

Task No. 1: Cube series without using power math function. (Use For loop).**Solution:**

```
using System;
using System.Linq;

namespace Hammad
{
    public static class Program
    {
        public static void Main()
        {
            for(int a =1;a<=10;a++)
            Console.WriteLine("{0} cube is:{1}\n",a,a*a*a);
        }
    }
}
```

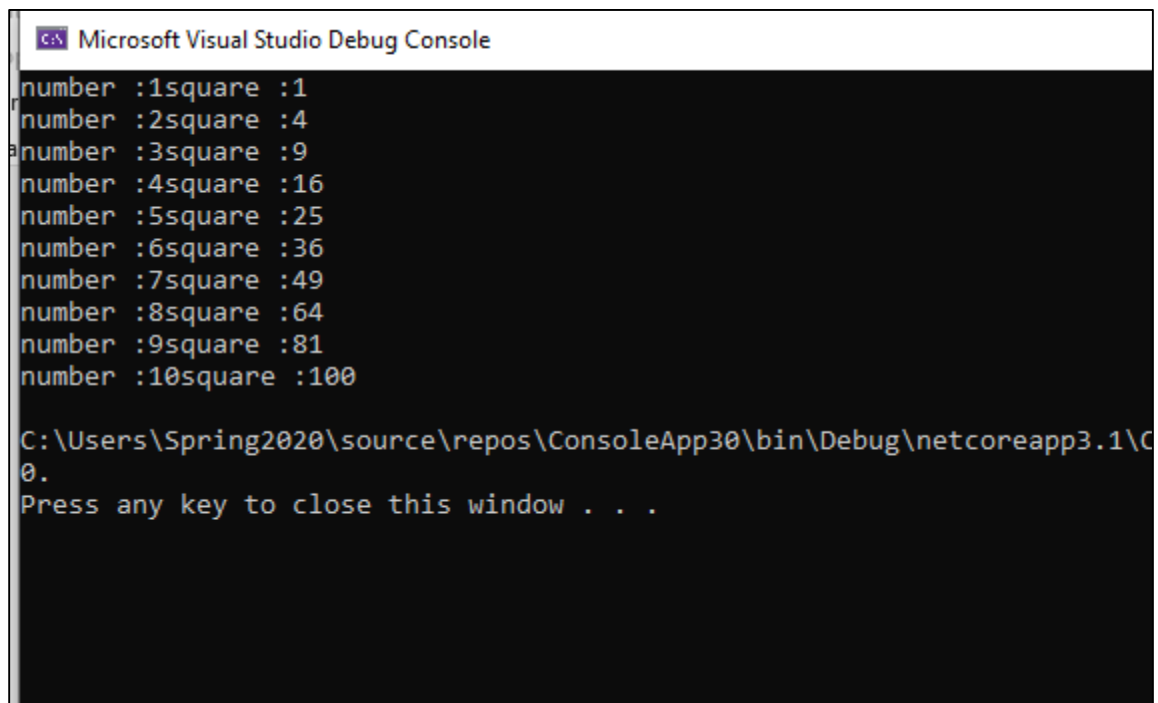
Output:

```
1 cube is:1
2 cube is:8
3 cube is:27
4 cube is:64
5 cube is:125
6 cube is:216
7 cube is:343
8 cube is:512
9 cube is:729
10 cube is:1000
```

Task No. 2: Square series without using power math function. (Use For loop)**Solution:**

```
using System;

namespace ConsoleApp30
{
    class Program
    {
        static void Main(string[] args)
        {
            for (int i = 1; i <= 10; i++)
            { Console.WriteLine("number :" + i + "square :" + i*i); }
        }
    }
}
```

Output:The image shows a screenshot of the Microsoft Visual Studio Debug Console. The title bar reads "Microsoft Visual Studio Debug Console". The console output displays a series of lines, each containing a number and its square, separated by a colon. The numbers range from 1 to 10. Below the output, the file path "C:\Users\Spring2020\source\repos\ConsoleApp30\bin\Debug\netcoreapp3.1\..." is visible, followed by a prompt "Press any key to close this window . . .".

```
Microsoft Visual Studio Debug Console

number :1square :1
number :2square :4
number :3square :9
number :4square :16
number :5square :25
number :6square :36
number :7square :49
number :8square :64
number :9square :81
number :10square :100

C:\Users\Spring2020\source\repos\ConsoleApp30\bin\Debug\netcoreapp3.1\...
Press any key to close this window . . .
```

Task No. 3: Repeatedly print the value of the variable x Value, decreasing it by 0.5 each time, as long as x Value remains positive.

