

Chapter 9

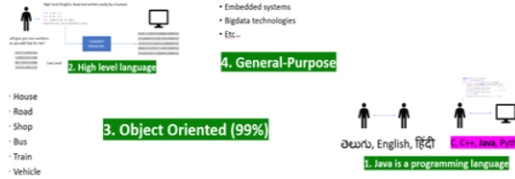
Write your first Java Application



Other courses in our channel

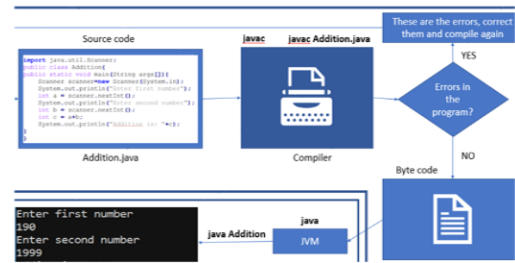
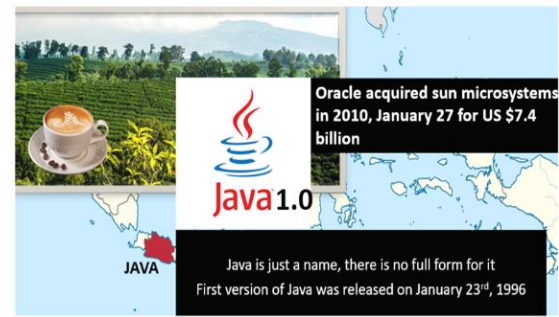
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What is Java?

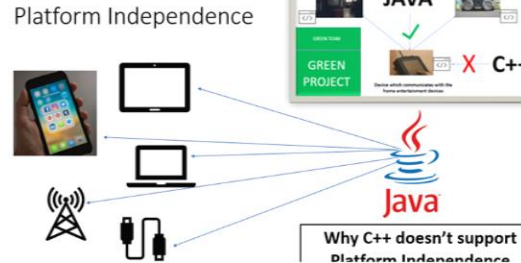


Java is a high level, general-purpose, class-based, object-oriented programming language

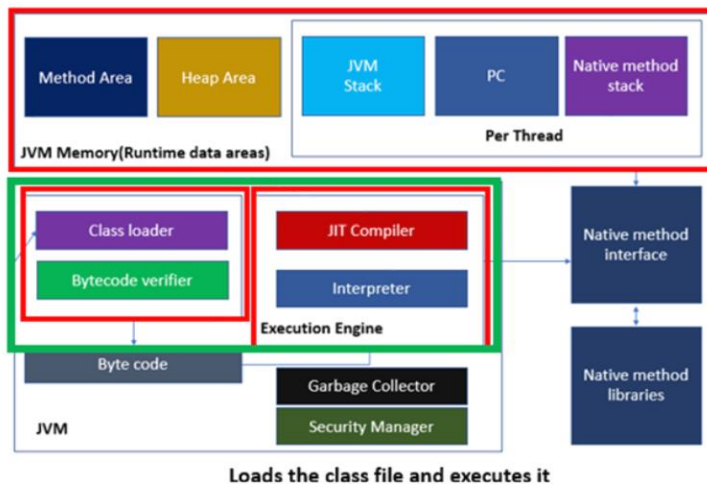
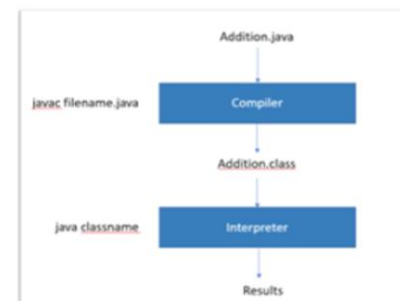
Invented a complete new language



Platform Independence



1. Class loader subsystem
2. Runtime data areas
3. Execution Engine



Write your first Java Application

jdk-18_windows-x64_bin

Let's Install Java (JDK)

Program ?

