



# Workshop

HocoHacks 2020

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# Main Method

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

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# Variable Types

## Most Commonly Used

- Int
- Boolean
- String
- Double

```
int number = 0;
```

```
double decimal = 1.6652;
```

```
boolean bool = false;
```

```
String name = "Joshua";
```

```
//change value of variables
```

```
number = 160;
```

```
decimal = 1.2345;
```

```
bool = true;
```

```
String name = "Joshua";
```

---

# Printing to Console

- `Println`: Output to next line
- `Print`: Output to same line

```
System.out.println("Example 1");
```

```
System.out.print("Example 2");
```

---

# Parts to a Method

- public - visibility
  - Can you see it in other classes or not
- static - instance of a class ?
  - Static for ease right now
- void - return type
  - Include: Integer, string, double...
- method - name of the method
- int p1, String p2 - parameters
  - Variables given to the method to use
- int, String - type of parameter

```
public static void method( int p1, String p2){  
  
}
```

# Conditionals

- Operators

- `a > b`
- `a >= b`
- `a < b`
- `a <= b`
- `a == b`

```
if (one >= two){
```

```
    System.out.println("Number one is  
greater than number two!");
```

```
}else if (one <= two){
```

```
    System.out.println("Number two is  
greater than number one!");
```

```
}else if (one == two){
```

```
    System.out.println("These Numbers are  
the same!");
```

```
}else {
```

```
    System.out.println("Error");
```

```
}
```

# Operators for Calculations

- Addition (+)
- Subtraction (-)
- Multiplication (\*)
- Division (/)
- Modulus (%)
  - the remainder of dividing two things

```
result1 = num1 + num2;
```

```
result2 = num1 - num2;
```

```
result3 = num1 * num2;
```

```
result4 = num1 / num2;
```

```
result5 = num1 % num2;
```

---

# Loops

- For Loop
- While/ Do While Loop

```
int start = 0;

while (start <= countNumber) {

    start = start + 1;

}

for (int i = 0; i <= countNumber; i++) {

    System.out.println(i);

}
```

---



# Arrays

- Initialize and declare all elements in array
- Initialize Array for Future Use
- Collections

```
int[] declared = {1,2,3,4,5,6,7,8,9,10};
```

//computer will have 10 spots in memory for the empty array

```
int[] empty = new int[10];
```

```
for (int i : declared) {
```

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

```
}
```

---

# Input with Scanner

- Must import scanner first outside class
- To use with types other than Strings:
  - nextInt()
  - nextDouble()
  - nextBoolean()

```
import java.util.Scanner;

class sample {

    public static void input() {

        Scanner myObj = new
        Scanner(System.in);
        String name = myObj.nextLine();

    }

}
```

---

# QUESTIONS?

For any Java assistance needed during the hackathon, please contact our Helpdesk or visit websites like Stack Overflow!