

## Home Work 4

1.

Ans to the Ques no: 1

Executing Continue statement.  $iten = 1, a = 6, b = 27$

$iten = 2, a = 8, b = 27$

$iten = 3, a = 10, b = 27$

Executing Continue statement.  $iten = 4, a = 12, b = 24$

$iten = 5, a = 14, b = 24$

$iten = 6, a = 16, b = 24$

Executing Continue statement.  $iten = 7, a = 18, b = 21$

$iten = 8, a = 20, b = 21$

$iten = 9, a = 22, b = 21$

$a = 22, b = 21$

2.

Ans to the Ques no: 2

Enter a number: 3720485

Iteration number 1, digit = 5

Iteration number 2, digit = 8

Iteration number 3, digit = 4

Iteration number 4, digit = 9

Iteration number 5, digit = 2

Iteration number 6, digit = 7

Iteration number 7, digit = 3

3.

```
#include <math.h>
```

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

```
double Series(int n)
```

```
{
```

```
    int i;
```

```
    double sums = 0.0, ser;
```

```
    for (i = 1; i <= n; ++i) {
```

```
        ser = 1 / pow(i, i);
```

```
        sums += ser;
```

```
    }
```

```
    return sums;
```

```
}
```

```
int main()
```

```
{
```

```
    int n;
```

```
    printf("ENTER THE VALUE OF n : ");
```

```
    scanf("%d",&n);
```

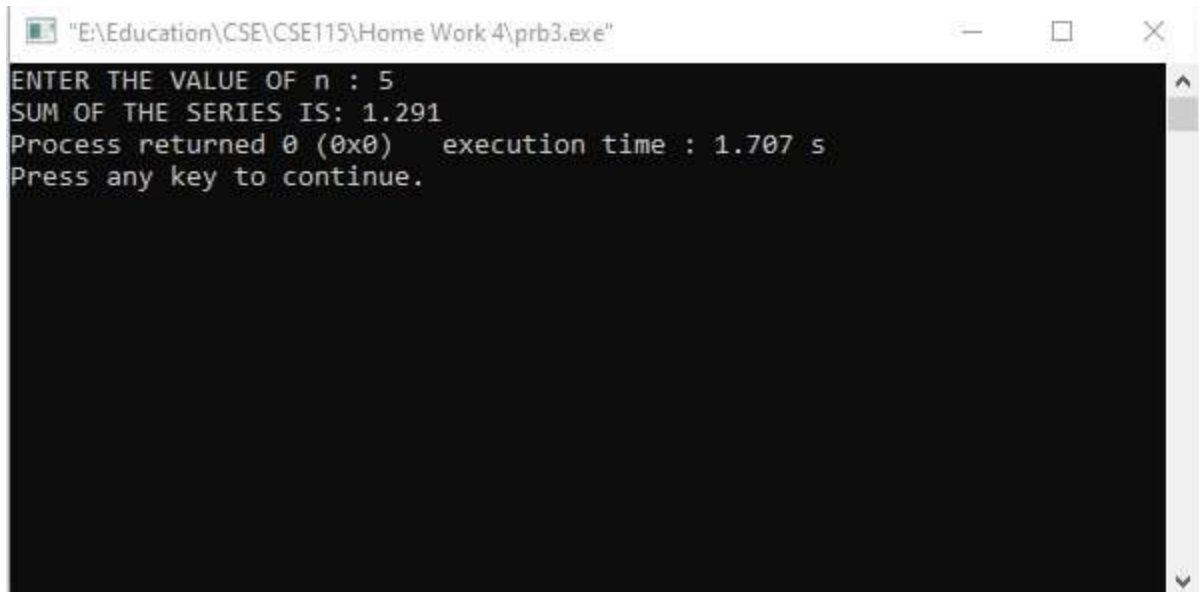
```
    double res = Series(n);
```

```
    printf("SUM OF THE SERIES IS: %.3f", res);
```

```
    return 0;
```

```
}
```

Output:



```
"E:\Education\CSE\CSE115\Home Work 4\prb3.exe"
ENTER THE VALUE OF n : 5
SUM OF THE SERIES IS: 1.291
Process returned 0 (0x0) execution time : 1.707 s
Press any key to continue.
```

4.