Program is a set of instructions used to perform a **task**

In order to develop an application we need to create programs

```
import java.util.Scanner;
public class Addition{
    public static void main(String args[]){
        Scanner scanner=new Scanner(System.in);
        System.out.println("Enter first number");
        int a = scanner.nextInt();
        System.out.println("Enter second number");
        int b = scanner.nextInt();
        int c = a+b;
        System.out.println("Addition is: "+c);
    }
}
```



Will create a project to develop this application



Suresh Techs Software Solutions

Application, is short **app**,
is a **software** that **performs**
specific tasks for an end user

Software Engineers
Employees

Difference between a program, package, library & application?

Our goal - print below message to the console

Welcome to Suresh techs, I am learning Java.

My name is Hareesh, I will get job soon

1

2

3

4

"Suresh techs" is 5 star

Terminal / Console / Command prompt

Home = Application

Hall

Hall.java

Bedroom

Bedroom.java

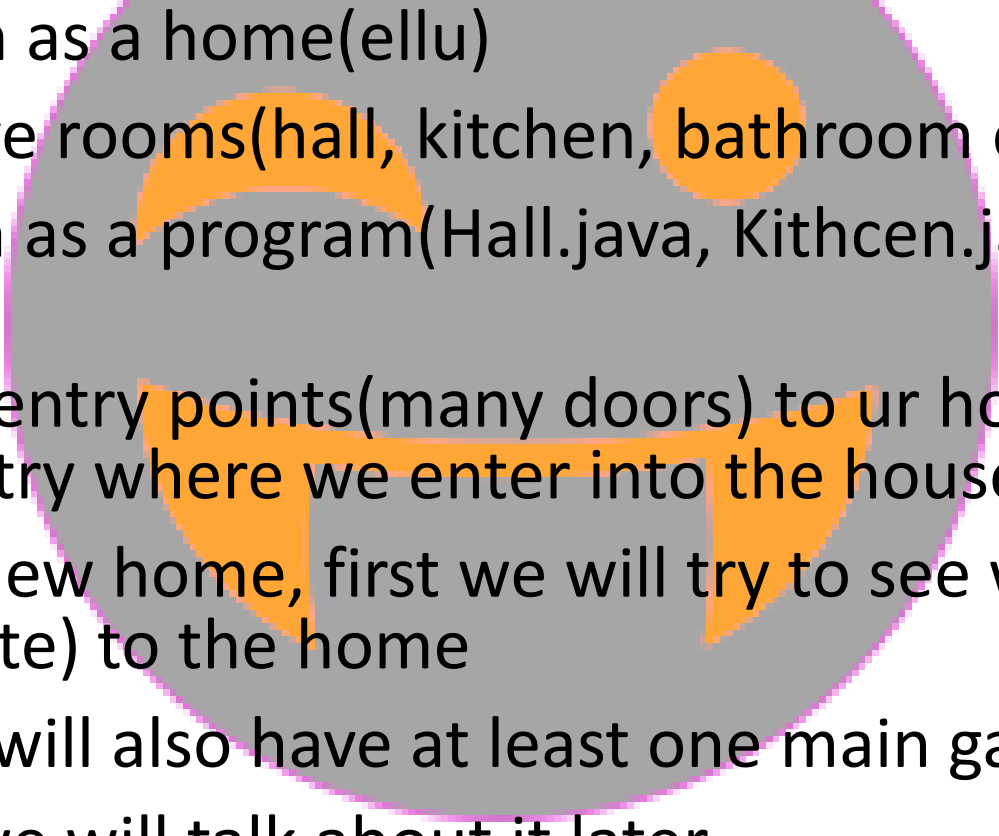
Kitchen

Kitchen.java



Main gate = Entry point

**Every application will have an entry point(main gate)
from where execution starts**

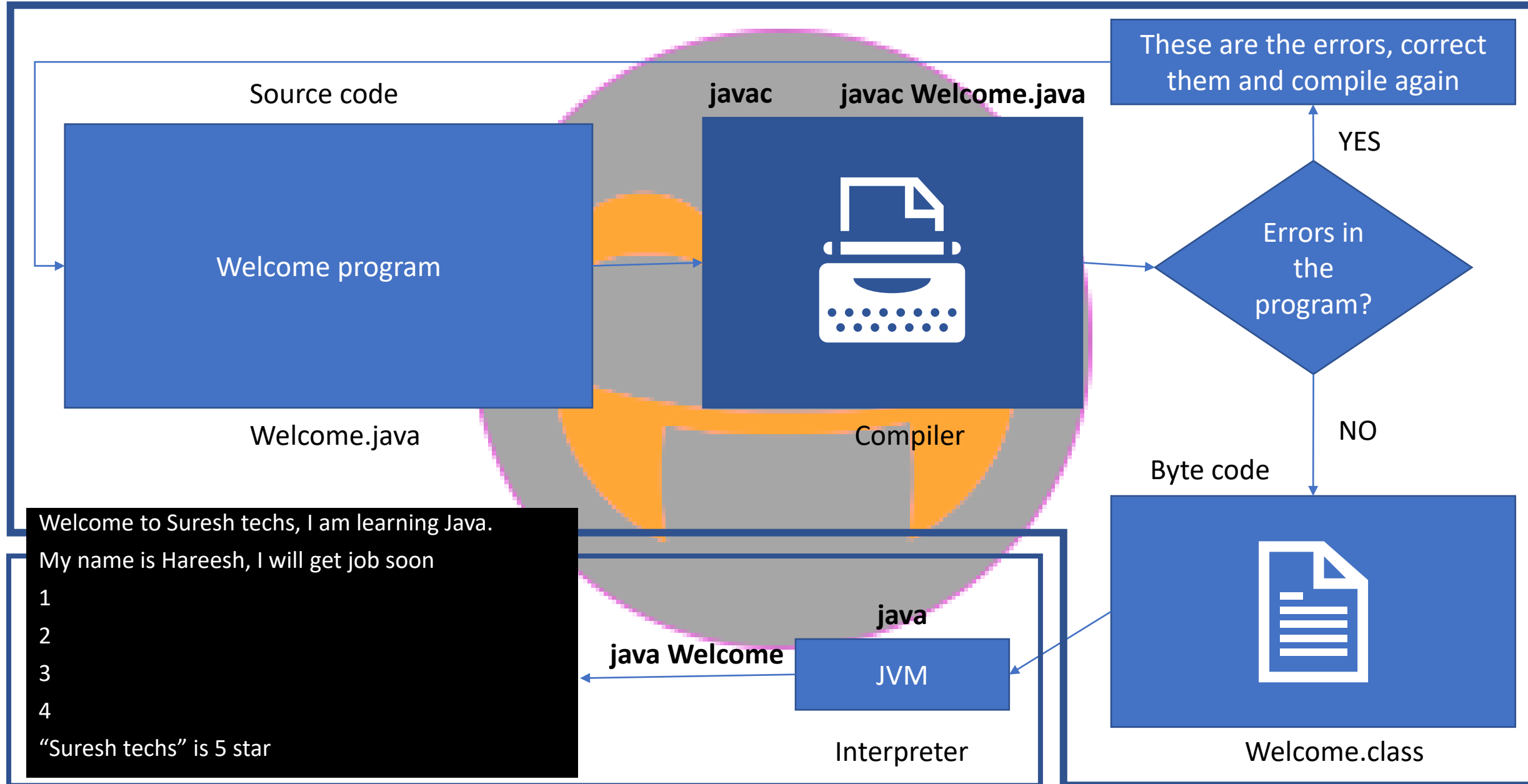
- 
- Think an application as a home(ellu)
 - Every home will have rooms(hall, kitchen, bathroom etc)
 - Consider each room as a program(Hall.java, Kithcen.java, Bathroom.java)
 - There will be many entry points(many doors) to ur home but there will be one main entry where we enter into the house.
 - Ex: If we go to any new home, first we will try to see where is the entry point(main gate) to the home
 - Even a small house will also have at least one main gate to enter
 - Keep this in mind, we will talk about it later

Steps to write a java program

1. **Open** any of the **editors**(notepad, **notepad++**, or any other)
2. Create new file and save it with an extension **.java**
3. **Write your program**



Steps to write and execute java programs?



