* JDK (java development tool kit): has java runtime environment, debug tool everything in it
* sublime text - editor but does not include compiler and executer
* IDE(Integrated development environment): 'IntelliJ' provide editor, compiler and executer/run and GUI as well

**Important information:**

* java would have class [public class {}] and function [void main(){}]. withing main function all code will be written and executed.
* filename and class name should be same
* Write code on sublime text editor and compile and execute it on command prompt using command line (type and enter).
* we can compile (javac filaname.java) and execute (java filename) this file through command line as well.
* we can use IDE(Integrated development environment) 'IntelliJ' to directly compile and execute our code without typing command on cmd.

**- In Intellij:**

- .idea folder holds metadata about our project

- src (source code) folder contains our main code of java program files.

- in external library our JDK (java development tool kit) is linked.

- play button to run the code: it act as javac(compiling) and java(executing) commands from the command line(cmd)

**Quiz:**

- The runtime system starts your program by calling the \_\_main\_\_\_ function first.

- The execution of any Java application begins at the `main` function.

- Which component is contained inside a JDK installation? --> JRE

- What is the main purpose of an IDE? --> to run, debug, and step through a Java program

- When you use the javac command, which type of file gets created by the compiler? --> "bytecode" --> The `javac` command creates bytecode that allows a program to run inside a JRE.

- If you do not know the correct spelling of a Java keyword, how can the IDE be used to help you? --> Start typing the first few letters and look at the code completion list.

- How would you output the value stored in a variable named studentAge and make the next output begin on a new line? 🡪 System.out.println(studentAge); 🡪 The `println` method is a command that outputs values with a new line character added to the end.

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**Java Data types:**

1. Primitive (foundational data type) types: Boolean, int, double (decimal type-- float), char (single letter or symbol)

2. Reference types: string 🡪 take word or sentences

Input and output for Functions

* gather user input: Scanner
* output to user: System.out.println()
* Input data to a function: Parameter passed while define the function, Argument passed while calling the function
* Output data from a function: return type (no void any more)