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

```
int main()
```

```
{
```

```
int n,i,sum=0;
```

```
printf("Enter n value: ");
```

```
scanf("%d",&n);
```

```
for (i=1;i<=n;i++)
```

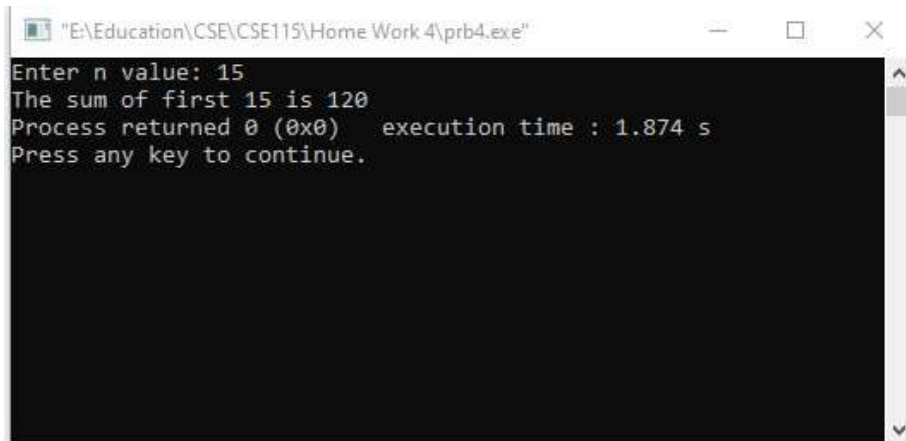
```
sum=sum+i;
```

```
printf("The sum of first %d is %d",n,sum);
```

```
return 0;
```

```
}
```

Output:



```
"E:\Education\CSE\CSE115\Home Work 4\prb4.exe"
Enter n value: 15
The sum of first 15 is 120
Process returned 0 (0x0)   execution time : 1.874 s
Press any key to continue.
```

5.

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

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

```
int main(){
```

```
    int N, facto, count;
```

```
    printf("Enter a number for find the factorial :");
```

```
    scanf("%d",&N);
```

```
    for(count = 1, facto = 1; count <= N; count++){
```

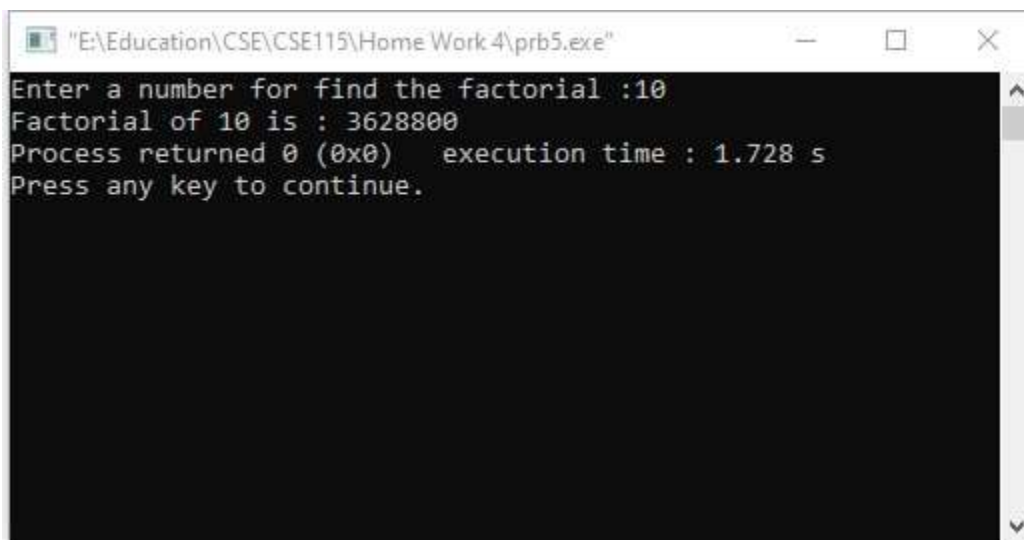
```
        facto = facto * count;
```

```
    }
```

```
printf("Factorial of %d is : %d", N, facto);

return 0;
}
```

