Pattern Programming Examples

Star_Vertical.java | Star_Horizontal.java

```java
package Star_Examples;

public class Star_Vertical
{
        //*
        //*
        //*
        //*
    public static void main(String[] args)
    {
        for (int i=1; i<=4; i++)
        {
            System.out.println("*");
        }
    }

}
```

Console

<terminated> Star_Verti

```
*
*
*
*
```

Star_Vertical.java | Star_Horizontal.java

```java
package Star_Examples;

public class Star_Horizontal
{
    //*****
    public static void main(String[]args)
    {
        for (int i=1; i<=4; i++)
        {
            System.out.print("*");
        }
    }
}
```

Console

<terminated> Star_Hori

```
****
```

Star_Vertical.java | Star_Horizontal.java | *Star_Box.java

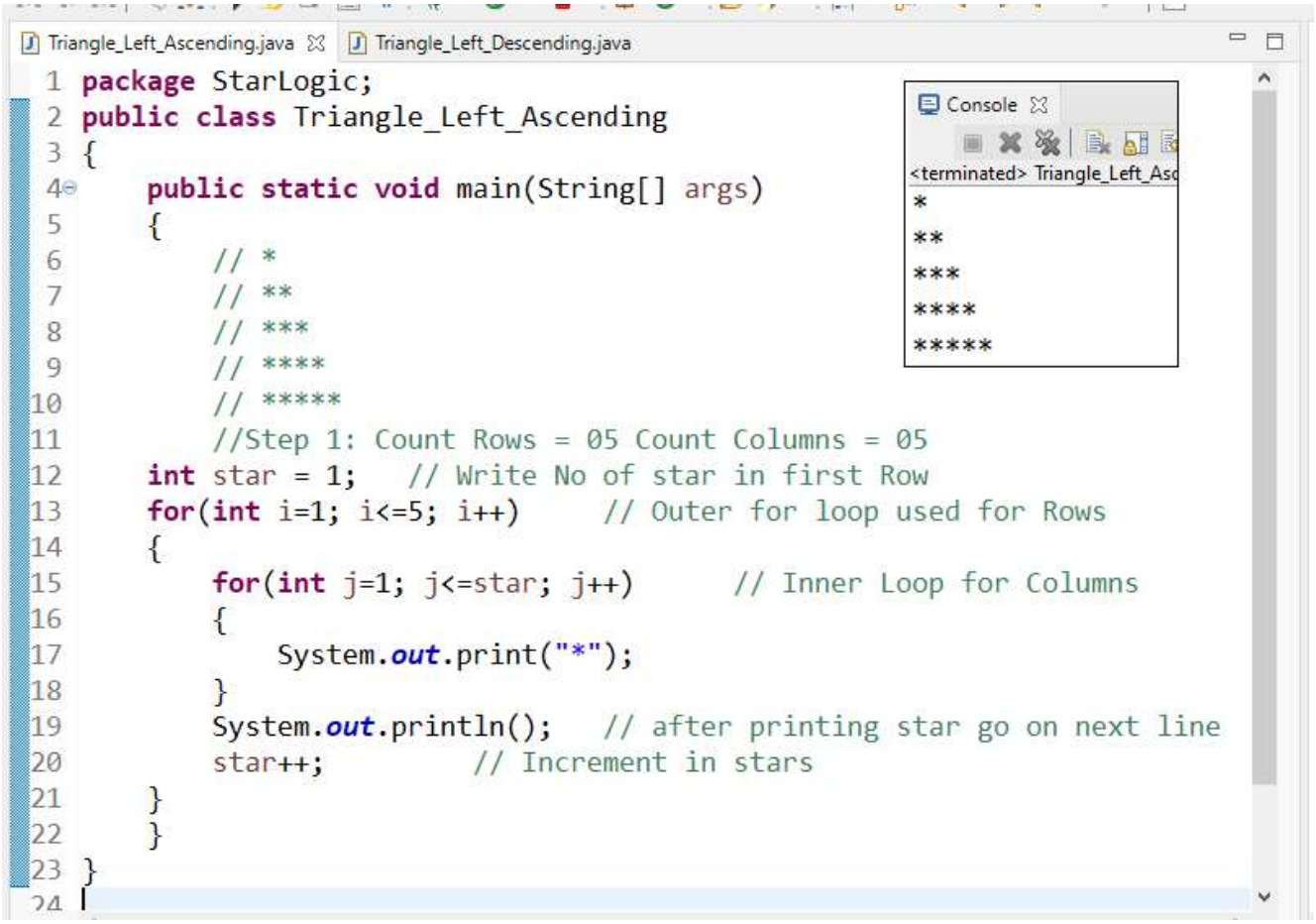
```java
package Star_Examples;

public class Star_Box
{
    //*****     // Rows = 3
    //*****     // Columns = 5
    //*****     // Always Start with Rows (Outer loop)

    public static void main(String[] args)
    {
        // outer for loop for rows (Count rows) Here rows = 3
        for (int i=1; i<=3; i++)
        {
            //inner loop for columns ( Count columns) Here Col = 5
            for (int j=1; j<=5; j++)
            {
                System.out.print("*");  // Note : Use (Print) only
            }
            System.out.println();       // On next line use println
        }

    }
}
```

