1.Problem Statement:

Print the following pattern displayed below.

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

2.Source code:

```java
/*Program to display the below expected pattern below

 *     *
  *   *
    *
  *   *
 *       *

    */
package mypackage;

public class DisplayPattern
{
      //Declaration of main method
 public static void main(String[] args)
  {
      //Declare the variable for total number of rows.
      int rows=5;
      System.out.println("The expected pattern to display:");
      System.out.println();

      //Loop to traverse to the total no of times to display the * and space
character.
      for(int i=0;i<rows;i++)
            {
                  for(int j=0;j<rows;j++)
                      {
                      if ((i==j) || j == rows-i-1)
                            //Displaying the * symbol
                            System.out.print("*");
                      else {
                            //Printing the space character
                        System.out.print(" ");
                      }
                  }
                //To insert a new line
            System.out.println();
          }
      }

}//End of the program
```
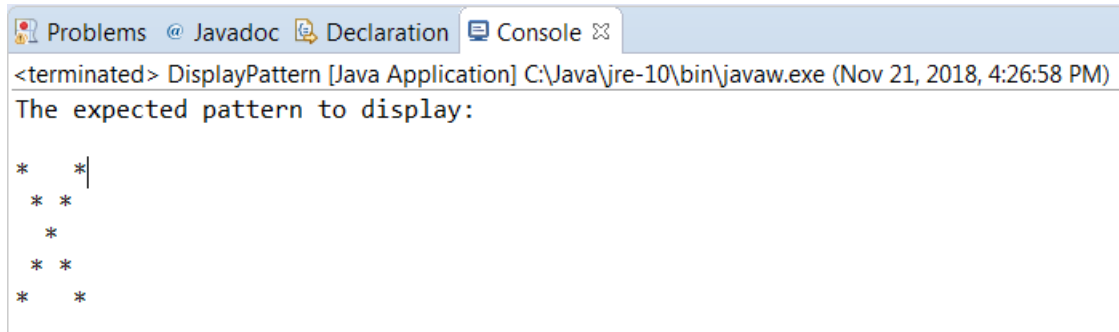
3.Output:

```
The expected pattern to display:

*    *|
 *  *
   *
 *  *
*    *
```

4.Additional Information:

Initially an integer variable is declared and assigned as 5. To display the expected pattern in total of 5 rows , a for loop is written and inside this for loop, another for loop is written to determine the position where exactly the symbol '*' and space character can be displayed based on the if condition .Finally output heading is displayed along with expected pattern.