Output:



```
"E:\Education\CSE\CSE115\Home Work 4\prb5.exe"
Enter a number for find the factorial :10
Factorial of 10 is : 3628800
Process returned 0 (0x0) execution time : 1.728 s
Press any key to continue.
```

6.

```
#include <stdio.h>

int main() {
    int base, power;
    double result = 1.0;
    printf("Enter a base number: ");
    scanf("%d", &base);
    printf("Enter the power, the number to be raised: ");
```

```
scanf("%d", &power);
```

```
while (power != 0) {
```

```
result *= base;
```

```
--power;
```

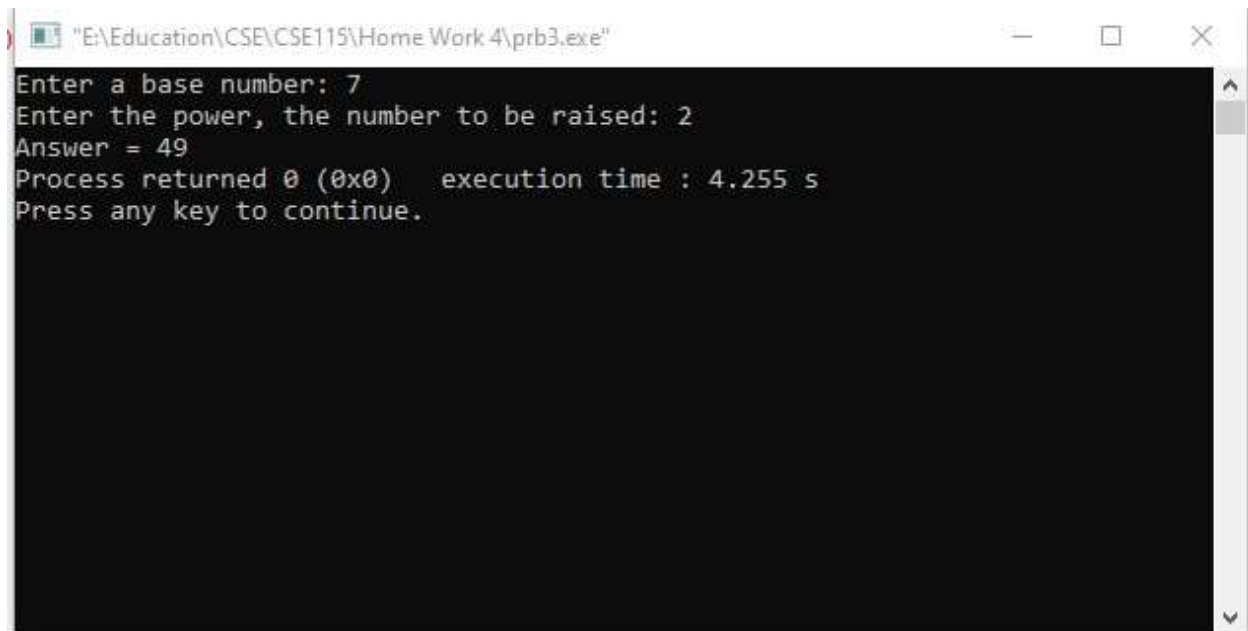
```
}
```

```
printf("Answer = %.0lf", result);
```

```
return 0;
```

```
}
```

Output:



```
"E:\Education\CSE\CSE115\Home Work 4\prb3.exe"
Enter a base number: 7
Enter the power, the number to be raised: 2
Answer = 49
Process returned 0 (0x0) execution time : 4.255 s
Press any key to continue.
```

7.

