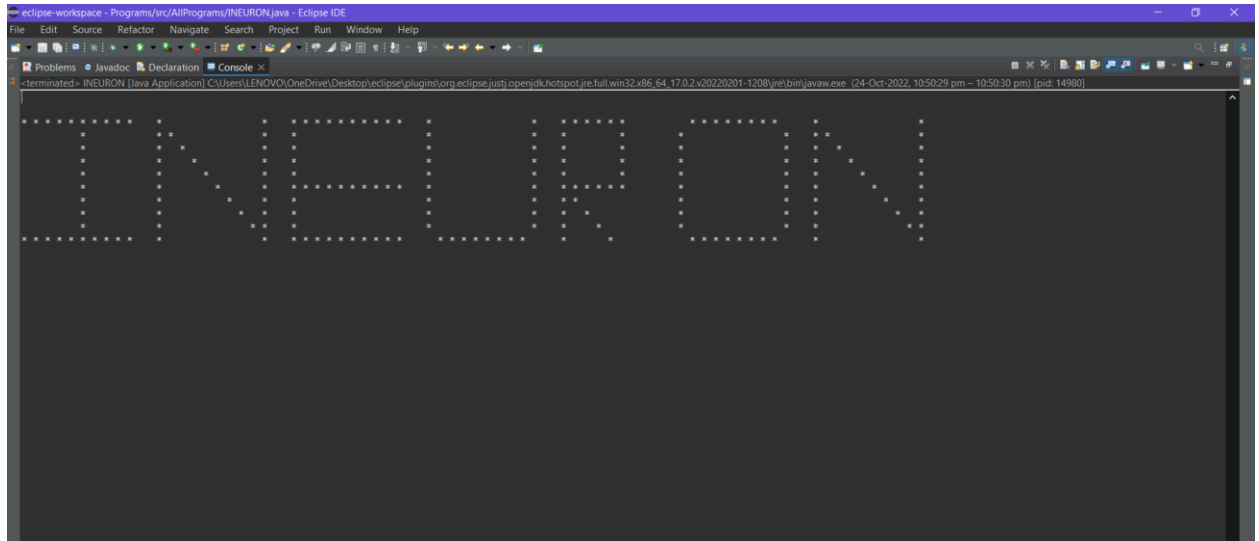
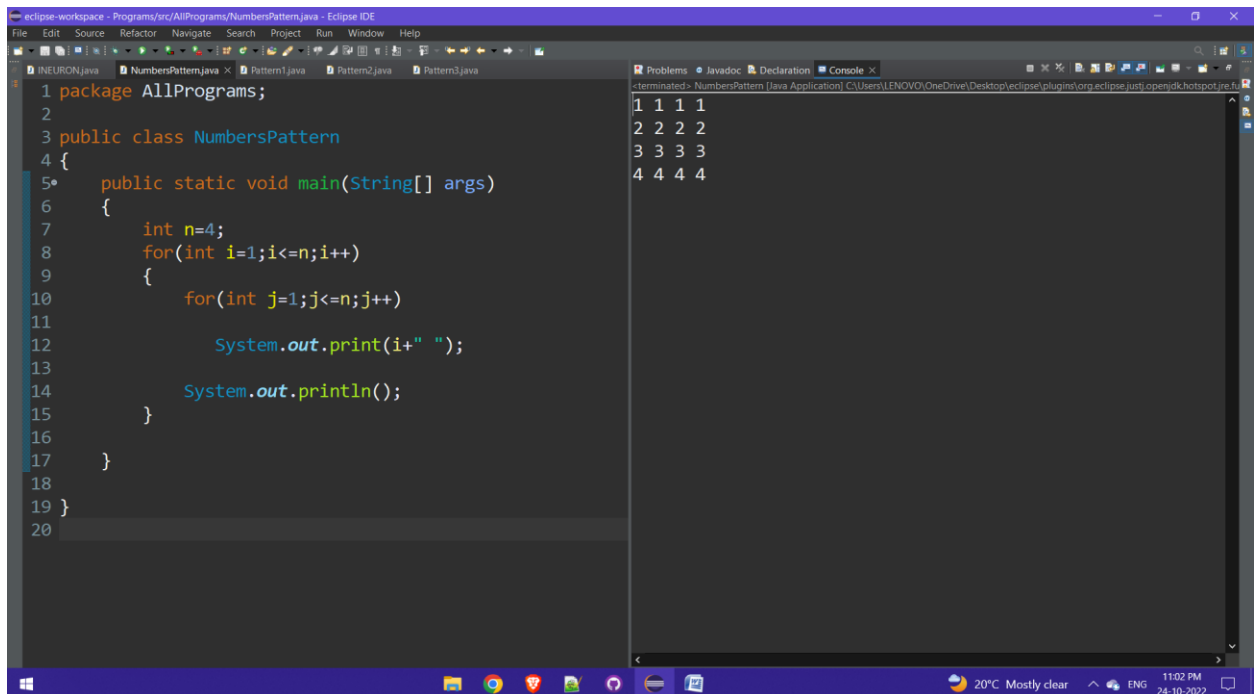


ASSIGNMENT - 1

1. INEURON



2. Number Pattern



The screenshot shows the Eclipse IDE interface. The left pane displays the source code for `Pattern1.java`:

```
1 package AllPrograms;
2
3 public class Pattern1
4 {
5
6     public static void main(String[] args)
7     {
8         int n=14;
9         for(int i=0;i<n;i++)
10        {
11            for(int j=0;j<n;j++)
12            {
13                if((i==0)||j==0||i+j<(n-1)/2||j-i>n/2||j==n-1||i==n-1)
14                    System.out.print(" * ");
15                else
16                    System.out.print("   ");
17            }
18            System.out.println();
19        }
20    }
21 }
```

The right pane shows the console output, which is a diamond-shaped pattern of asterisks:

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

The bottom status bar indicates the system temperature as 20°C, mostly clear weather, and the time as 11:02 PM on 24-10-2022.

