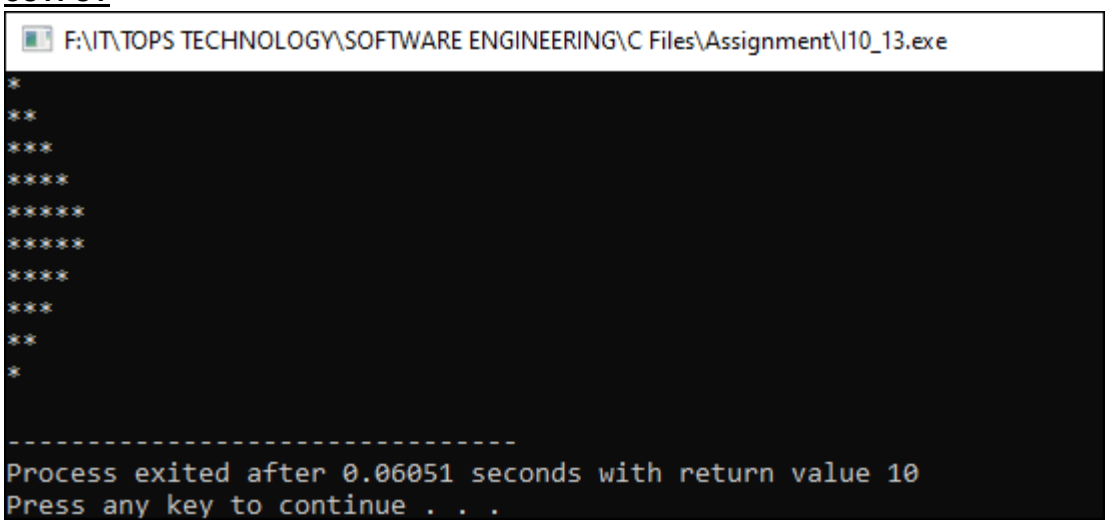


13. PROGRAM

```
#include<conio.h>
#include<stdio.h>
void main()
{
      int i,j,k;
      for(i=1;i<=5;i++)
      {
            for(j=1;j<=i;j++)
            {
                  printf("*");
            }
            printf("\n");
      }
      for(i=1;i<=5;i++)
      {
            for(k=5;k>=i;k--)
            {
                  printf("*");
```

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

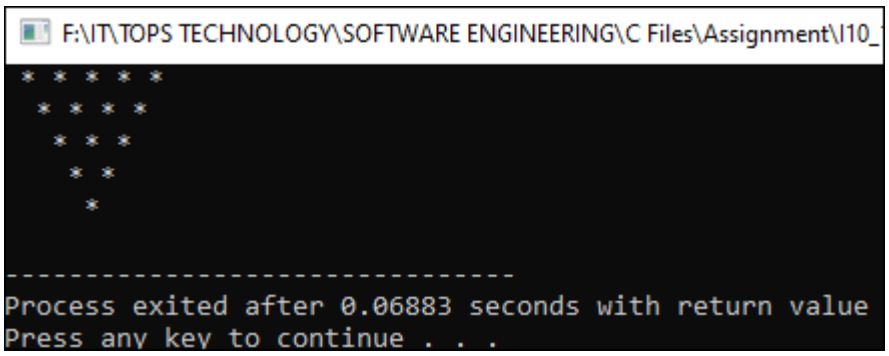
OUTPUT



14. PROGRAM

```
#include<conio.h>
#include<stdio.h>
void main()
{
      int i,j,k,m;
      m=1;
for(i=1;i<=5;i++)
{
      for(j=1;j<=m;j++)
      {
            printf(" ");
      }
      m++;
      for(k=5;k>=i;k--)
      {
      printf("* ");
      }
      printf("\n");
      }

}
```