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

```
int main()
```

```
{
```

```
int n1, n2;

printf("Enter n1: ");
scanf("%d",&n1);
printf("Enter n2: ");
scanf("%d",&n2);


int temp;
if(n1>n2)
{
    temp=n2;
    n2=n1;
    n1=temp;
}

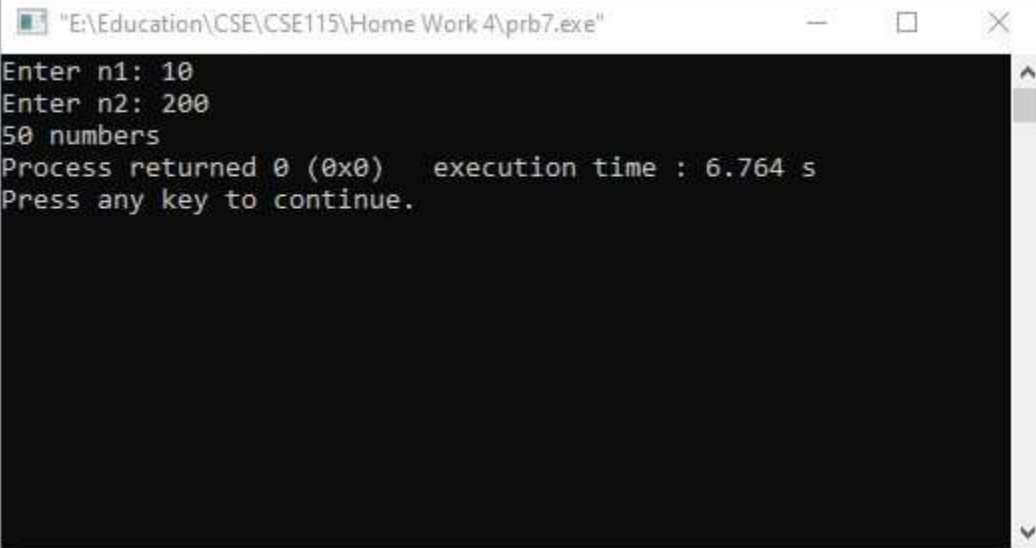

int i=0;
int count=0;
for(i=n1+1;i<n2;i++)
{

    if(i%3==0&& i%5!=0)
    {
        count++;
    }
}


printf("%d numbers",count);
}
```



Output:

A screenshot of a Windows command prompt window. The title bar shows the file path "E:\Education\CSE\CSE115\Home Work 4\prb7.exe". The window has standard minimize, maximize, and close buttons. The command prompt area is black with white text. The text displayed is: "Enter n1: 10", "Enter n2: 200", "50 numbers", "Process returned 0 (0x0) execution time : 6.764 s", and "Press any key to continue.".