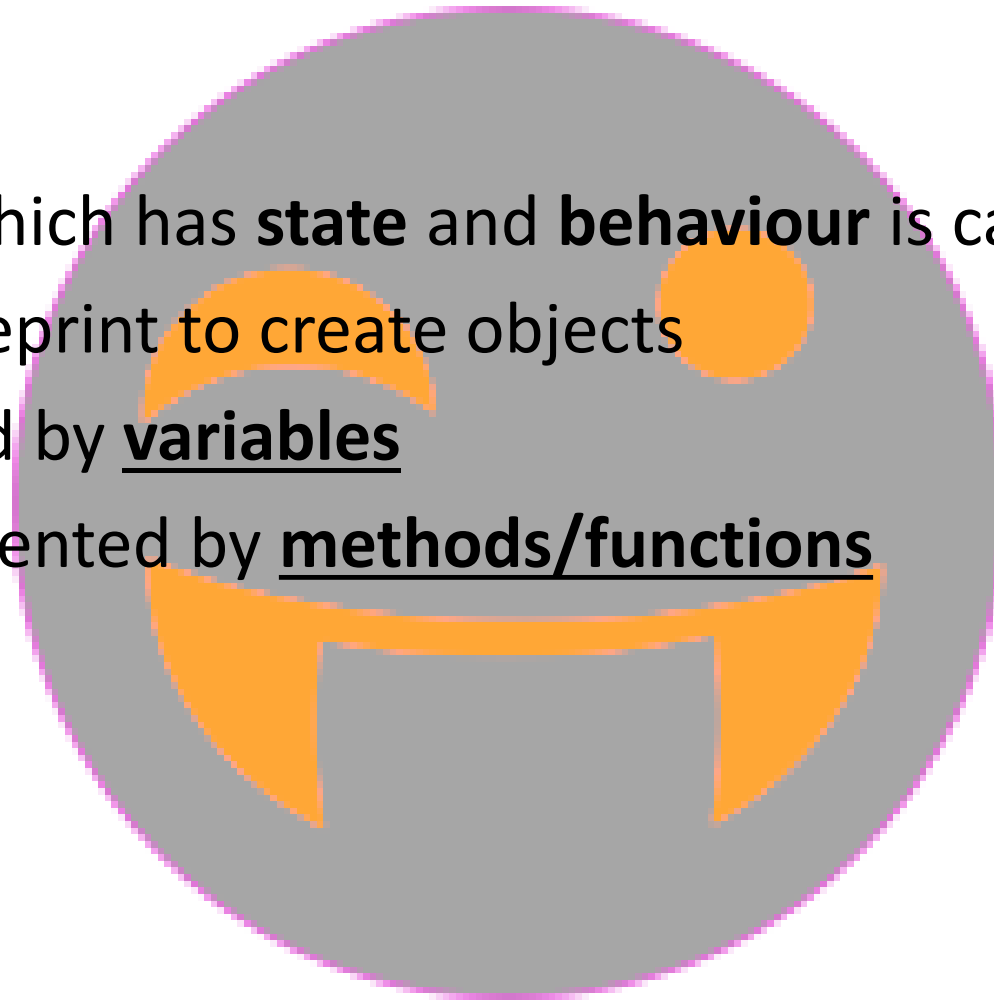
NOTE

- You may not understand everything in this chapter
- Slowly you will get everything
- Don't worry 😊



Overview

- **Object:** Anything which has **state** and **behaviour** is called an object
- **Class:** Class is a blueprint to create objects
- **State** is represented by variables
- **Behaviour** is represented by methods/functions