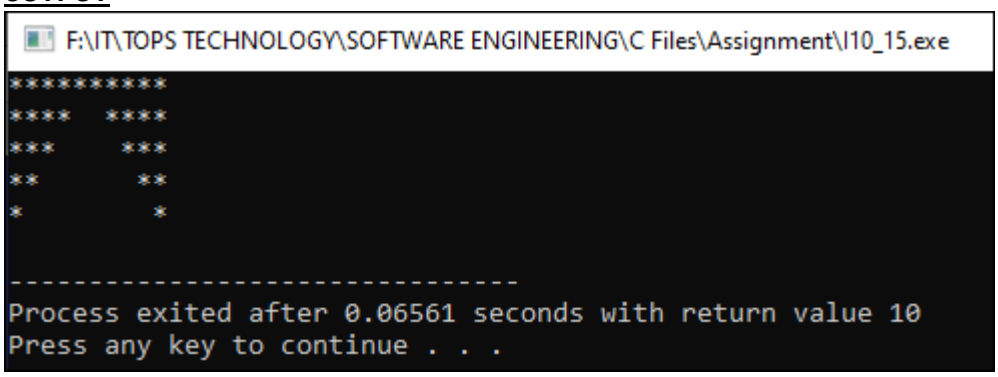
OUTPUT



15. PROGRAM

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i,j,k,m;
	for(i=1;i<=5;i++)
	{
		for(j=5;j>=i;j--)
		{
			printf("*");
		}
			for(k=1;k<i;k++)
			{
				printf("  ");
			}
			for(m=5;m>=i;m--)
			{
				printf("*");
			}
		printf("\n");
	}
}
```

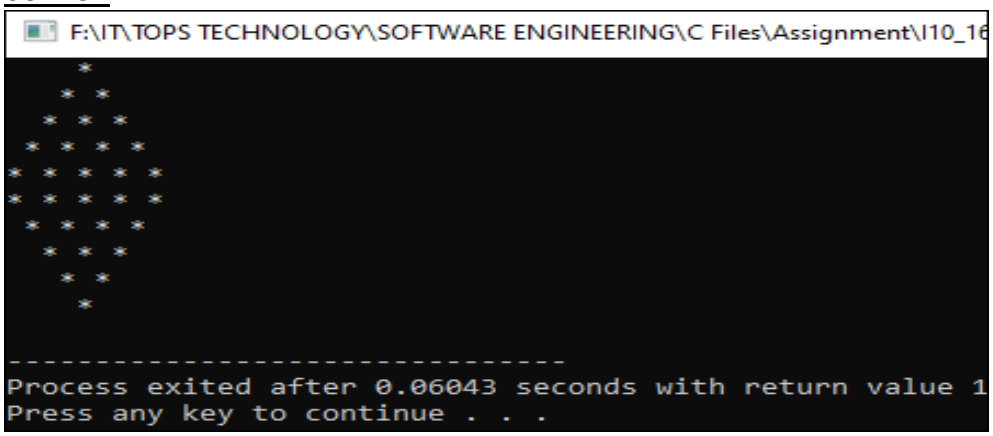
OUTPUT



16. PROGRAM

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int i,j,k,m;
      m=1;
for(i=1;i<=5;i++)
{
      for(j=5;j>m;j--)
      {
            printf(" ");
      }
      m++;
      for(k=1;k<=i;k++)
      {
      printf("* ");
      }
      printf("\n");
      }
      m=0;
for(i=1;i<=5;i++)
{
      for(j=1;j<=m;j++)
            printf(" ");

      m++;
      for(k=5;k>=i;k--)
      printf("* ");

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

OUTPUT

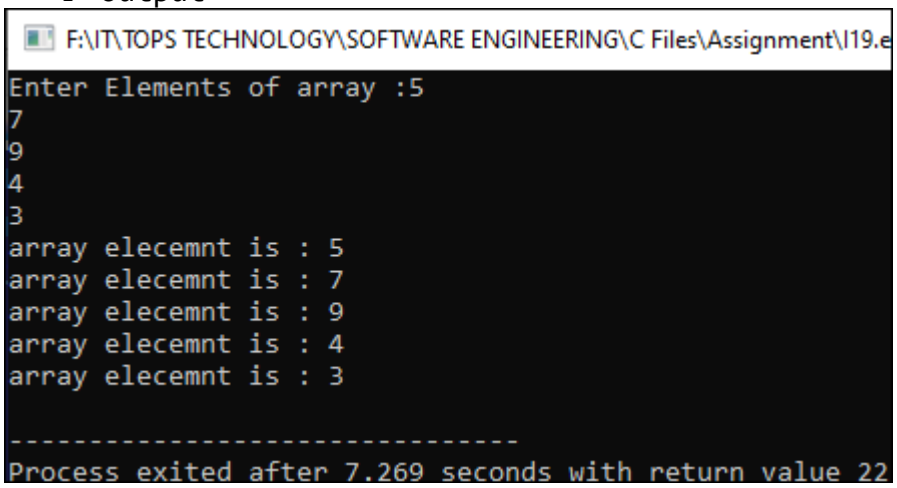


I19.Write a program to enter a five elements using Array and print it on a screen.

➔ Program

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i,arr[5];
	printf("Enter Elements of array :");
	for(i=0;i<5;i++)
	{
		scanf("%d",&arr[i]);
	}
		for(i=0;i<5;i++)
		{
			printf("array elecemnt is : %d\n",arr[i]);
		}
}
```

➔ Output



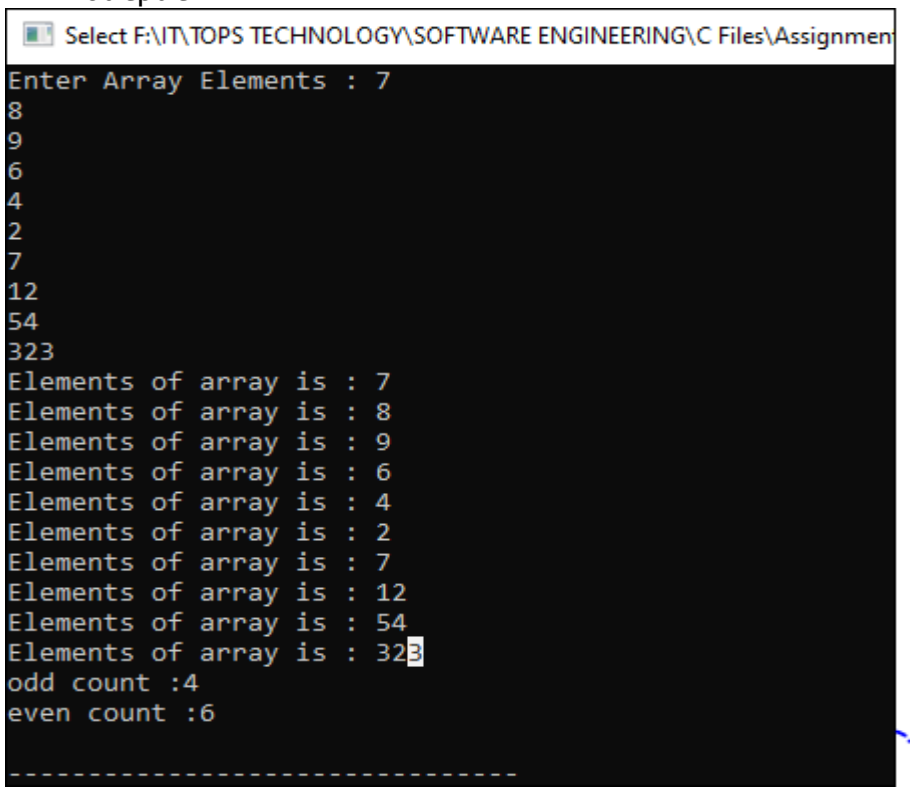
I20. . Write a program to enter a ten elements using Array and find out the to count the total number of odd and even numbers

➔ Program

```
#include<stdio.h>
#include<conio.h>
void main()
{
int i,odd=0,even=0,arr[10];
printf("Enter Array Elements : ");
for(i=0;i<=9;i++)
{
	scanf("%d",&arr[i]);
}
for(i=0;i<=9;i++)
{
	printf("Elements of array is : %d\n",arr[i]);
```

```
}
for(i=0;i<=9;i++)
{
if(arr[i]%2==0)
even++;
else
odd++;
}
printf("odd count :%d\n",odd);
printf("even count :%d\n",even);
}
```

➔ Output



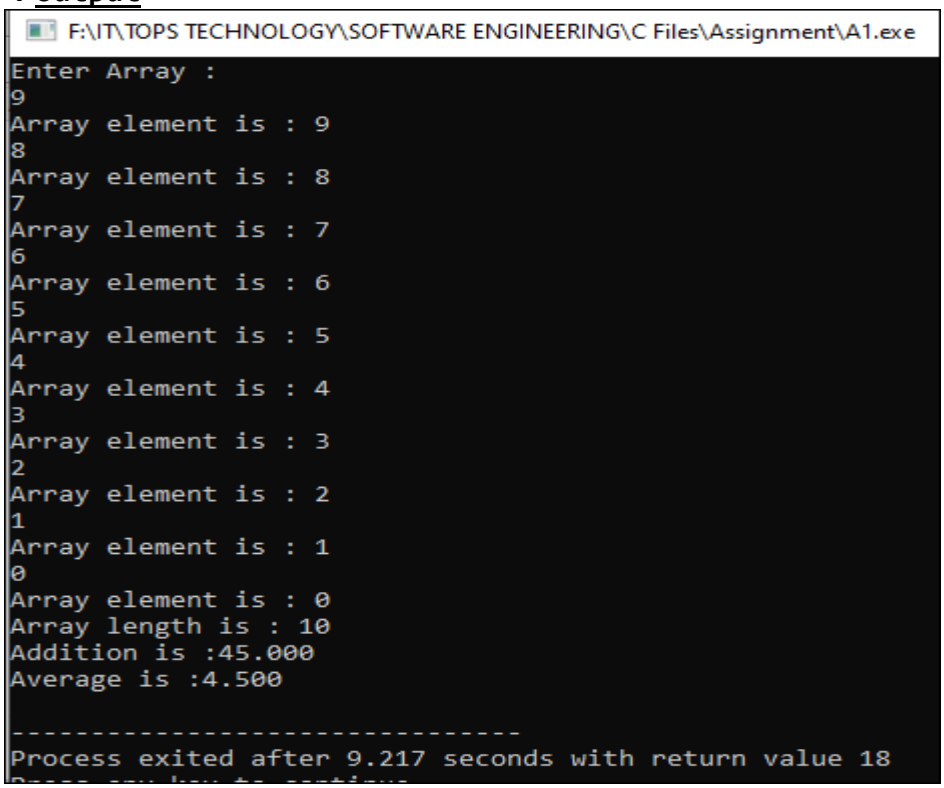
A1.Write a program to enter a ten elements using Array and make a summation of the numbers and average of summation