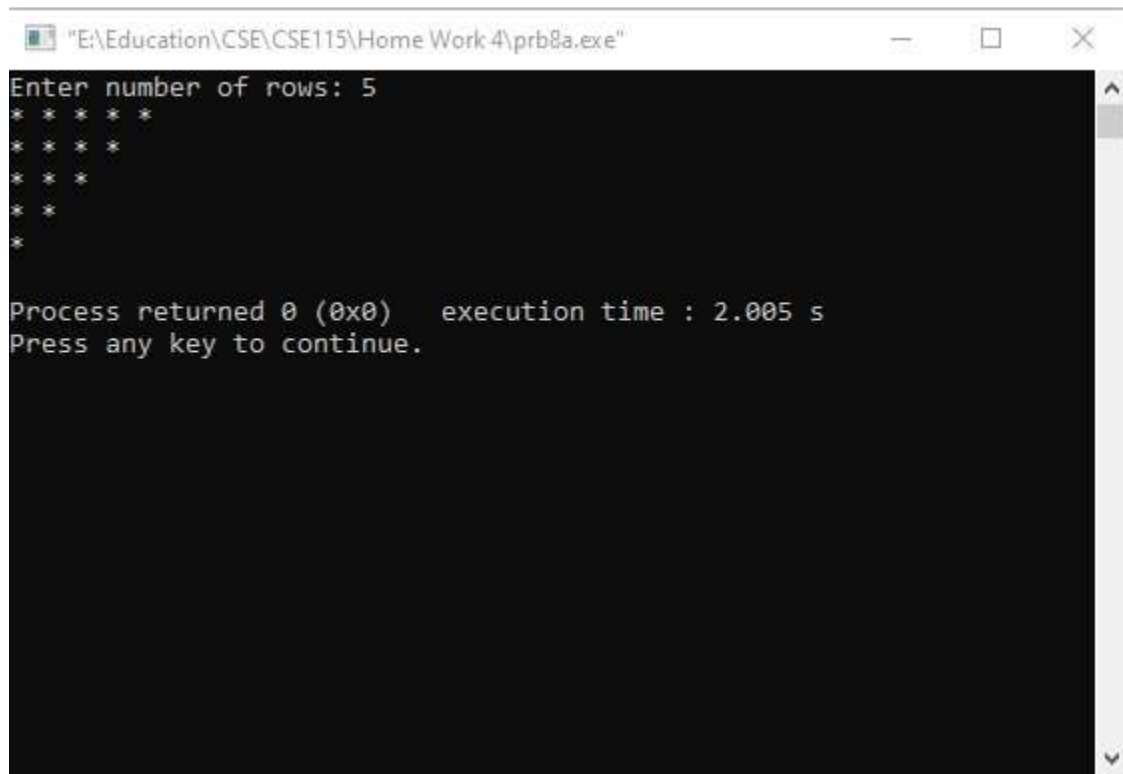
```
"E:\Education\CSE\CSE115\Home Work 4\prb7.exe"
Enter n1: 10
Enter n2: 200
50 numbers
Process returned 0 (0x0) execution time : 6.764 s
Press any key to continue.
```

8.

a)

```
#include<stdio.h>
int main()
{
    int i,j,n;
    printf("Enter number of rows: ");
    scanf("%d",&n);
    if(n%2!=0)
    {
        for(i=n;i>=1;i--)
        {
            for(j=1;j<=i;j++)
            {
                printf("* ");
            }
            printf("\n");
        }
    }
    else
```

```
    printf("Enter a odd number");  
    return 0;  
}Output:
```



```
"E:\Education\CSE\CSE115\Home Work 4\prb8a.exe"  
Enter number of rows: 5  
*****  
****  
***  
**  
*  
  
Process returned 0 (0x0)   execution time : 2.005 s  
Press any key to continue.
```

b)

```
#include<stdio.h>  
#include<conio.h>  
int main()  
{  
    int n, s, i, j;  
    printf("Enter number of rows: ");  
    scanf("%d",&n);  
    for(i = 1; i <= n; i++)  
    {
```

```
for(s = i; s < n; s++)
```

```
printf(" ");
```

```
for(j = 1; j <= i; j++)
```

```
printf("* ");
```