Console

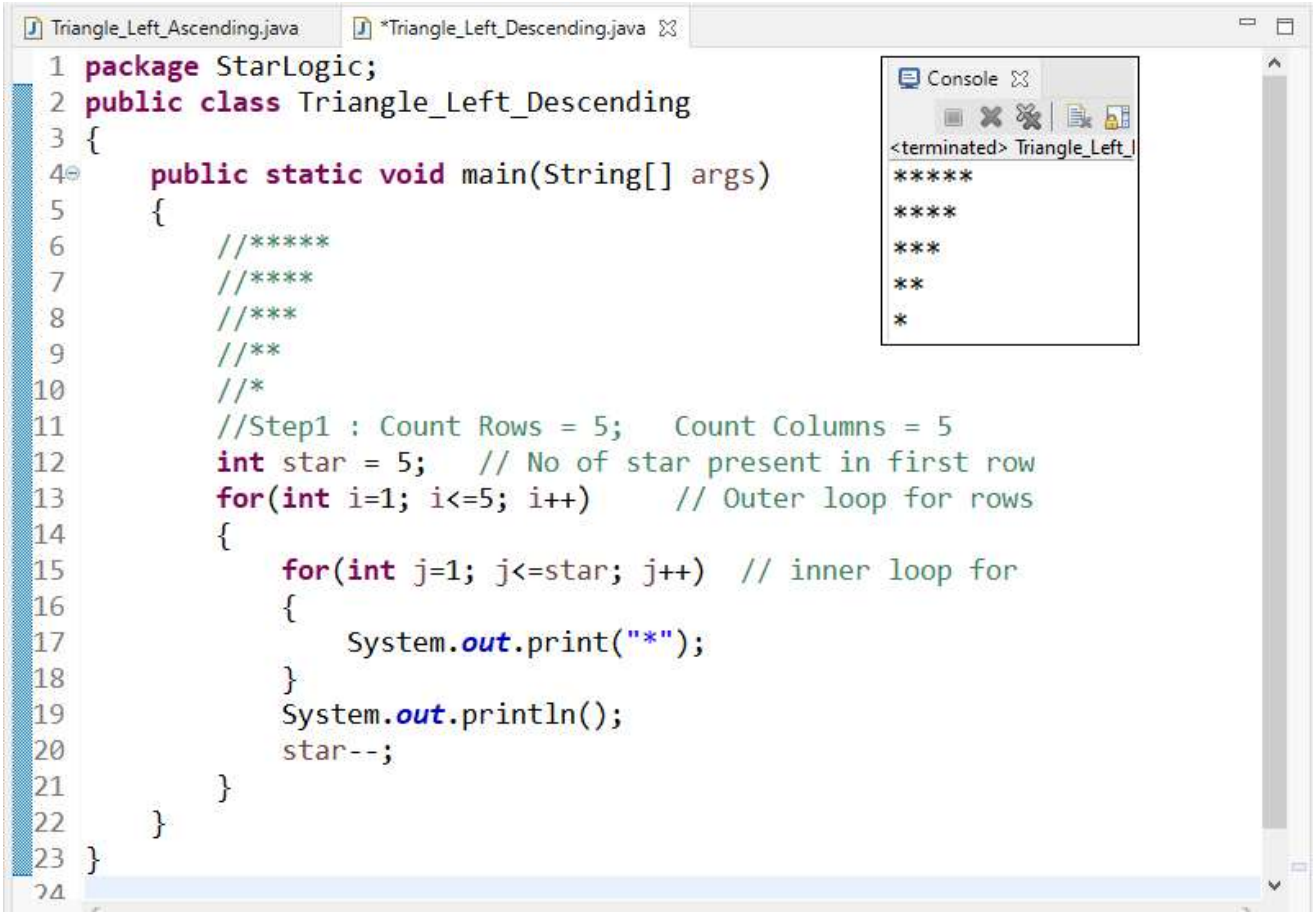
<terminated> Star_B

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

```java
package StarLogic;
public class Triangle_Left_Ascending
{
	public static void main(String[] args)
	{
		// *
		// **
		// ***
		// ****
		// *****
		//Step 1: Count Rows = 05 Count Columns = 05
		//
	int star = 1; // Write No of star in first Row
	for(int i=1; i<=5; i++)     // Outer for loop used for Rows
	{
		for(int j=1; j<=star; j++)       // Inner Loop for Columns
		{
			System.out.print("*");
		}
		System.out.println();   // after printing star go on next line
		star++;             // Increment in stars
	}
	}
}
```



```java
package StarLogic;

public class Triangle_Left_Descending
{
    public static void main(String[] args)
    {
        //*****
        //****
        //***
        //**
        //*
        //Step1 : Count Rows = 5;   Count Columns = 5
        int star = 5; // No of star present in first row
        for(int i=1; i<=5; i++)     // Outer loop for rows
        {
            for(int j=1; j<=star; j++)  // inner loop for
            {
                System.out.print("*");
            }
            System.out.println();
            star--;
        }
    }
}
```



```java
package StarLogic;
public class E6_Triangle_Right_Descending {
	public static void main(String[] args) {
	//*****
	// ****
	//  ***
	//   **
	//    *
		int space = 0;		// On the First Row there is no space, space = 0;
		int star = 5;		// Outer Loop for the No of Rows = 5
	 for (int i=1; i<=5; i++)
	 {
		 for (int j=1; j<=space; j++ )//1st consider inner for loop for the Space
		 {
			 System.out.print(" ");// Use Single Space and on Print for Inner For Loop
		 }
		 for (int j=1; j<=star; j++)
		 {