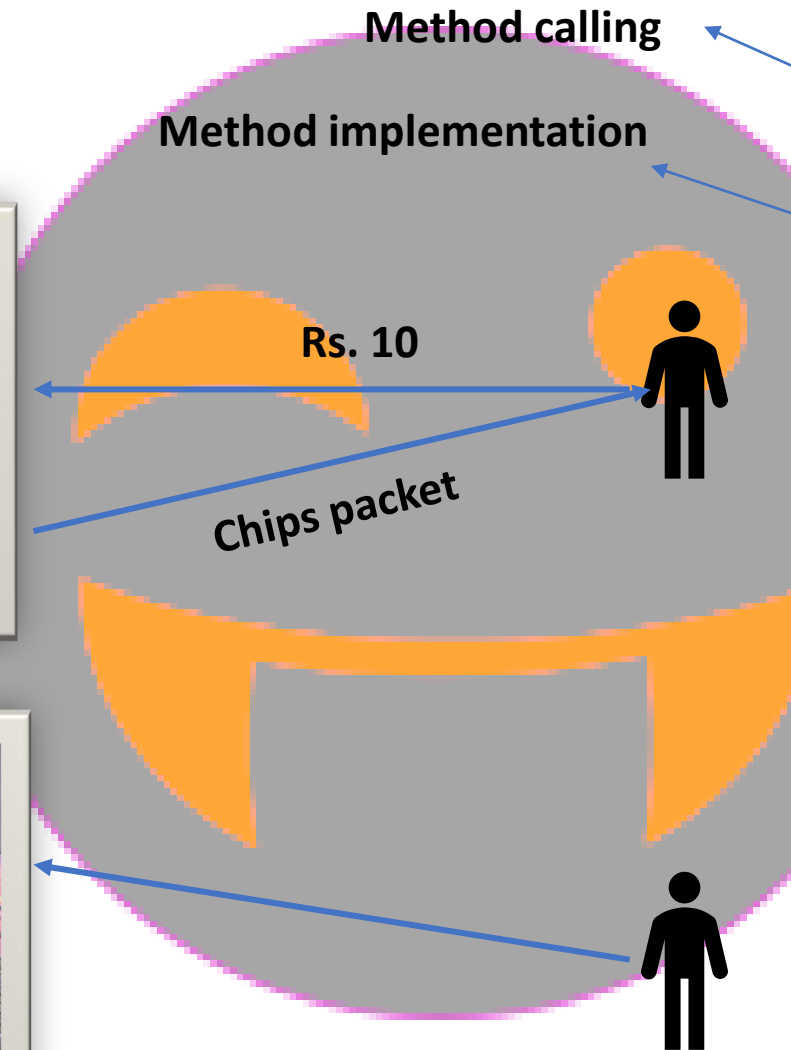
Welcome.java

```
class Welcome {
```

```
}
```



method



```
class DailyActivities {  
    String item;  
    switchOnLight(    );  
  
    item = getChipsPacket( 10 );  
    String getChipsPacket(int rs) {  
        cashbox = rs;  
        return "lays packet"  
    }  
  
    void switchOnLight(    ){  
  
    }  
}
```


main method / main entry gate

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

```
}
```

```
D:\Java-SureshTechs>javac Welcome.java
```

```
D:\Java-SureshTechs>java Welcome
```

You can go to other rooms(kitchen, bathroom etc) from the main gate and once you are done with your tasks, you can come out from the main method



state

- **Static** variables, **instance** variables, **local** variables
- Accessing state of one class in another class
 - Static variables can be accessed directly using class name
 - If **sum** is a **static variable** in a class named **Calculation** then it can be accessed from other class as **Calculation.sum**
 - In order to access instance variables, we need to create an object
 - If **sum** is an **instance variable** in a class named **Calculation** then it can be accessed from other class as:
 - **Calculation c = new Calculation();**
 - **c.sum**

Look at our goal

Welcome to Suresh techs, I am learning Java.