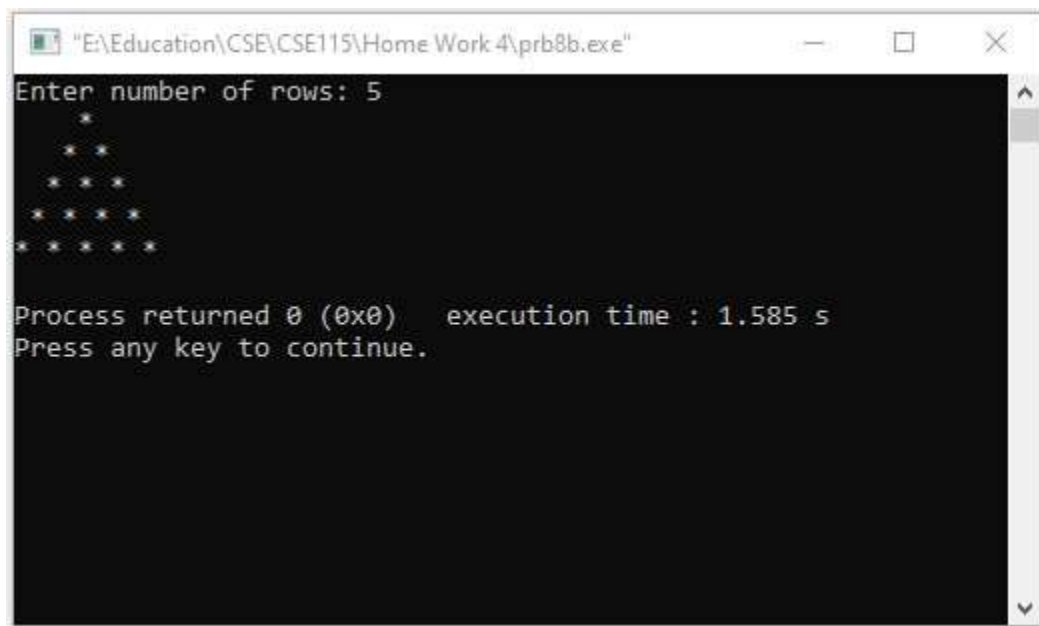
```
printf("\n");
```

```
}
```

```
return 0;
```

```
}
```

Output:



```
"E:\Education\CSE\CSE115\Home Work 4\prb8b.exe"
Enter number of rows: 5
 *
 * *
 * * *
 * * * *
 * * * * *

Process returned 0 (0x0)   execution time : 1.585 s
Press any key to continue.
```

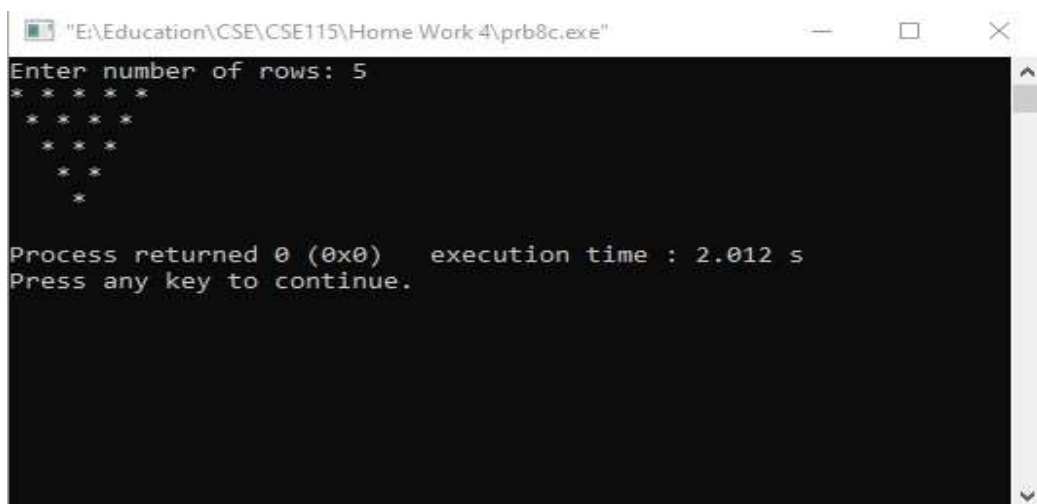
c)

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

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

```
int main()
{
int n, s, i, j;
printf("Enter number of rows: ");
scanf("%d",&n);
for(i = n; i >= 1; i--)
{
for(s = i; s < n; s++)
printf(" ");
for(j = 1; j <= i; j++)
printf("* ");
printf("\n");
}
return 0;
}
```