Solution:

```
using System;
using System.Linq;
namespace Lab_6
{
    public static class Program
    {
        public static void Main()
        {
            Console.WriteLine("put the X value");
            double i = Convert.ToInt32(Console.ReadLine());
            for(double j=i;j>0;j-=0.5)
            { Console.WriteLine("X-0.5:"+j);
            }
        }
    }
}
```

Output:

```
put the X value
4
X-0.5:4
X-0.5:3.5
X-0.5:3
X-0.5:2.5
X-0.5:2
X-0.5:1.5
X-0.5:1
X-0.5:0.5
```

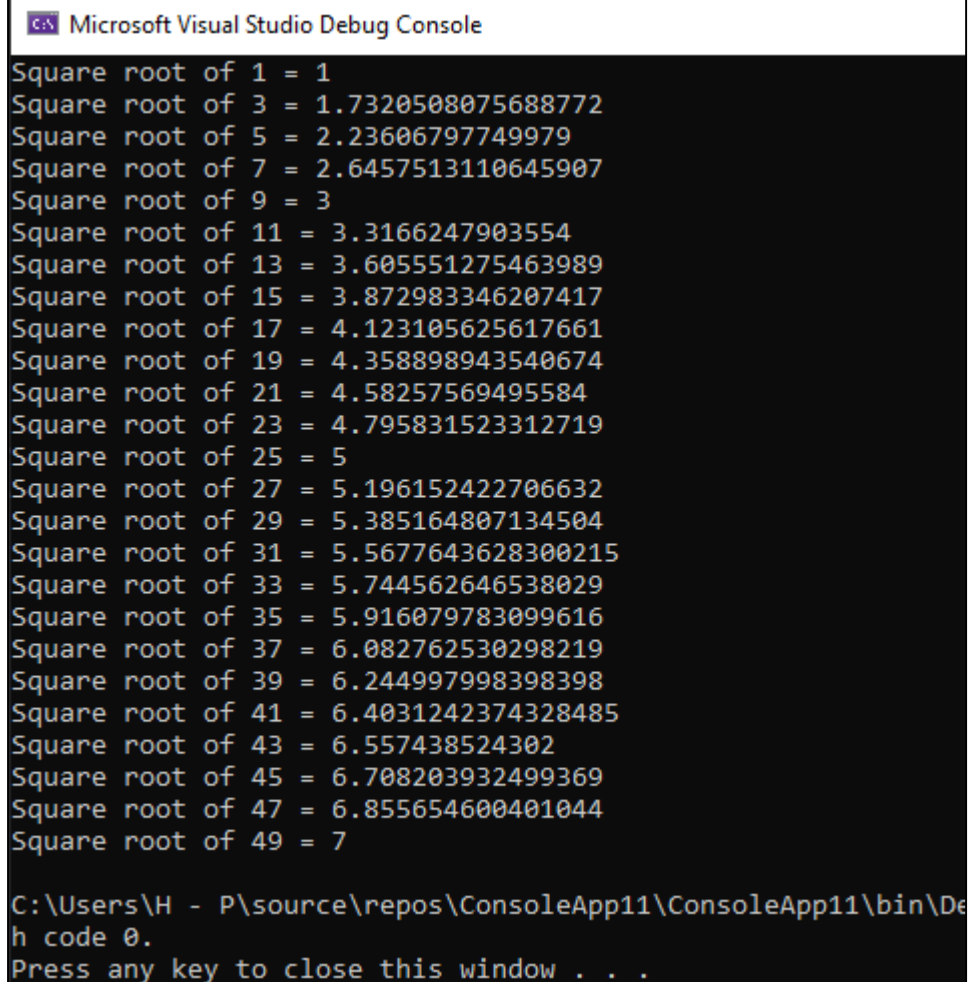
Task No. 4: Print the square roots of the first 25 odd positive integers.