			 System.out.print("*");
		 }
	System.out.println();
	space++;
	star--;

	 }
	}
}
```

```java
package StarLogic;
public class E7_Triangle_Right_Acending {
	public static void main(String[] args) {
		//    *
		//   **
		//  ***
		// ****
		//*****
		int space = 4;		// Space in first row, space = 4
		int star = 1;		// star on first row, star = 1
		for(int i=1; i<=5; i++)		// Outer loop for No of Rows = 5
		{
			for(int j=1; j<= space; j++)	// 1st inner loop : Space
			{
				System.out.print(" ");		// Don't Use Println()
			}
			for(int j=1; j<= star; j++)
			{
				System.out.print("*");
			}
		System.out.println();
		space--;
		star++;
		}
	}
}
```

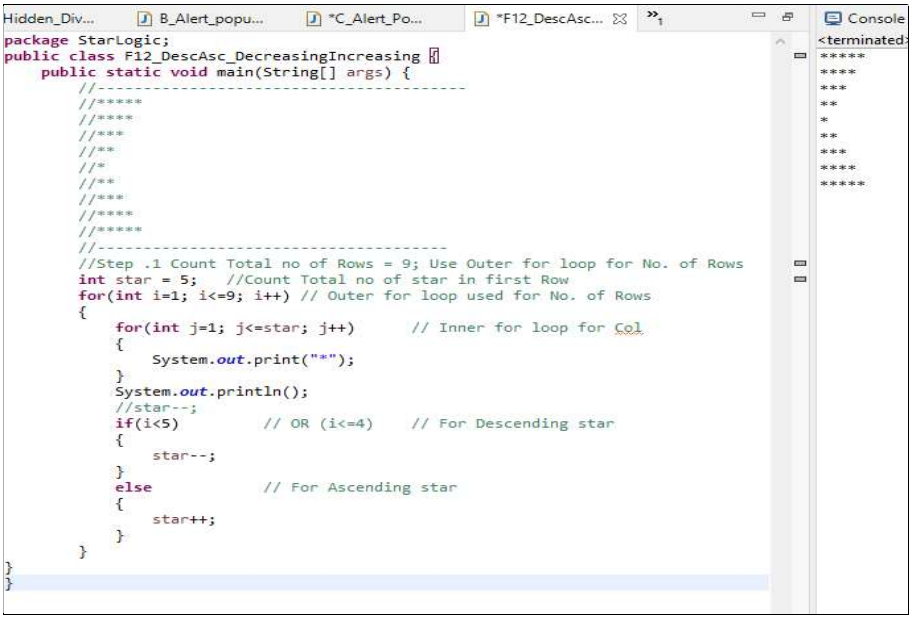
```java
package StarLogic;
public class E8_Equilateral_Downward{
	public static void main(String[] args){
		//*******
		// *****
		//  ***
		//   *
		int space=0;
		int star=7;
		for(int i=1; i<=4; i++)          // Outer For Loop; Rows= 4
		{
			for(int j=1; j<=space; j++)      // Inner for Loop
			{
				System.out.print(" ");
			}
			for(int j=1; j<=star; j++)       // Inner for Loop
			{
				System.out.print("*");
			}
			System.out.println();
			space++;              // Increment of Space by 1
			star = star-2;        // Decrement of Star by 2
		}
	}
}
```

```java
package StarLogic;

public class E9_EquilateralTriagle_Upward
{	public static void main(String[] args)
	{
		//   *
		//  ***
		// *****
		//*******

		int space=3;
		int star=1;
		for(int i=1; i<=4; i++)    // Outer For loop; Rows=4;
		{
			for(int j=1; j<=space; j++)
			{
				System.out.print(" ");
			}
			for(int j=1; j<=star; j++) // Inner For loop; Column;
			{
				System.out.print("*");
			}
			System.out.println();
			space--;
			star=star+2;
		}
	}
}
```