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int i,k = 0,arr[9];
      float av,sum;
      printf("Enter Array :\n");
      for(i=0;i<=9;i++)
      {
            scanf("%d",&arr[i]);
            printf("Array element is : %d\n",arr[i]);
            sum = k + arr[i];
```

```
            k = sum;
      }
            printf("Array length is : %d \n",i);
            av = (sum/i);
            printf("Addition is :%0.3f\n",sum);
            printf("Average is :%0.3f\n",av);
}
```

→**Output**



A2.Write a program to find out the max number from given 10 elements of array.

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int i;
      int k = 0;
      printf("Enter Array :\n");
      for(i=0;i<10;i++)
      {
            int a[i];
            scanf("%d",&a[i]);
            printf("Array element is : %d\n",a[i]);
            if(k<a[i])
            {
                  k=a[i];
            }
```

```
	}
		printf("Max vale is : %d\n",k);
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\A2.exe
Enter Array :
8
Array element is : 8
9
Array element is : 9
7
Array element is : 7
5
Array element is : 5
3
Array element is : 3
4
Array element is : 4
51
Array element is : 51
156
Array element is : 156
12
Array element is : 12
13
Array element is : 13
Max vale is : 156

--------------------------------
Process exited after 9.211 seconds with return value 18
Press any key to continue
```

A3. Write a program to sort the array of 5 elements

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i,j,k=0,a[50];
	printf("Enter Array Elements :\n");
	for(i=0;i<10;i++)
	{
		scanf("%d",&a[i]);
	}
	for(i=0;i<10;i++)
	{
		for(j=i+1;j<10;j++)
		{
			if(a[i]>a[j])
			{
				k = a[i];
				a[i] = a[j];
				a[j] = k;
			}
		}
	}
```

```
            for(i=0;i<10;i++)
            {
                  printf("arranged array is : %d\n",a[i]);
            }
      }
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\A3.exe
Enter Array Elements :
789
456
3113
321
897
45
21
32
1
5
arranged array is : 1
arranged array is : 5
arranged array is : 21
arranged array is : 32
arranged array is : 45
arranged array is : 321
arranged array is : 456
arranged array is : 789
arranged array is : 897
arranged array is : 3113

--------------------------------
Process exited after 14.12 seconds with return value 25
```

A4. Write a program to find out the second smallest number from the array.

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int i,small,s_small;
      int a[100];
      printf("Enter Array :\n");
      for(i=0;i<10;i++)
      {
            scanf("%d",&a[i]);
            printf("Array element is : %d\n",a[i]);
            if(a[0]<a[1])
            {
                  small = a[0];
                  s_small = a[1];
```

```
            }
            else{
                  small = a[1];
                  s_small = a[0];
            }
      }
      for(i=2;i<10;i++)
      {
            if(small>a[i])
            {
                  s_small = small;
                  small = a[i];
            }
            else if(s_small>a[i])
            {
                  s_small = a[i];
            }
      }
            printf("Second Smallest vale is : %d\n",s_small);
      }
```

→**Output**

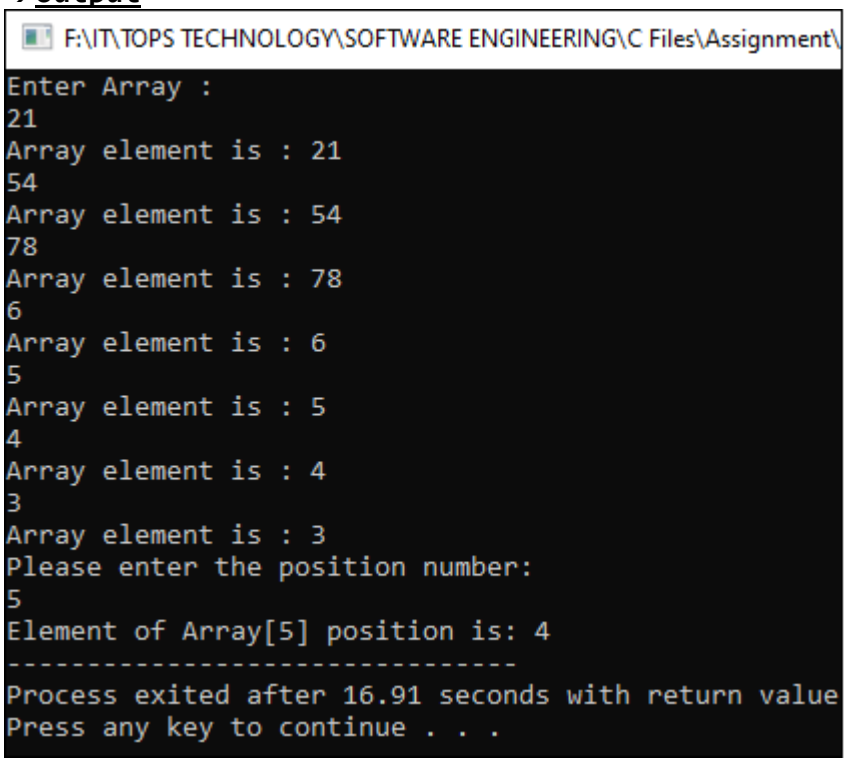
```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\A4.exe
Enter Array :
87
Array element is : 87
54
Array element is : 54
21
Array element is : 21
15
Array element is : 15
75
Array element is : 75
122
Array element is : 122
1
Array element is : 1
8
Array element is : 8
9
Array element is : 9
2
Array element is : 2
Second Smallest vale is : 2

--------------------------------
Process exited after 11.49 seconds with return value 28
```

A5. Write a Program of find the element of given position from the array

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i,k,arr[9];
	float av,sum;
	printf("Enter Array :\n");
	for(i=0;i<=6;i++)
	{
		scanf("%d",&arr[i]);
		printf("Array element is : %d\n",arr[i]);
	}
	printf("Please enter the position number: \n");
	scanf("%d",&k);
	if(i>k)
	{
		printf("Element of Array[%d] position is: %d ",k,arr[k]);
	}
	else{
		printf("Error!");
	}