Solution:

```
using System;

namespace ConsoleApp11
{
    class Program
    {
        static void Main(string[] args)
        {
            for (double i = 1, j = 1; i < 50; i += 2, j++)
            {
                Console.WriteLine("Square root of {0} = {1}", i, Math.Sqrt(i));
            }
        }
    }
}
```

Output:



Microsoft Visual Studio Debug Console

```
Square root of 1 = 1
Square root of 3 = 1.7320508075688772
Square root of 5 = 2.23606797749979
Square root of 7 = 2.6457513110645907
Square root of 9 = 3
Square root of 11 = 3.3166247903554
Square root of 13 = 3.605551275463989
Square root of 15 = 3.872983346207417
Square root of 17 = 4.123105625617661
Square root of 19 = 4.358898943540674
Square root of 21 = 4.58257569495584
Square root of 23 = 4.795831523312719
Square root of 25 = 5
Square root of 27 = 5.196152422706632
Square root of 29 = 5.385164807134504
Square root of 31 = 5.5677643628300215
Square root of 33 = 5.744562646538029
Square root of 35 = 5.916079783099616
Square root of 37 = 6.082762530298219
Square root of 39 = 6.244997998398398
Square root of 41 = 6.4031242374328485
Square root of 43 = 6.557438524302
Square root of 45 = 6.708203932499369
Square root of 47 = 6.855654600401044
Square root of 49 = 7

C:\Users\H - P\source\repos\ConsoleApp11\ConsoleApp11\bin\De
h code 0.
Press any key to close this window . . .
```

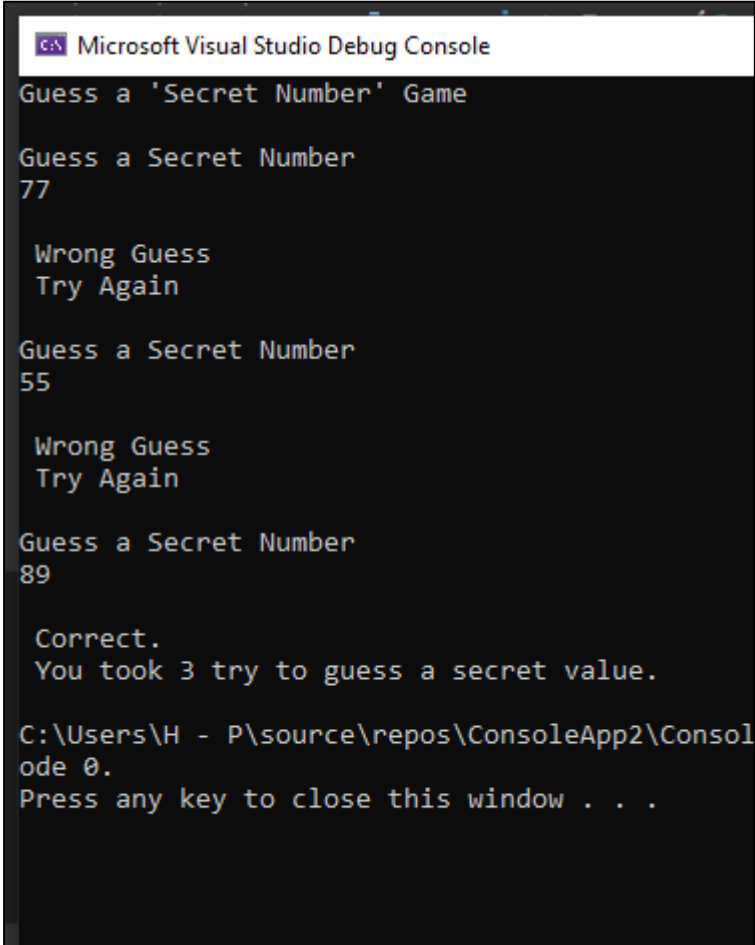
Task No. 5: Make a game in C#, in which give 5 tries to the user to guess the value of the number.