Output:



```
"E:\Education\CSE\CSE115\Home Work 4\prb8c.exe"
Enter number of rows: 5
* * * * *
 * * * *
  * * *
   * *
    *
Process returned 0 (0x0)   execution time : 2.012 s
Press any key to continue.
```

d)

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

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

```
int main()
```

```
{
```

```
printf("Enter size of rows: ");
```

```
int n, i, j, m = 1, p;
```

```
scanf("%d",&n);
```

```
for(i = 0; i <= n; i++)
```

```
{
```

```
for(j = n; j > i; j--)
```

```
{
```

```
printf(" ");
```

```
}
```

```
printf("*");
```

```
if (i > 0)
```

```
{
```

```
for(p = 1; p <= m; p++)
```

```
{
```

```
printf(" ");
```

```
}
```

```
m += 2;
```

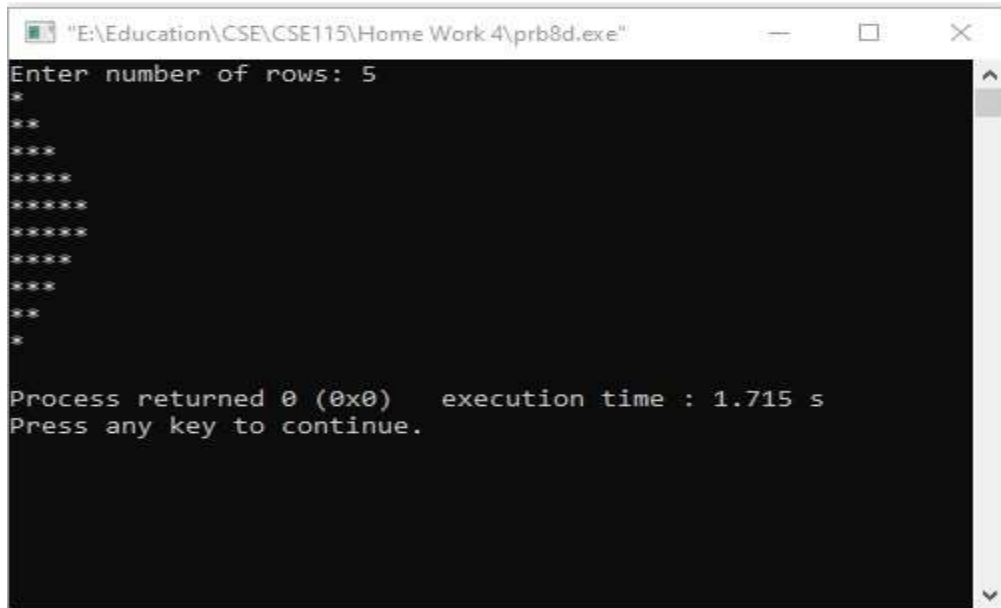
```
printf("*");
```

```
}
```

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

```
}  
m -= 4;  
for(i = 0; i <= n-1; i++)  
{  
    for(j = 0; j <= i; j++)  
    {  
        printf(" ");  
    }  
    printf("*");  
    for(p = 1; p <= m; p++)  
    {  
        printf(" ");  
    }  
    m -= 2;  
    if(i != n-1)  
    {  
        printf ("*");  
    }  
  
    printf("\n");  
}  
return 0;  
}
```

Output:



```
"E:\Education\CSE\CSE115\Home Work 4\prb8d.exe"
Enter number of rows: 5
*
**
***
****
*****
*****
*****
****
***
**
*

Process returned 0 (0x0)   execution time : 1.715 s
Press any key to continue.
```

e)