}
```

→**Output**

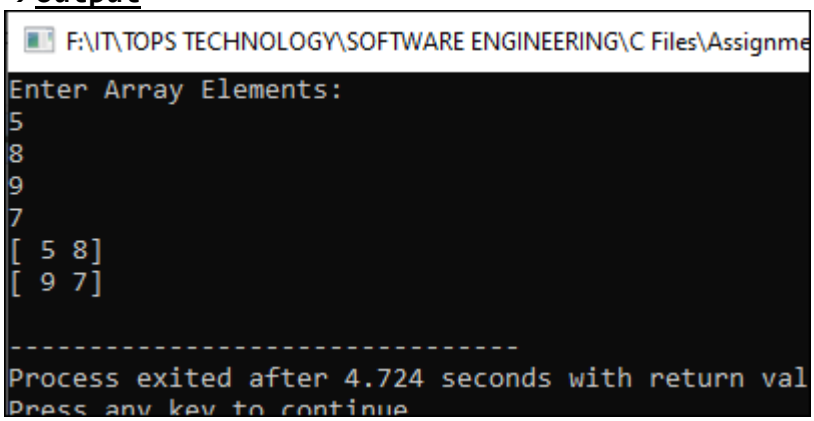


A6. Write a program to print the Matrix using 2-D Array

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i,j,a[2][2];
	printf("Enter Array Elements: \n");
	for(i=0;i<2;i++)
	{
		for(j=0;j<2;j++)
		{
			scanf("%d",&a[i][j]);
		}
	}
	for(i=0;i<2;i++)
	{
		printf("[");
		for(j=0;j<2;j++)
		{
			printf(" %d",a[i][j]);
		}
		printf("]\n");
	}
}
```

→**Output**



A7. Write a program of two make Addition of two matrix using 2-D Array.

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i,j,a[2][2] = {{1,2},{3,4}};
	int m,k,b[2][2] = {{5,6},{7,8}};
	int sum[2][2];
	for(i=0;i<2;i++)
```

```
	{
		for(j=0;j<2;j++)
		{
			sum[i][j] = a[i][j] + b[i][j];
			printf("Added array[%d][%d] is
:%d\n",i,j,sum[i][j]);
		}
	}
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\A7.exe
Added array[0][0] is :6
Added array[0][1] is :8
Added array[1][0] is :10
Added array[1][1] is :12

--------------------------------
Process exited after 0.04737 seconds with return value 25
Press any key to continue
```

A8. Write a program of two make Subtraction of two matrix using 2-D Array.

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i,j,a[2][2] = {{2,2},{13,10}};
	int m,k,b[2][2] = {{4,6},{7,8}};
	int sum[2][2];
	for(i=0;i<2;i++)
	{
		for(j=0;j<2;j++)
		{
			sum[i][j] = a[i][j] - b[i][j];
			printf("Subtracted array[%d][%d] is
:%d\n",i,j,sum[i][j]);
		}
	}
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\A8.exe
Subtracted array[0][0] is :-2
Subtracted array[0][1] is :-4
Subtracted array[1][0] is :6
Subtracted array[1][1] is :2

--------------------------------
Process exited after 0.05591 seconds with return value 29
Press any key to continue . . .
```

A9. Write a program of Multiplication make Subtraction of two matrix using 2-D Array.

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i,j,a[2][2] = {{2,2},{13,10}};
	int m,k,b[2][2] = {{4,6},{7,8}};
	int sum[2][2];
	for(i=0;i<2;i++)
	{
		for(j=0;j<2;j++)
		{
			sum[i][j] = a[i][j] * b[i][j];
			printf("Multiplied array[%d][%d] is
:%d\n",i,j,sum[i][j]);
		}
	}
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\A9.exe
Multiplied array[0][0] is :8
Multiplied array[0][1] is :12
Multiplied array[1][0] is :91
Multiplied array[1][1] is :80

--------------------------------
Process exited after 0.08298 seconds with return value 30
Press any key to continue . . .
```

A10. Write a program to find out the Max number from given Matrix

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
	int i,j,k,a[2][2];
	printf("Enter Array Elements: \n");

	for(i=0;i<2;i++)
	{
		for(j=0;j<2;j++)
		{
			scanf("%d",&a[i][j]);
		}
	}
	k = a[0][0];
	for(i=0;i<2;i++)
```

```
	{
		for(j=0;j<2;j++)
		{
		if(a[i][j]>k)
		{
			k = a[i][j];
		}
		}
	}
	printf("max value is - %d",k);
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\A
Enter Array Elements:
8
9
7
5
max value is - 9
--------------------------------
Process exited after 3.872 seconds with return value
```

A11. Write a program to convert the string from uppercase to lowercase and vice versa

→**Input**

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
	char a[10];
	printf("Enter your name : ");
	scanf("%s",&a);
	strupr(a);
	printf("Your name in UPPER CASE : %s\n",a);
	strlwr(a);
	printf("Your name in lower case : %s",a);

}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\A11.exe
Enter your name : sNehAl
Your name in UPPER CASE : SNEHAL
Your name in lower case : snehal
--------------------------------
Process exited after 4.516 seconds with return value 32
Press any key to continue . . .
```

A12. Write a program to find out the length of given string without using string function

→**Input**

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
      int i,len=0;
      char name[] = "abcsacacsd";
      printf("Enter String is :%s",name);
      for(i=0;name[i]!=0;i++)
      {
            len++;
      }
      printf("\nLength Of string is : %d",len);
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\A12.exe
Enter String is :abcsacacsd
Length Of string is : 10
--------------------------------
Process exited after 0.05066 seconds with return value 25
Press any key to continue . . .
```

A13. write a program to count the total number of word from given string without using string function

→**Input**

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
      int i,len;
      char name[10];
      printf("Enter String is :%s",name);
      gets(name);
      for(i=0;name[i]!=0;i++)
      {
            if(name[i] == ' ' || name[i] == '\n' || name[i] == '\t')
              len++;
      }
      printf("\nLength Of string word is : %d",len);
}
```

→**Output**

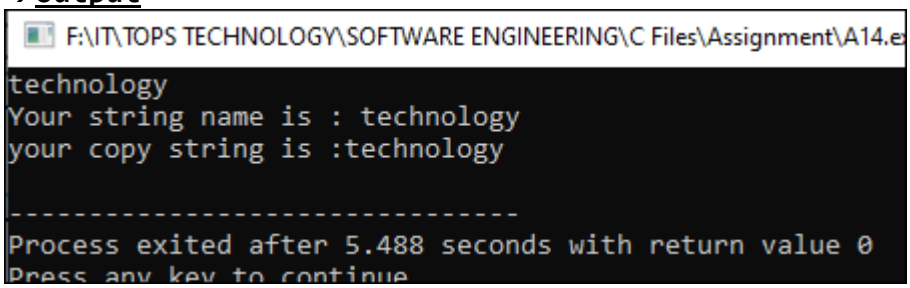
```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\A1
Enter String is :snehal is good student

