

.class file is not human readable

Date \_\_\_\_\_  
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javac ⇒ compiler for Java

# Java

main function  
public class gharsham {

    public static void main() {

⇒ For using Java you  
should have installed

JDK in

your sys.

System.out.print ("String or object")

}

}

It is must

You have use Semicolon every time

④ To run a java file

javac filename.java

Java Compiler

Runnable file

java filename ⇒

↳ Class generate having same name which  
you will gave inside class

not necessary  
to run

# skeleton of Java program

every time

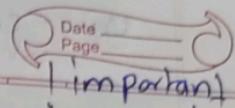
first.javafile

import java.lang.\*; → Import basic  
class should have same name as filename

Class first {

    public static void main(String args[])

functions  
are called methods in Java



System.out.print("Hello world");

} → main closing bracket

} → class closing bracket

⇒ Everything in Java should be inside Java

To run

javac first.java

java first  
→ run class

compile byte code & return output

meaning under main function declaration

# Public as we have to access class from terminal with java so for that purpose it should be public

# static ⇒ As we are directly using the class without even declaring so we use static  
Java first.main() → Inside

# void main

→ method declaration

System.out.print("Hello world");

System.out all are classes

You can use `System.out.print()`  
or `System.out.println()`

→ `print()` will print object directly  
→ `println()` - will write element on newline

`import java.lang.*;`  
→ this command has system class  
it is optional to type as it will be imported automatically.

★ If you declare Classname as public so  
it is must that Classname & filename  
must be same

If you not pass `(String args[])` so  
It will pass an error.

↳ must / compulsion  
must

`public static void main (String arg [])`

`args` → are IT is array from which we will  
pass extra command line argument

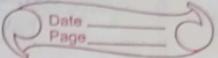
# Reading data from keyboard via input

You are able to concatenate in Java also  
with ease

So Procedure for input is simple

You have to create an object from a class

S.O.P  $\Rightarrow$  System.out.println



passing System.in as parameter + the we can use . operator with that object & get input of multiple type

Ex. :-

```
import java.util.*;  
Import java.lang.*;  
Public class Input {  
    public static void main (String args[]){
```

this will import all basic functions

& It is not mandatory to write this code each time every time

you basically  
create object  
of class

Scanner  
with having  
start  
system  
Input  
properties

Scanner = new Scanner

Scanner abc = new Scanner (System.in)

object of

Scanner class

$\Rightarrow$  created & inherited constructor from Scanner class

now int a, b, c;

a) You have declared type of variable in Java each & every time

S.O.P ("Enter no.");

a = abc.nextInt()

b = abc.nextInt()

S.O.P ("Addition is : " + (a+b))

abc.close()

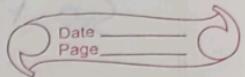
nextInt()  
is one  
of the method  
inside  
Scanner &  
we have a  
large set of  
them &

we will use  
according to  
our need

U should always close object

}

true  
false  $\Rightarrow$  Boolean value in Java



### class Scanner methods

nextInt()  $\Rightarrow$  to get int as input

nextFloat()  $\Rightarrow$  float as input

nextDouble()  $\Rightarrow$  double as input

only read one word  $\rightarrow$  next()  $\Rightarrow$  to read a string  
nextLine()  $\Rightarrow$  to read a line ( $\Rightarrow$  read multiple words)

The method which you provide to scanner is very selective boolean  
nextByte()  
nextShort()  $\Rightarrow$  multiple functionality

hasNextInt()  $\Rightarrow$  take argument + check

hasNextFloat()  $\Rightarrow$  that if it is following condition or not.

Both return boolean value

# variableName.getClass().getSimpleName()

||

This code will return type of variableName  
only works for object

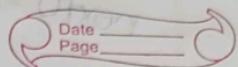
If it is not object we have to  
cast it

(Object)variable).getClass().getSimpleName()

### (\*) Type casting in Java

The syntax of the type casting in Java is quite similar to the type casting in C & CPP

True  
False  $\Rightarrow$  In Java we use case sensitive stuff  
Python



so

Int a, b;

We have to type cast it into char so  
 $\rightarrow$  It is char

(char)a

It is not char

(Object)a

as a whole it is a  
object

↑  
not an object

Int a;

(Object)a.getClass().getSimpleName();

↑  
this will return Integer as output.

It is an example of type casting in order  
to check the type of object

# Multiple classes

You can do it but lots of error are on the  
way if you trying to do it

$\Rightarrow$  the no. of classes in = no. of .class

Java file file going to form

$\Rightarrow$  Also you can write public static void main  
(String args[]){ }

↑  
main function should be only one throughout  
the whole code

next()  $\Rightarrow$  only Read one word  
nextLine()  $\Rightarrow$  Read one line

# while using scanner object at the end of code you should close it by

ObjectName.close();

If you provide wrong input it will throw an error.

Type	size	Range	Default
------	------	-------	---------

In byte  
byte 1 -128 to 127 0

Short 2 -32768 to 32767 0  
1 byte = 8 bit

Int 4 -2147483648 to +2147483647

long 8 - something large 0

float 4 -11.00f

double 8 -11.00d

Char 1 0 to 65535 \u40000

boolean ? true/false soft - false

we don't know exactly how much value boolean takes

all are primitive datatype