Solution:

```
using System;

namespace ConsoleApp2
{
    class Program
    {
        static void Main(string[] args)
        {
            int secret = 89, value, guess = 1;
            Console.WriteLine("Guess a \'Secret Number\' Game");
            for (int i = 0; i < 5; guess++, i++)
            {
                Console.WriteLine("\nGuess a Secret Number");
                value = int.Parse(Console.ReadLine());
                if (value == secret)
                {
                    Console.WriteLine("\n Correct.\n You took {0} try to guess a secret
value.", guess);
                    break;
                }
                else
                {
                    Console.WriteLine(" \n Wrong Guess \n Try Again");
                }
            }
        }
    }
}
```

Output:

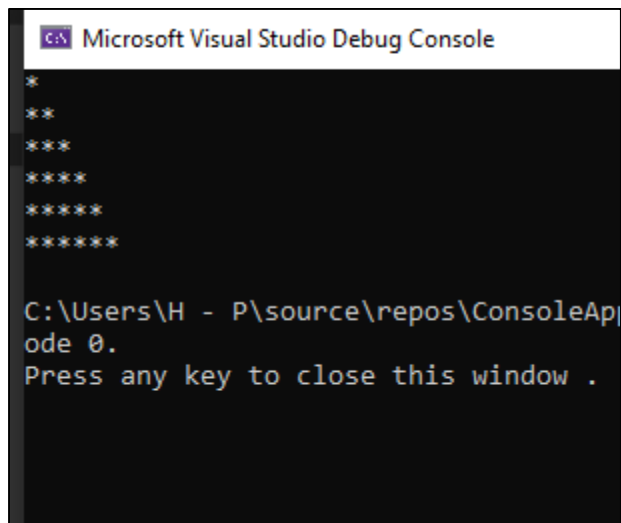


```
Microsoft Visual Studio Debug Console
Guess a 'Secret Number' Game
Guess a Secret Number
77
Wrong Guess
Try Again
Guess a Secret Number
55
Wrong Guess
Try Again
Guess a Secret Number
89
Correct.
You took 3 try to guess a secret value.
C:\Users\H - P\source\repos\ConsoleApp2\ConsoleApp2\Program.cs:10:
ode 0.
Press any key to close this window . . .
```

Task No. 6: Generate Stars using 2 for loops**Solution:**

```
using System;

namespace ConsoleApp3
{
    class Program
    {
        static void Main(string[] args)
        {
            for(int i=1;i<7;i++)
            {
                for (int j = 1; i > j; j++)
                {
                    Console.Write("*");
                }
                Console.WriteLine("*");
            }
        }
    }
}
```

Output:

Task No. 7: Write a program that reads from the console a positive integer number N ($N < 20$) and prints a matrix of numbers as on the figures below:

N = 3

1	2	3
2	3	4
3	4	5

N = 4.

1	2	3	4
2	3	4	5
3	4	5	6
4	5	6	7

Solution:

```
using System;

namespace ConsoleApp4
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("PLEASE ENTER ANY NUMBER 3 or 4");
            int num = Convert.ToInt32(Console.ReadLine());
            if (num <= 20)
            {
                for (int i = 1; i <= num; i++)
                {
                    for (int j = 0; j < num; j++)
                    {
                        Console.Write("{0} ", i + j);
                    }
                    Console.WriteLine(" ");
                }
            }
            else
            {
                Console.WriteLine("Invalid Input");
            }
        }
    }
}
```


Output:

```
Microsoft Visual Studio Debug Console
PLEASE ENTER ANY NUMBER 3 or 4
3
1 2 3
2 3 4
3 4 5

C:\Users\H - P\source\repos\ConsoleApp\bin\Debug\net8.0\ConsoleApp.exe
ode 0.
Press any key to close this window .
```

```
Microsoft Visual Studio Debug Console
PLEASE ENTER ANY NUMBER 3 or 4
4
1 2 3 4
2 3 4 5
3 4 5 6
4 5 6 7

C:\Users\H - P\source\repos\ConsoleApp\bin\Debug\net8.0\ConsoleApp.exe
ode 0.
Press any key to close this window
```

[Lab no. 06]

**[COMPUTER PROGRAMING]
[Introduction to LOOPS]**

[Lab no. 06]

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