Length Of string word is : 4
--------------------------------
```

A14. Write a program to copy string from one string to another string without using string function

→**Input**

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
      int i;
      char name[10],cop[10];
      gets(name);
      printf("Your string name is : ");
      puts(name);
      for(i=0;name[i]!=0;i++)
      {
      cop[i] = name[i];
      }
      printf("your copy string is :");
      puts(cop);
}
```

→**Output**



A15. Write a program to make string reverse and check the given string is palindrome or not without using string function

→**Input**

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
      char temp,s2[200],s1[10] = "tacocat";
      int a =strlen(s1);
      printf("Lenth of String is = %d\n",a);
      int i,j=a-1;
      for(i=0;i<j;i++)
      {
        temp = s1[i];
       s1[i] = s1[j];
       s1[j] = temp;
      j--;
      }
```

```
printf("Reversed string is : %s\n",s1);
i =0;
j = 6;
if(s1[i]==s1[j]){
      printf("String is palindrome");
}
else{
      printf("String is not palindrome");
}
}
```

→**Output**

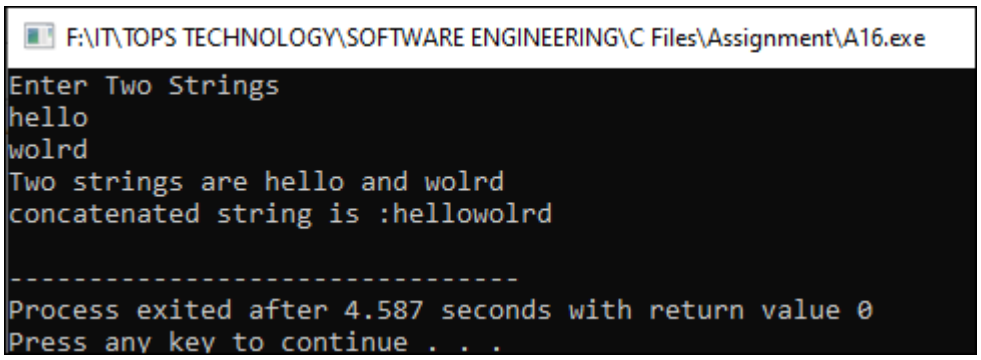
```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\A15.exe
Lenth of String is = 7
Reversed string is : tacocat
String is palindrome
--------------------------------
Process exited after 0.09768 seconds with return value 20
Press any key to continue . . .
```

A16. Write a program co concatenate the two string without using string function

→**Input**

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
      int i,j=0;
      char s1[10],s2[10],s3[200];
      printf("Enter Two Strings\n");
      gets(s1);
      gets(s2);
      printf("Two strings are %s and %s\n",s1,s2);
      for(i=0;s1[i]!=0;i++)
      {
      s3[j] = s1[i];
      j++;
      }
      for(i=0;s2[i]!=0;i++)
      {
      s3[j] = s2[i];
      j++;
      }
      s3[j] = '\0';
      printf("concatenated string is :");
      puts(s3);
}
```

→**Output**



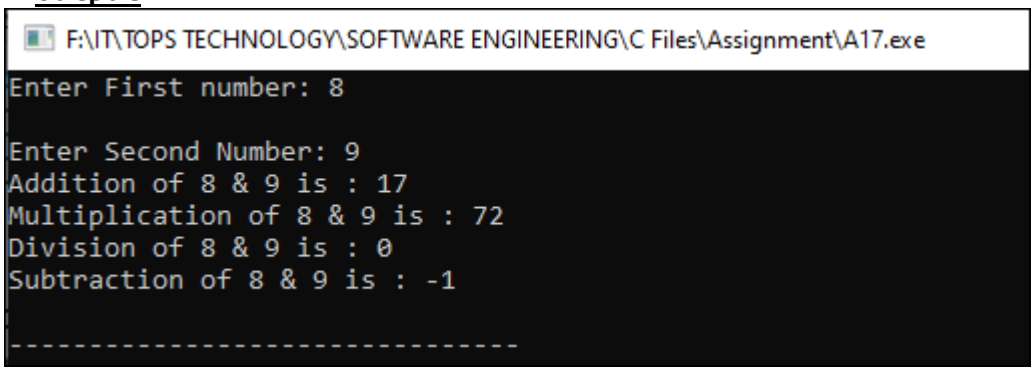
A17. Write a program to perform addition, subtraction, multiplication and division of two numbers using Function

→**Input**

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int n1,n2;
      printf("Enter First number: ");
      scanf("%d",&n1);
      printf("\nEnter Second Number: ");
      scanf("%d",&n2);
      printf("Addition of %d & %d is : %d\n",n1,n2,Add(n1,n2));
      printf("Multiplication of %d & %d is :
%d\n",n1,n2,Mul(n1,n2));
      printf("Division of %d & %d is : %d\n",n1,n2,Div(n1,n2));
      printf("Subtraction of %d & %d is : %d\n",n1,n2,Sub(n1,n2));

}
int Add(int a, int b)
{
      int result;
      result = a + b;
      return result;
}
int Mul(int a, int b)
{
      int result;
      result = a * b;
      return result;
}
int Div(int a, int b)
{
      int result;
      result = a / b;
      return result;
}
int Sub(int a, int b)
```

```
{
      int result;
      result = a - b;
      return result;
}
```

→**Output**

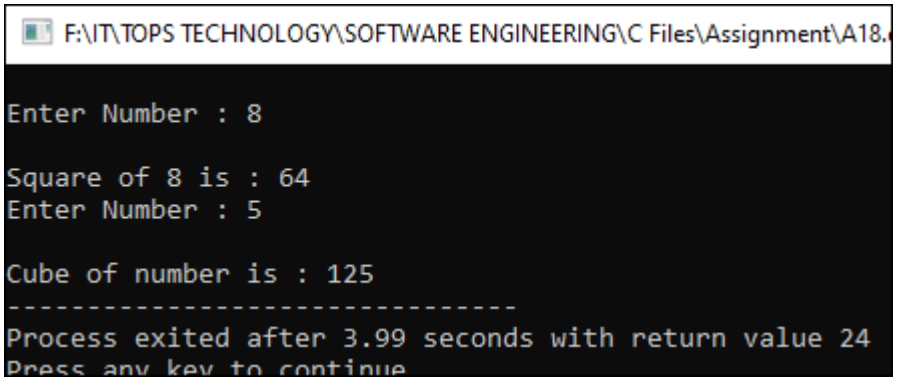


A18. Write a program to find out the Square and cube of given number using function

→**Input**

