

Data types

numeric data types

int - 1 byte

short - 16 bits 2 bytes

float - 0.5f;
double

decimal numbers. float will have f at end.

double stores 8 bytes while float 4 bytes

Char. one letter

boolean. true/false

non-numeric

char

boolean

Concatenation

Joining 2 things together

"Hello" + "World" + num 1

num 1 = 15

= Hello World 15

Comments

// single line comments

/* multiple line comments

*

*

*/

Keywords

These words are referenced in Java. You can not change them or take them out of place.

Using Scanner for user input

```
import java.util. Scanner
```

```
Scanner sc = new Scanner(System.in);
```

```
System.out.println ("Enter name");  
String name = sc.next();
```

If, if else statements

```
if (x > 100) {
```

```
.....
```

```
else if (x == 200) { };
```

You use else if, when you want only one answer. eg 72 will be >70, >60 etc.

Nested 'if' statements

An 'if' statement in an 'if' statement.

Switch Statement

Switch statements are executed line by line and they have 'break' at the end of each code.

If statement found, then it will stop, if not then it will return default.

Use when
required data
not found

```
1 package switchStatement;
2
3 public class switchStatement {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         char grade = 'D';
8         switch(grade)
9         {
10            case 'A' :
11                System.out.println("Excellent");
12                break;
13            case 'B' :
14                System.out.println("Very Good");
15                break;
16            case 'C' :
17                System.out.println("Good");
18                break;
19            default:
20                System.out.println("Error");
21        }
22        System.out.println("Your grade is " + grade);
23    }
24 }
25
```

'While' loop

```
1 package loopWhile;
2
3 public class loopWhile {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         int x = 35;
8         while(x > 29)
9         {
10            System.out.println("hello" + x);
11            x--;
12        }
13    }
14 }
15 }
16
```

will print until
 $x == 29$.

will print
the first value

```
1 package doWhile;
2
3 public class doWhile {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         int x = 15;
8         do {
9             System.out.println(x);
10            x++;
11            System.out.println("\n");
12        } while ((x < 15));
13    }
14
15 }
16
17
18
```

For loop

```
1 package forLoop;
2
3 public class forLoop {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         for(int x = 15; x < 30; x++)
8         {
9             System.out.println(x);
10        }
11    }
12 }
13
14 }
15
```

Arrays

```

1 package arrays;
2
3 public class arrays {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         int[] numbers = {5,10,15,20};
8         for(int x : numbers) {
9             System.out.println(x + ",");
10        }
11    }
12 }
13
14 }
15

```

Problems Javadoc Declaration Console

<terminated> arrays [Java Application] /Library/Java/JavaVirtualMachines/jdk-13.jdk/Contents/Home/bin/java (10 Nov 2019, 22:4

5,
10,
15,
20,

- 1) Declare type of array followed by `[]` then name { values } ,
- 2) for (type ^{name} : name) {
- 3) print

Break statement

Terminates a code.

Continue statement

```

1 package arrays;
2
3 public class arrays {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         int[] numbers = {10,15,20,25};
8         for(int x : numbers) {
9             if(x == 20) {
10                continue;
11            }
12            System.out.println(x);
13        }
14    }
15 }
16
17 }
18

```

Problems Javadoc Declaration Console

<terminated> arrays [Java Application] /Library/Java/JavaVirtualMachines/jdk-13.jdk/Contents/Home/bin/java (10 Nov 2019, 23:44:32)

10
15
25

- skips 20, then continues with rest of the array list.

Conditional Operator

```
2
3 public class operatorConditional {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         int a, b;
8         a = 20;
9
10        b = (a==15)? 30:70;
11        System.out.println(b);
12        b = (a==20) ? 15:35;
13        System.out.println(b);
14    }
15
16 }
17
```

Handwritten note: if true b = 30 else 70

Problems | Javadoc | Declaration | Console

<terminated> operatorConditional [Java Application] /Library/Java/JavaVirtualMachines/jdk-13.jdk/Contents/Home/bin/java (10 Nov 2019, 23:59:08)

70
15

```
1 package evenNumber;
2 import java.util.*;
3
4 public class evenNumber {
5
6     public static void main(String[] args) {
7         // TODO Auto-generated method stub
8         int x;
9         System.out.println("Please insert a number!!");
10        Scanner sc = new Scanner(System.in);
11        x = sc.nextInt();
12
13        if (x%2 ==0) {
14            System.out.println("This number is even");
15        }
16        else
17            {System.out.println("this number is odd");
18        }
19    }
20
21 }
22
23
24
```

Problems | Javadoc | Declaration | Console

<terminated> evenNumber [Java Application] /Library/Java/JavaVirtualMachines/jdk-13.jdk/Contents/Home/bin/java (11 Nov 2019, 13:17:39)

Please insert a number!!
5
this number is odd