

## Java notes

### Java

It is a Programming language  
Java has JRE and API  
It's used to create an application

### variable

It is used to assign value to particular element with help of datatype

Eg int a;  
  └ Variable name

datatype are int [integer], float [float decimal value]  
char (character), String; long, short, double,  
array, class.

### looping statements

initialization → to start loop

condition → used to end the loop

increment/decrement → to increase the value loop

value

### For loop

#### Syntax

```
for (initial; condition; increment  
{  
    Statement;  
}
```

### While loop

#### While Syntax

```
Initialise;  
while (condition)  
{  
    Statement;
```

increment;  
y  
3

do while [Syntax]

initialise

{  
statement;

increment;

y

while (condition)

Function:

Function are group elements or method with single name.

For our understanding if we wanna do factorial of 10 numbers we can't initialise 10 times, instead that we use function

Function has three gen parts

Fn declaration

Fn definition

Fn call

But in Java we just define and call the function we don't declare a function

i) Fn declare

return type      function\_name (Argument list);

Future definition

Syntax

return-type      function-name (argument list)  
                  {  
                  Body;  
                  }

Fn call

Syntax

Function-name ( argument list);

return-type generally we use void, int, char, float  
as return types

If we need Function should be defined  
outside of the main program and it  
shouldn't be defined inside the program.  
Function call be done in main

Eg

    if main()  
        { statements  
            :  
            :  
            fn call  
            }

function definition should be done here

If we use void we shouldn't return the  
value But if we use int or other things  
we should return the value, so while  
calling the function in main program, we  
can use the value. If we use void  
then we should have print statement  
inside the function part to print  
the req output of program.

## basic Java Program

Public class Main

    Public static void main (String [] args)

        System.out.println ("Hello");

    }

Java is basically for our understanding  
it's group of class accessed using  
Objects

If u see a class with a Public  
static void main (String [] args) statement  
then that class is the main class of the  
Program and other classes are declared  
to pass the values in main class

Public class Main

    L first letter of class name  
should be capital

Public static void main (String [] args)

    L

    L first letter  
capital in  
string

    L This main Part of Java function  
should be declared outside of this Part

\* how to declare objects in Java

```
int a = 5;
char b = 'S';
String S = new String ("Srinivas");
float c = 7.5;
```

\* how to declare user defined values [Input Statement]

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

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

Scanner

new Scanner

System should be in capital

int a; (initialisation & get values from user)  
 a = S.nextInt(); - For integers  
 ↑ capital

String a; (~~next~~) [For string]  
 a = S.nextLine();  
 ↑ capital

for character

```
char a;  

a = S.charAt();
```

↑ capital

\* how to declare an array

```
int a [] = new int [5];
```

[Syntax

datatype array\_name [] = new datatype [size];

## Print Statement in Java

`System.out.println ("Statement to  
be displayed  
in screen" + a);`

variable  
used in the  
code to for de  
the value

note : class, functions and method defined  
in Java can be accessed only by  
using objects in main part of the  
Java

To define a object in main() of the Java

class name variable name = new class name();  
or  
function name  
or  
method name

Eg

Public class Demo

{

void add (int a, int b)

{

`System.out.println ("Add:" + (a+b));`

Public static void main (String [] args)

{

`Demo d = new Demo(); // Object created`

d.add(4,3);

If we use keyword static then we don't need to ~~create~~ create a object for accessing the methods or function in main() Java

Eg

Static void add (int a, int b)

System.out.println ("add:" + (a+b));

Public static void main (String [] args)

{  
Demo.add (4,3) → Passing the values to function

↳ class name ↳ function name

Class:

group of element

basically for demand group of elements with datatypes & functions with same name.

Class can be accessed in main() of Java using the object

Eg

class Hello

{  
Statement -1

void input()

{ Statements

3.

void display()

{ Statement 3

g  
do Public class Main

{  
Public static void main(String args)

statements;

Hello d = new Hello(); Object created  
d. display();

With the object we are  
calling the display function of the class  
Hello in main() of Java

g  
}

we can declare,  
Public static void main(String args [ ])

like this

or  
Public static void main (String [] args )

Like this also

functions eg in Java

Eg do

Public class Main

{  
void ~~class~~ add (int a, int b)

return int sum

$$\text{sum} = a + b;$$

System.out.println ("Sum:" + sum);

g  
Public static void main (String [] args )

add d-  
d. ad  
g

note :  
If  
the  
void  
is the  
main d  
in ma

```
add d = new add();  
d.add(5, 3);
```

note :

If u see function is defined above  
the main doop (doop of Public static  
void main). It can also be declared  
~~in class~~ other man below the  
main doop but shouldn't be declared  
in main doop