```
#include<stdio.h>
#include<conio.h>
int square();
void main()
{
      square();
      printf("\nCube of number is : %d",Cube());
}
int square()
{
      int n1,sqr;
      printf("\nEnter Number : ");
      scanf("%d",&n1);
      sqr = n1*n1;
      printf("\nSquare of %d is : %d",n1,sqr);
}
int Cube()
{
      int n1,cube;
      printf("\nEnter Number : ");
      scanf("%d",&n1);
      cube = n1*n1*n1;
      return cube;
}
```

→**Output**

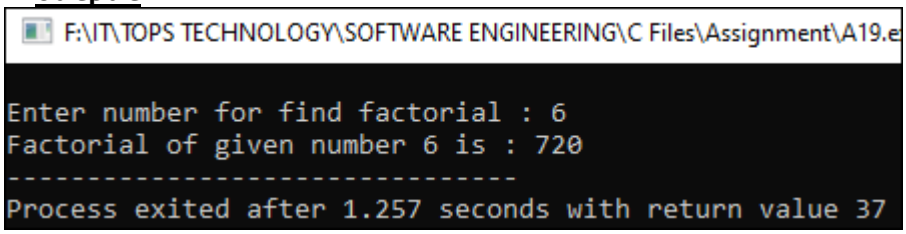


A19. Write a program to find out the factorial of given number using function

→**Input**

```
#include<stdio.h>
#include<conio.h>
int fact(int n);
void main()
{
      int a;
      printf("\nEnter number for find factorial : ");
      scanf("%d",&a);
      printf("Factorial of given number %d is : %d ",a,fact(a));

}
int fact(int n)
{
      int i,f;
      f=1;
      for(i=1;i<=n;i++)
      {
      f = f*i;
      }
      return f;
}
```

→**Output**



A20. Write a program to print the Fibonacci series using function

→**Input**

```
#include<stdio.h>
#include<conio.h>
void series();
void main()
{
```

```
	series();
}
void series()
{

	int i=0,j=0,fibo,number;
	printf("Please enter the number for find series:");
	scanf("%d",&number);

	printf("fibonacci series: ");
	for(i=0; i<=number ;i++)
	{
		printf(" %d",i);
		fibo = i+j;
		i=j;
		j=fibo;
}
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\A20.exe
Please enter the number for find series:8
fibonacci series:  0 1 1 2 3 5 8
--------------------------------
Process exited after 1.563 seconds with return value 8
Press any key to continue . . .
```

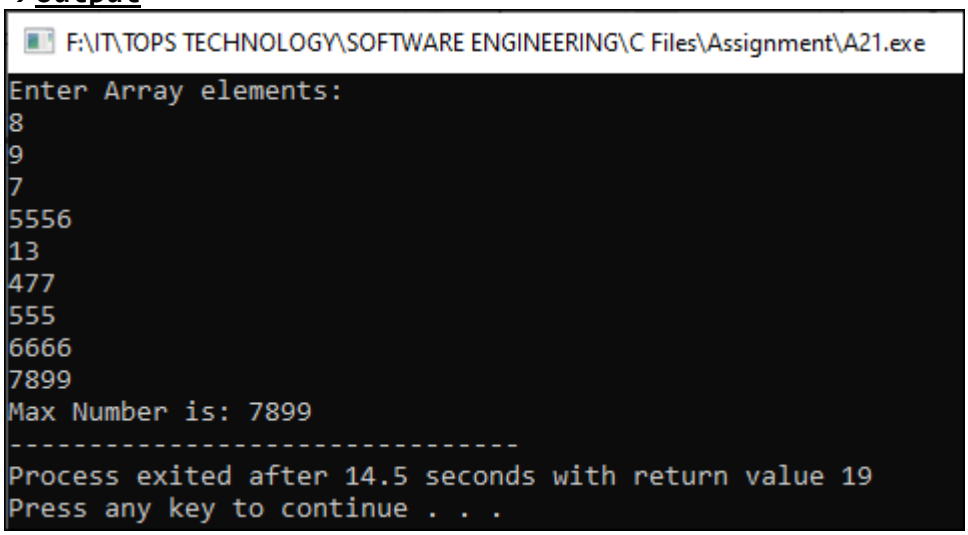
A21. Write a program to find out the max number from given array using function

→**Input**

```
#include<stdio.h>
#include<conio.h>
void Max_num();
void main()
{
	printf("Enter Array elements:\n");
	Max_num();
}
void Max_num()
{
int i,j,a[3][3];
for(i=0;i<3;i++)
	{
		for(j=0;j<3;j++)
		{
			scanf("%d",&a[i][j]);
			}
	}
	for(i=0;i<3;i++)
	{
```

```
            for(j=0;j<3;j++)
            {
                  if(a[i][j]>a[0][0])
                  {
                  a[0][0] = a[i][j];
                  }
            }
      }
      printf("Max Number is: %d",a[0][0]);
}
```

→**Output**

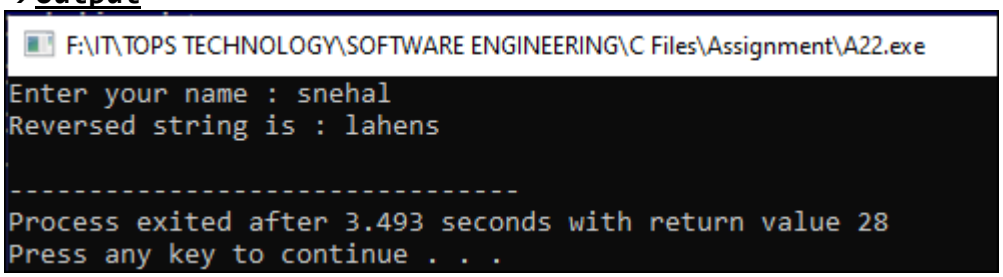


A22. Write a program to print the string in reverse order using function

→**Input**

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
      char s1[100];
      printf("Enter your name : ");
      scanf("%s",&s1);
      strrev(s1);
      printf("Reversed string is : %s\n",s1);
}
```

→**Output**



A23. Write a Program of Factorial using Recursive Function

→**Input**

```
#include<stdio.h>
#include<conio.h>
int fact(int number);
void main()
{
      int result,b;
      printf("Enter number for finding factorial : ");
      scanf("%d",&b);
      result = fact(b);
      printf("Factorial of Number %d is : %d",b,fact(b));
}
int fact(int number)
{
      {
      if(number == 1 && number ==0)
      return 1;
      }
      if(number>1)
      {
      return number * fact(number - 1);
      }
}
```

→**Output**

```
F:\IT\TOPS TECHNOLOGY\SOFTWARE ENGINEERING\C Files\Assignment\A23.exe
Enter number for finding factorial : 7
Factorial of Number 7 is : 5040
--------------------------------
Process exited after 2.331 seconds with return value 31
Press any key to continue . . .
```