My name is Hareesh, I will get job soon

1

2

3

4

“Suresh techs” is 5 star

Terminal / Console / Command prompt

Print message to the console

James Gosling has written a class called **System**

Windows (C:) > Program Files > Java > jdk-18.0.1 > lib > src > java.base > java > lang >

out is a static variable of type **PrintStream**

Windows (C:) > Program Files > Java > jdk-18.0.1 > lib > src > java.base > java > io



Welcome.java

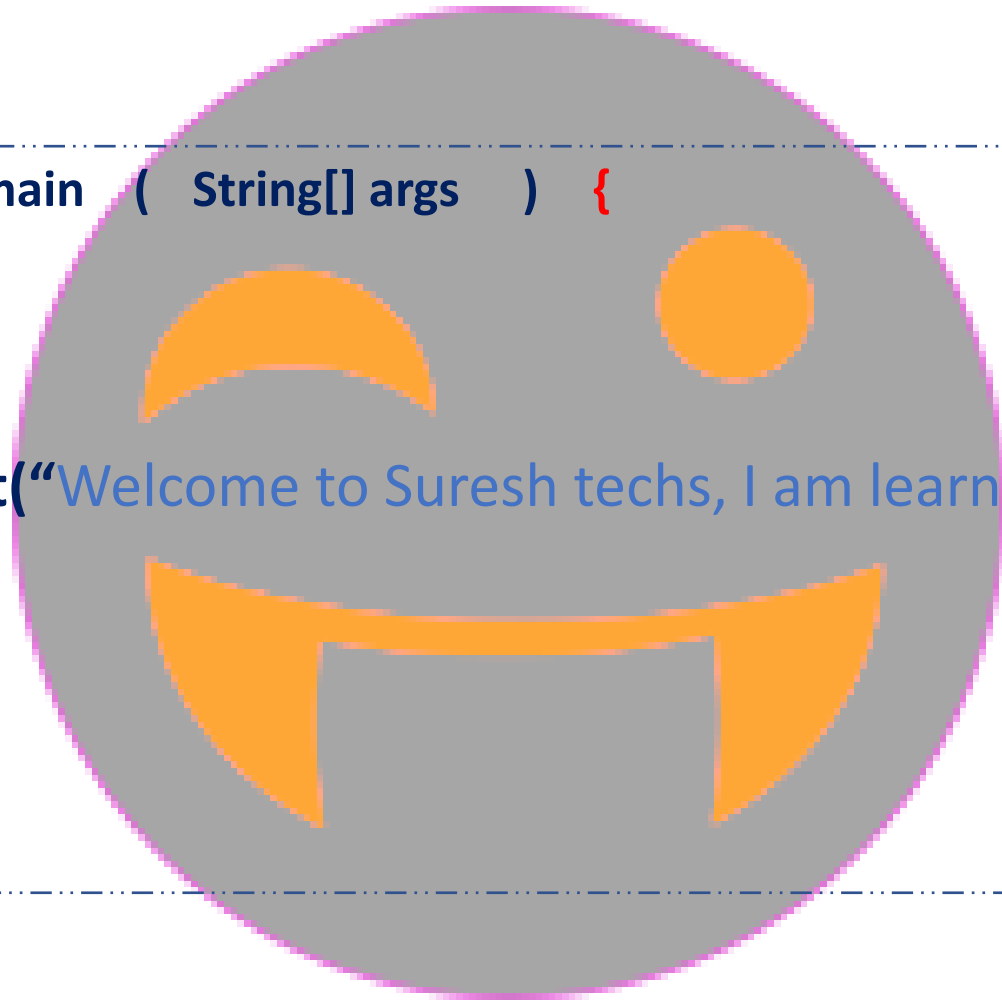
```
class Welcome {
```

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

```
        System.out.print("Welcome to Suresh techs, I am learning Java.");
```

```
    }
```

```
}
```



Let us complete our first program

Welcome to Suresh techs, I am learning Java.