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

```
int main()
```

```
{
```

```
    int i,j,n,k;
```

```
    printf("Enter size of Diamond: ");
```

```
    scanf("%d",&n);
```

```
    if(n%2!=0)
```

```
    {
```

```
        for(i=1;i<=n;i++)
```

```
        {
```

```
            for(k=i;k<=n;k++)
```

```
                printf(" ");
```

```

        for(j=1;j<=(2*i-1);j++)
        {
            if(j==1 || j==2*i-1)
                printf("*");
            else
                printf(" ");
        }
        printf("\n");
    }

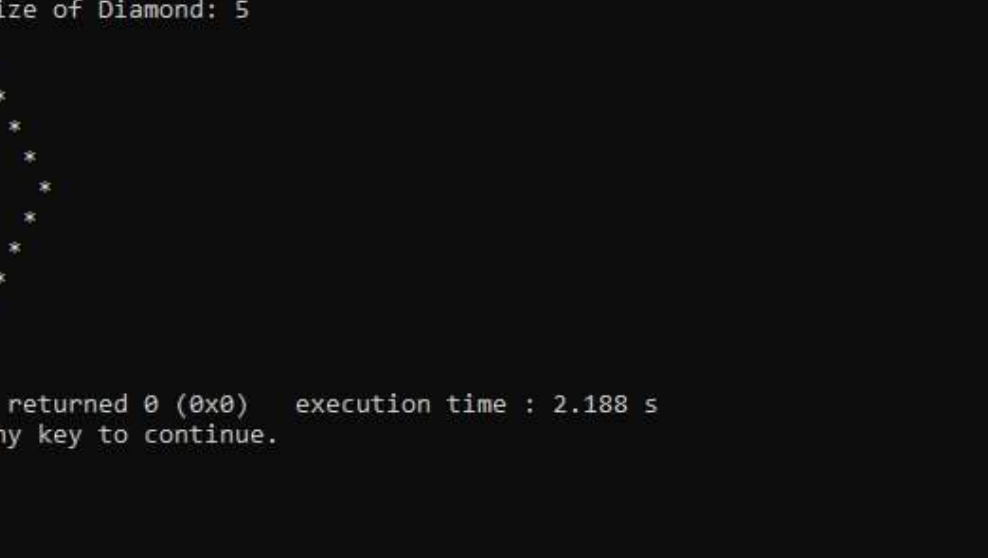
    for(i=n-1;i>=1;i--)
    {
        for(k=n;k>=i;k--)
            printf(" ");
        for(j=1;j<=(2*i-1);j++)
        {
            if(j==1 || j==2*i-1)
                printf("*");
            else
                printf(" ");
        }
        printf("\n");
    }
}

else
    printf("Enter a odd number");
}

```



Output:



The screenshot shows a Windows command prompt window with the title bar "E:\Education\CSE\CSE115\Home Work 4\prb8d.exe". The prompt displays the text "Enter size of Diamond: 5". Below this, a diamond shape is printed using asterisks. The diamond has a height of 5 rows and a width of 5 columns. The pattern is as follows:

```
  *
 * *
*   *
* *   *
* * * * *
```

Below the diamond, the text "Process returned 0 (0x0) execution time : 2.188 s" is displayed, followed by "Press any key to continue.".

f)

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

```
int main()
```

$$\{$$

```
int i,j,n,k;
```

```
printf("Enter value of n : ");
```

```
scanf("%d",&n);
```

```

if(n%2!=0)
{
    for(i=1;i<=n;i++)
    {
        for(k=1;k<=n-i+1;k++)
            printf("*");
        for(j=1;j<2*i-1;j++)
            printf(" ");
        for(k=1;k<=n-i+1;k++)
            printf("*");
        printf("\n");
    }
    for(i=2;i<=n;i++)
    {
        for(k=1;k<=i;k++)
            printf("*");
        for(j=1;j<2*(n-i)+1;j++)
            printf(" ");
        for(k=1;k<=i;k++)
            printf("*");
        printf("\n");
    }
}
else
    printf("Enter a odd number");
}Output:

```

"E:\Education\CSE\CSE115\Home Work 4\prb8f.exe"

Enter value of n : 5

```
*****
****  ****
***   ***
**    **
*     *
*     *
**   **
***  ***
****  ****
*****
```

Process returned 0 (0x0) execution time : 1.119 s  
Press any key to continue.