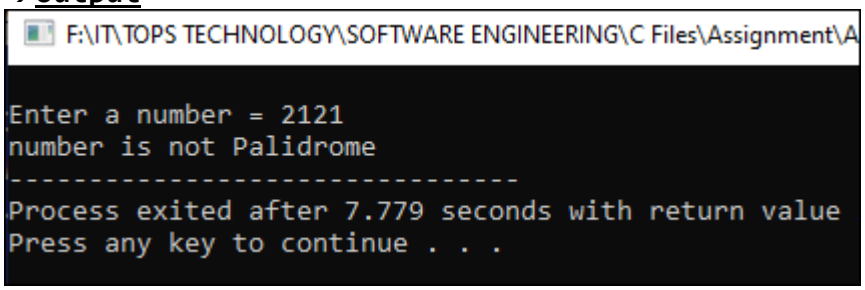
A24. Write a Program of Print a number and check the number is palindrome or not using recursive Function

→**Input**

```
#include<stdio.h>
#include<conio.h>
int reverse(int num);
void main()
{
      int num1;
      printf("\nEnter a number = ");
      scanf("%d",&num1);

      if(palindrome(num1) == 0)
      {
      printf("number is Palidrome");
      }
```

```
      else
      {
      printf("number is not Palidrome");
      }
}
int reverse(int num)
{
      int   rev =0;
      while(num!=0)
      {
            rev = rev*10 + num%10;
            num = num/10;
      }
      return rev;
}
int palindrome(int num)
{
      if(reverse(num) == num)
            return 0;
      else
            return 1;
}
```

→**Output**



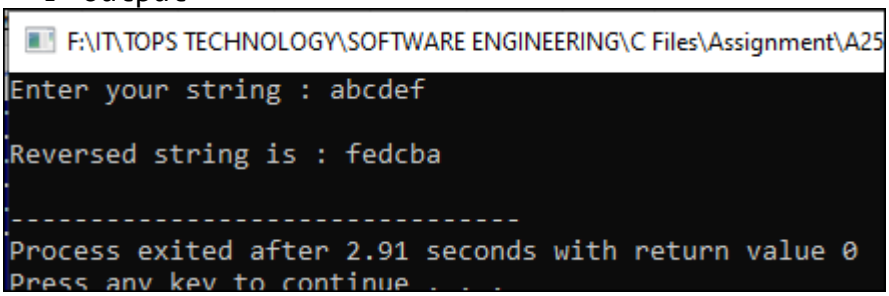
A25. Write a Program of Make a string reverse using recursive Function.

➔ Program

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
char reverse(char str[50]);
void main()
{
      char str1[40];
      reverse(str1);
}
char reverse(char str[20])
{
      printf("Enter your string : ");
      gets(str);
```

```
	strrev(str);
	printf("\nReversed string is : ");
	puts(str);
}
```

➔ Output

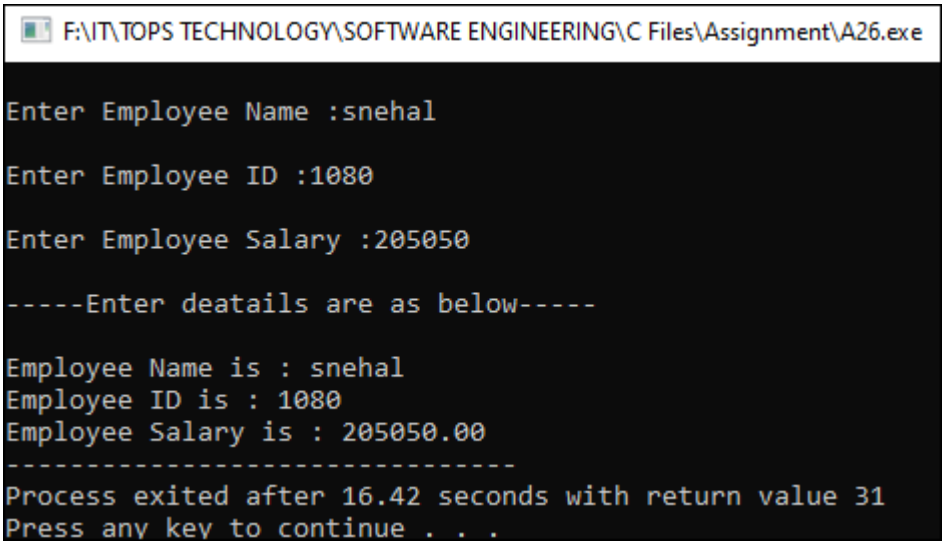


A26. Write a program of structure employee that provides the following information
-print and display empno,empname,address and age

➔ Program

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
struct employee{
	char name[20];
	int emID;
	float slry;
};
void main()
{
	struct employee emp;
	printf("\nEnter Employee Name :");
	scanf("%s",&emp.name);
	printf("\nEnter Employee ID :");
	scanf("%d",&emp.emID);
	printf("\nEnter Employee Salary :");
	scanf("%f",&emp.slry);
	printf("\n-----Enter deatails are as below-----\n");
	printf("\nEmployee Name is : %s",emp.name);
	printf("\nEmployee ID is : %d",emp.emID);
	printf("\nEmployee Salary is : %.2f",emp.slry);
	return 0;
}
```

➔ Output



A27. Write a program of structure for five employee that provides the following information
-print and display empno,empname,address and age

➔ Program is Upload in drive.

A28. Describe the structure student having rollno and marks of three subjects of five students.
-Write a program to print all the information and total marks and percentage of each student.

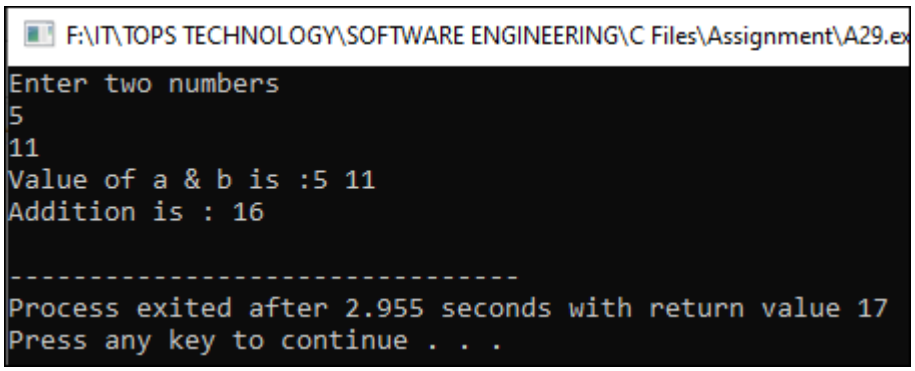
➔ Program is Upload in drive.