My name is Hareesh, I will get job soon

1

2

3

4

"Suresh techs" is 5 star

Rules

- No need to **have file name and class name same**(Except that if your class is made public, both needs to be same)
- Can I have a class without main method?
 - **Earlier it was possible** with static blocks which is not possible now
- Can I create more than once class in one file?
 - **Yes you can** create more than once class in a single file, but we don't often do that

Task for you



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

java Welcome

- When JVM starts running, **it looks for the class** that you give it at the **command line**, then it starts looking for a specifically written method that looks exactly like:

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

```
}
```

- JVM runs everything between the curly braces of your main method.
- Every java application has to have at least one class and at least one main method(not one main method per class, just one main method per application)

Welcome class

```
class Welcome {  
    public static void main(String[] args){  
        System.out.println("Welcome to suresh techs, I am learning Java");  
        System.out.println("My name is Hareesh, I will get job soon");  
        System.out.println(1);  
        System.out.println(2);  
        System.out.println(3);  
        System.out.println(4);  
        System.out.println("'Suresh techs' is 5 star");  
    }  
}
```




Welcome.java

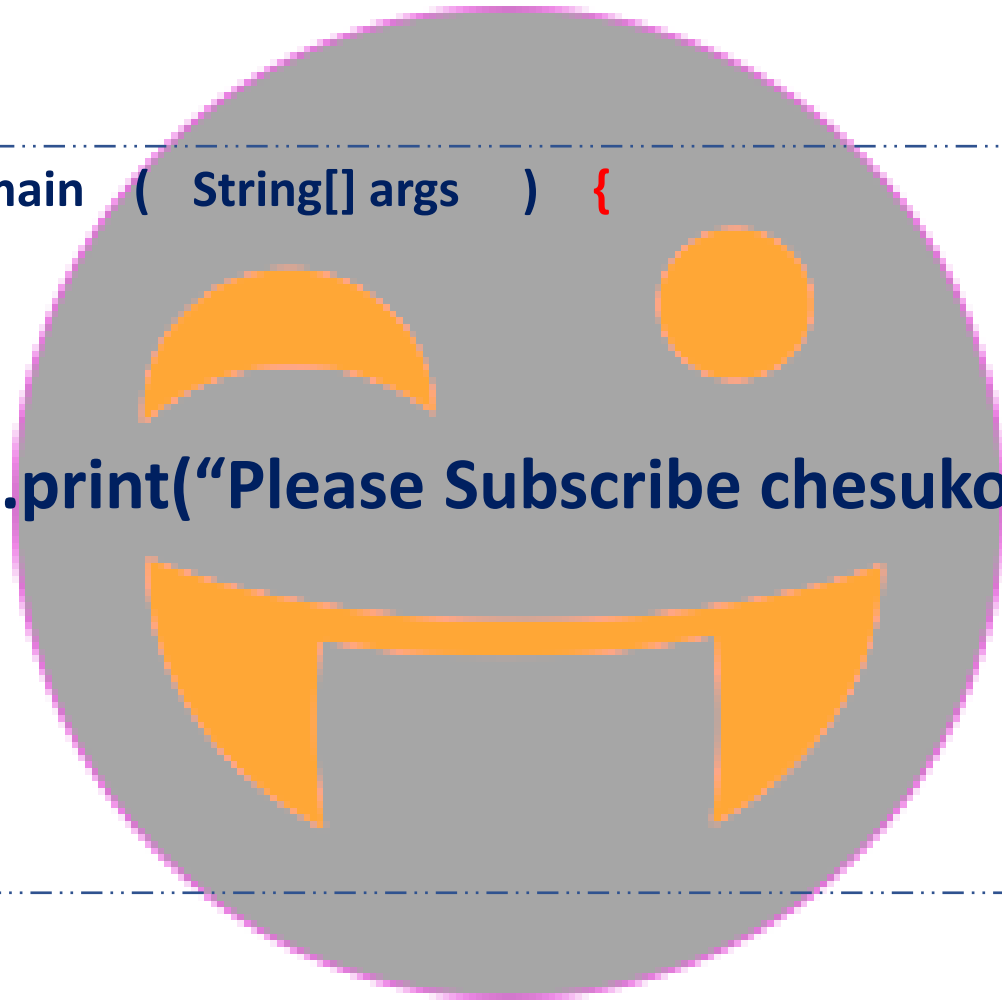
```
class Welcome {
```

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

```
        System.out.print("Please Subscribe chesukondi");
```

```
    }
```

```
}
```



What next?

Interview questions – part 2 (chapter 4 to 9)



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