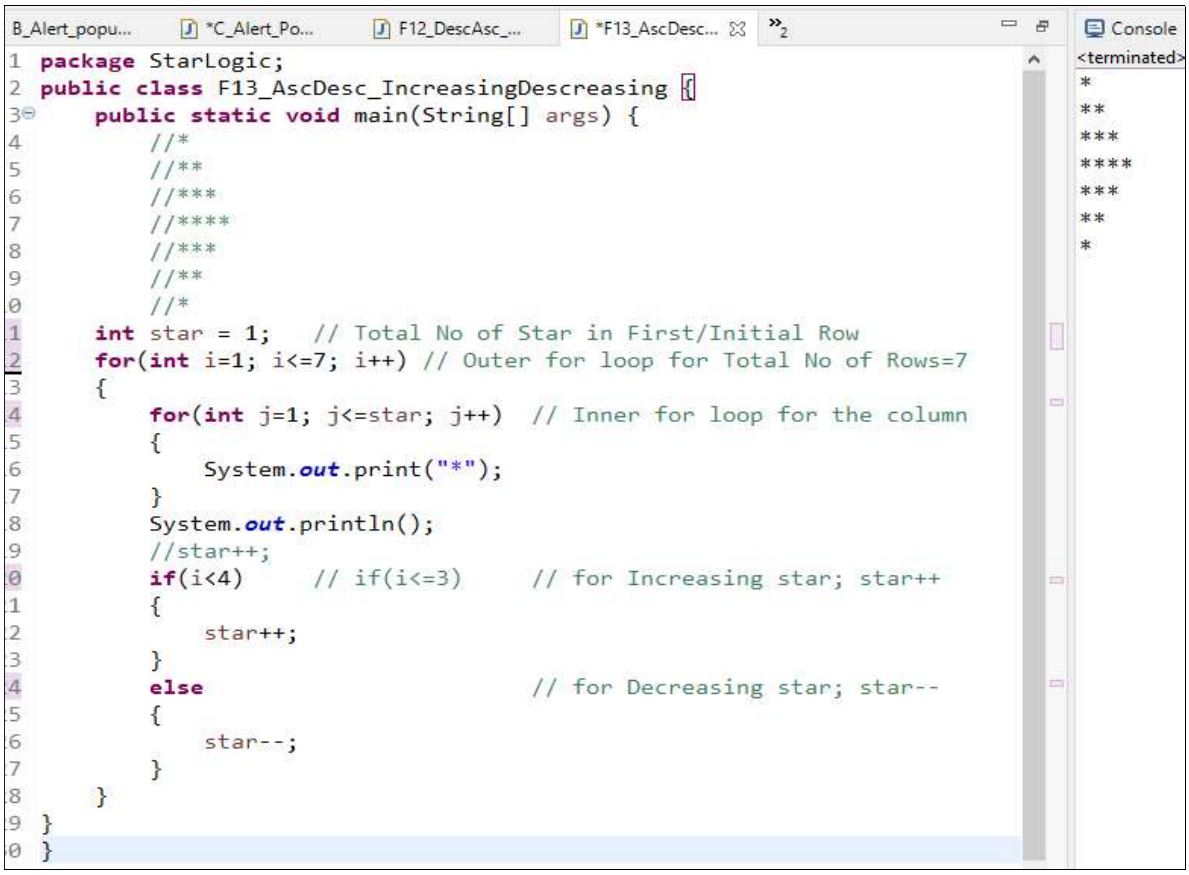
```java
package StarLogic;
public class E10_EquilateralTriangle_Upward_WithSpacing
{    public static void main(String[] args) {
          // Equilateral Triangle Upward With Space
          //    *
          //   * *
          // * * *
          //* * * *
          int space=3;
          int star=1;
          for(int i=1; i<=4; i++)          // Outer for loop for the no of Rows
          {
               for(int j=1; j<=space; j++)      // Inner For Loop for Space
               {
                    System.out.print(" ");
               }
               for(int j=1; j<=star; j++)       // Inner For Loop for star
               {
                    System.out.print("* ");
               }
               System.out.println();
               space--;
               star++;
          }
     }
}
```

```java
package StarLogic;
public class E11_EquilateralTriangle_Downward_WithSpacing
{    public static void main(String[] args)
     {    // Equilateral Triangle Downward With Space
          //* * * * *
          // * * * *
          //  * * *
          //   * *
          //    *
          int space = 0;        // No of Space in First Row
          int  star = 5;        // No of Starts in First Row
          for(int a=1; a<=5; a++)               // Outer For Loop
          {
               for(int b=1; b<=space; b++)      //Inner For Loop
               {
                    System.out.print(" ");
               }
               for(int c=1; c<=star; c++)       //Inner For Loop
               {
                    System.out.print("* ");
               }
               System.out.println();
               space++;
               star--;
          }
     }
}
```

```java
package StarLogic;
public class F12_DescAsc_DecreasingIncreasing {
	public static void main(String[] args) {
		//----------------------------------------
		//*****
		//****
		//***
		//**
		//*
		//**
		//***
		//****
		//*****
		//---------------------------------------

		//Step .1 Count Total no of Rows = 9; Use Outer for loop for No. of Rows

		int star = 5;    //Count Total no of star in first Row