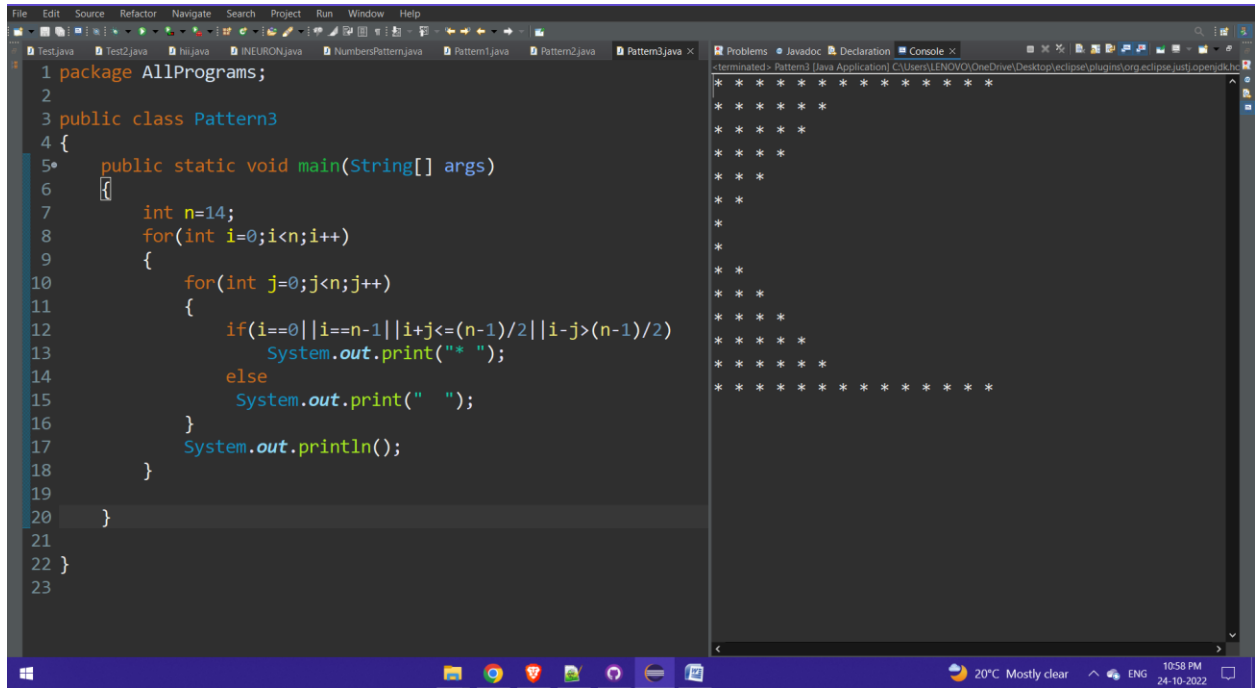
The screenshot shows the Eclipse IDE interface. The left pane displays the source code for Pattern2.java, which defines a main method that prints a diamond-shaped pattern of asterisks. The right pane shows the console output, which matches the pattern described in the code. The bottom status bar indicates the system time as 10:56 PM on 24-10-2022.

```
package AllPrograms;

public class Pattern2
{
    public static void main(String[] args)
    {
        int n=14;
        for(int i=0;i<n;i++)
        {
            for(int j=0;j<n;j++)
            {
                if(i-j>(n-1)/2||i==n-1||i==n-2||i+j>(n-1))
                    System.out.print("* ");
                else
                    System.out.print("  ");
            }
            System.out.println();
        }
    }
}
```

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

5. Pattern5



The screenshot shows the Eclipse IDE with a Java project. The main editor displays the source code for `Pattern3.java`, which is part of the `AllPrograms` package. The code defines a `main` method that prints a diamond-shaped pattern of asterisks. The pattern is 14 rows high, with the number of asterisks per row following a diamond shape: 1, 3, 5, 7, 9, 11, 13, 14, 13, 11, 9, 7, 5, 3, 1. The `main` method uses nested loops to calculate the positions of the asterisks based on the row and column indices.

```
1 package AllPrograms;
2
3 public class Pattern3
4 {
5     public static void main(String[] args)
6     {
7         int n=14;
8         for(int i=0;i<n;i++)
9         {
10             for(int j=0;j<n;j++)
11             {
12                 if(i==0||i==n-1||i+j<=(n-1)/2||i-j>=(n-1)/2)
13                     System.out.print(" * ");
14                 else
15                     System.out.print("   ");
16             }
17             System.out.println();
18         }
19     }
20 }
21
22 }
23
```

The right-hand side of the IDE shows the console output, which displays the diamond pattern of asterisks:

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

The bottom status bar indicates the system temperature is 20°C, mostly clear, and the time is 10:58 PM on 24-10-2022.