

CS101

Section 4 & 5

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Quiz No. 2

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```
public static void main(String[] args) {
```

```
    // For quick online compilations you may try http://www.jdoodle.com/ (much stable than tutorialPoints).
```

```
    // y is our input
```

```
    int y = 7;
```

```
    // Section 4 - Q1
```

```
    for (int i = y; i > 0; i -= 2)
```

```
    {
```

```
        for (int j = (y - i) / 2; j > 0; j--) // having (y-i)/2 to satisfy the needed amount of spaces
```

```
        {
```

```
            System.out.print(" ");
```

```
        }
```

```
        for (int k = 1; k < i + 1; k++)
```

```
        {
```

```
            System.out.print("*");
```

```
        }
```

```
        System.out.print("\n");
```

```
    }
```

```
    // Section 4 - Q4
```

```
    for (int i = 0; i < y; i += 2)
```

```
    {
```

```
        for (int j = (y - i) / 2; j > 0; j--) // having (y-i)/2 to satisfy the needed amount of spaces
```

```
        {
```

```
            System.out.print(" ");
```

```
        }
```

```
        for (int k = 1; k <= i + 1; k++)
```

```
        {
```

```
            System.out.print("*");
```

```
        }
```

```
        System.out.print("\n");
```

```
    }
```

// Section 5 - Q1

```
for (int i = 1; i <= y; i++)
{
    if( i <= (y / 2) + 1) // checks whether the number of stars is greater than 4 or not
    {
        for (int k = 0; k < i; k++)
        {
            System.out.print("* ");
        }
    }
    else{//prints after 4 stars
        for (int k = (y - i) + 1; k > 0; k--)
        {
            System.out.print("* ");
        }
    }
    System.out.print("\n");
}
```

// Section 5 - Q4

```
int first = y / 2; //first half
int second = 1; //second half
```

```
for ( ; first > 0 ; first--)
{
    for ( int i = first; i > 0; i--)
        System.out.print(" "); // double space to arrange the triangle shape
    for ( int j = second; j > 0; j--)
        System.out.print(" * ");
    second++;
    System.out.print("\n");
}
for ( ; second > 0; second--)
{
    for(int i = first; i > 0; i--)
        System.out.print(" "); // double space to arrange the triangle shape
    first++;
    for ( int j = second; j > 0; j--)
        System.out.print(" * ");
    System.out.print("\n");
}
}
```

Outputs:

*

*

*

* *

* * *

* * * *

* * *

* *

*

*

* *

* * *

* * * *

* * *

* *

*