A29. Write program to make an addition of two number using pointer

➔ Program

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int a,b,c;
      int *ptra = &a;
      int   *ptrb = &b;
      int *sum = &c;
      printf("Enter two numbers\n");
      scanf("%d %d",&a,&b);
      printf("Value of a & b is :%d %d\n",*ptra,*ptrb);
      *sum = *ptra + *ptrb;
      printf("Addition is : %d\n",*sum);
}
```

➔ Output

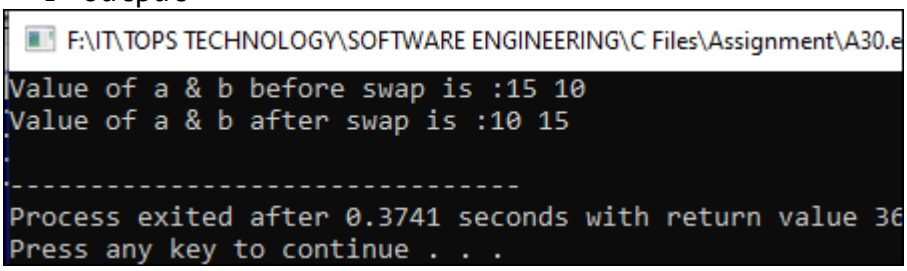


A30. Write a program to swap the two numbers without using third variable using pointer

➔ Program

```
#include<stdio.h>
#include<conio.h>
void main()
{
      int a = 15,b = 10;
      int *ptra = &a;
      int   *ptrb = &b;
      printf("Value of a & b before swap is :%d %d\n",*ptra,*ptrb);
      *ptra = *ptra + *ptrb;
      *ptrb = *ptra - *ptrb;
      *ptra = *ptra - *ptrb;
      printf("Value of a & b after swap is :%d %d\n",*ptra,*ptrb);
}
```

➔ Output



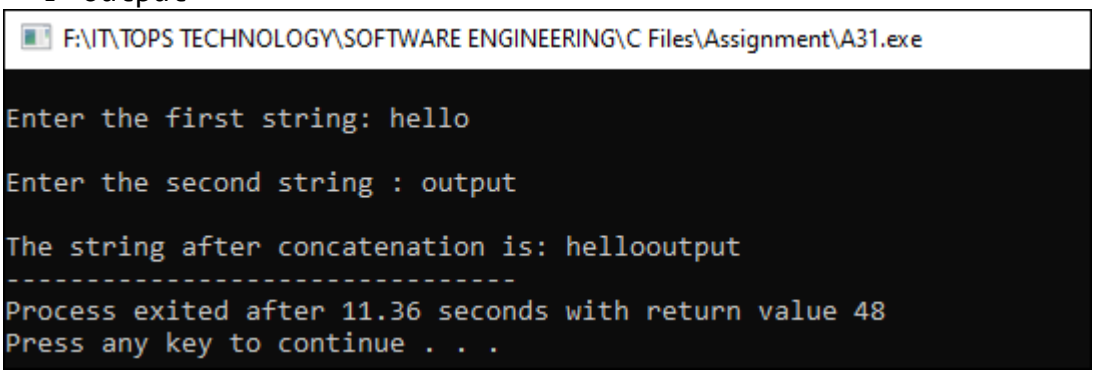
A31. Write a program to concatenate the stow string using pointer.

➔ Program

```
#include<stdio.h>
#include<conio.h>
void main()
{
      char a[100], b[100];

    printf("\nEnter the first string: ");
    gets(a);

    printf("\nEnter the second string : ");
    gets(b);
```

```
    char *ptra = a;
    char *ptrb = b;

    while(*ptra)
          {
        ptra++;
           }
    while(*ptrb)
    {
        *ptra = *ptrb;
        ptrb++;
        ptra++;
    }
    *ptra = '\0';

    printf("\nThe string after concatenation is: %s ", a);
    }
```

➔ Output



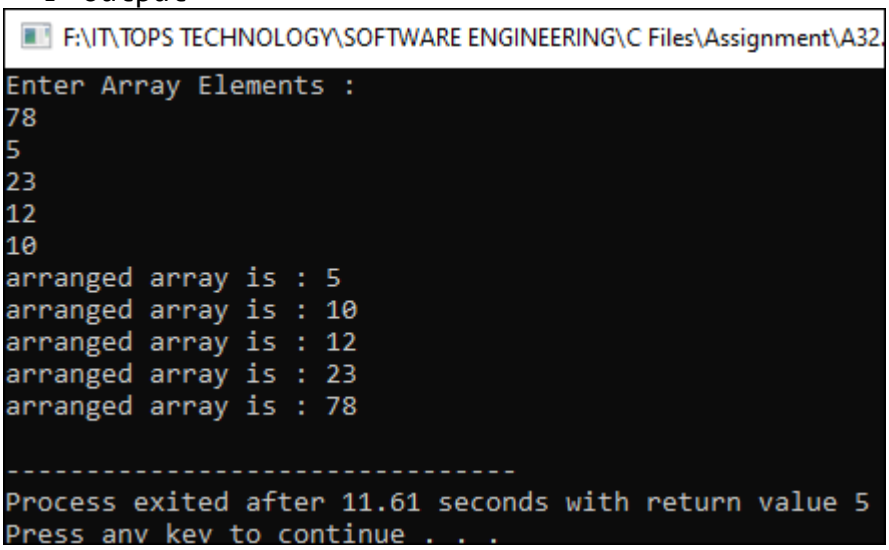
A32. Write a program to sort the numbers using pointer and functions

➔ Program

```
#include<stdio.h>
#include<conio.h>
void sort(int n,int *ptr)
{
      int i,j,k=0;
      for(i=0;i<n;i++)
      {
            for(j=i+1;j<n;j++)
            {
                  if(*(ptr + j) < *(ptr + i))
                  {
                        k = *(ptr + i);
                        *(ptr + i) = *(ptr + j);
                        *(ptr + j) = k;
                  }
            }
      }
            for(i=0;i<n;i++)
```

```
            {
                  printf("\narranged array is : %d\n",*(ptr + i));
            }
      }
void main()
{
      int i,n=5,a[50];
      printf("Enter Array Elements :\n");
      for(i=0;i<n;i++)
      {
            scanf("%d",&a[i]);
      }
      sort(n,a);
}
```

➔ Output



A38. Write a program to swap the values of 2 variable using pointer, function and structure.

➔ Program

```
#include<stdio.h>
#include<conio.h>
struct swap{
      int n1;
      int n2;
      int temp;
};
void swap(int *a,int *b);
void main()
{
      struct swap num;
      printf("Enter the Value of n1 : \n");
      scanf("%d",&num.n1);
      printf("Enter the Value of n2 : \n");
      scanf("%d",&num.n2);
```

```
	printf("\nValue of n1 = %d and n2 = %d is before
swap\n",num.n1,num.n2);
	swap(&num.n1,&num.n2);
	printf("\nValue of n1 = %d and n2 = %d is after
swap\n",num.n1,num.n2);
}
void swap(int *a,int *b)
{
	struct swap num;
	num.temp = *a;
	*a = *b;
	*b = num.temp;
}
```

➔ Output