		for(int i=1; i<=9; i++)    // Outer for loop used for No. of Rows
		{
			for(int j=1; j<=star; j++)       // Inner for loop for Col
			{
				System.out.print("*");
			}
			System.out.println();
			//star--;
			if(i<5)               // OR (i<=4)    // For Descending star
			{
				star--;
			}
			else             // For Ascending star
			{
				star++;
			}
		}
}
}
```



```java
package StarLogic;
public class F13_AscDesc_IncreasingDescreasing {
	public static void main(String[] args) {
		//*
		//**
		//***
		//****
		//***
		//**
		//*
	int star = 1;    // Total No of Star in First/Initial Row
	for(int i=1; i<=7; i++)     // Outer for loop for Total No of Rows=7
	{
		for(int j=1; j<=star; j++) // Inner for loop for the column
		{
			System.out.print("*");
		}
		System.out.println();
		//star++;
		if(i<4)          // if(i<=3)           // for Increasing star; star++
		{
			star++;
		}
		else                                // for Decreasing star; star--
		{
			star--;
		}
	}
}
}
```



```java
package StarLogic;
public class F14_ButterFly {
	public static void main(String[] args) {
		//*         *
		//**       **
		//***     ***
		//****   ****
		//***** *****
		//****   ****
		//***     ***
		//**       **
		//*         * ( Remember : Star Space Space Star)

		int star = 1;    // Star on the first Row Left
		int space = 5;   // Space on the first Row Left
		int star2 = 1;   // Star on the first Row Right
		int space2 = 4;  // Space on the first Row Right

		for(int i=1; i<=9; i++)    //Outer for loop used for No. of Rows = 9
		{
			for(int j=1; j<=star; j++) // Inner For loop for Star(Left)
			{
				System.out.print("*");
			}
			for(int k=1;k<=space; k++) // Inner For loop for space(Left)
			{
				System.out.print(" ");
			}
			for(int m=1; m<=space2; m++)
			{
				System.out.print(" ");
			}
			for(int l=1; l<=star2;l++)
			{
				System.out.print("*");     // Inner For loop for Star(Right)
			}

			if(i<5)
			{
				star++;
				space--;
				star2++;
				space2--;
			}
			else
			{
				star--;
				space++;
				star2--;
				space2++;
			}
			System.out.println();
		}
		}}----------------------------------------------------------------------
```