For loop , while loop , if , else if , switch statements are identical as c++

Scanner class for having input by user form console…to use v need to import this…

“import java.util.\*;”

Conditional operator works same as expected , no syntax change

For creating a object of any class, we need to follow this syntax:-

Example object1 = new Example(); //generally this syntax is followed

Here for Class Example and its object object1

In if statement n every other statement in java it is for Boolean value…so if(1) which should actually always execute since its 1 therefore should always execute, but it will give error since if statement expects an Boolean thing , such as a comparison which results to true or false or rather having a true or false variable , i.e . a Boolean data type variable .

For having random number generator , import java.util.Random class, and make an object of that class, for the random value we need to assign it to a int or something or directly use it or display it , by using nextInt() method of that Random class object.

Enhanced for loop|Or foreach loop:-

Int bucky[]={1,2,3,4};

Int temp=0;

For(int x : bucky){

Temp+=x;

}

Here x will posses value of the array its associate with the array

In java a method called toString is provided to us, what is really does is that it converts the int or float to String so that we can perform operations on it as we can do it on a string…

We can also override the default toString method so that what we can do is whenever we use object or this we can get it by this toString .toString method is usually overridden so that it returns string, i.e. that method returns string…and when this is used , it reference to the string when we used as %s, what we actually return is String.format() method and set things accordingly if we are overriding it.

we can use static member n method can also be called or used using dot operator using object of the class, like c++ off course it can be used or called with the class name but also with object is possible here.

In Java there is no thing called functions, its called methods which follows CamelCase but not like javaScript , as In in java the very first letter is small and then after it follows camelcasing , though its just a naming convention n not a rule but It should be followed to have good n readable code, i.e. good programming practice is followed. For class names first letter should be used as capital, a common convention.

There are some methods provided by java which can be invoked by the class directly without using the object, like Integer.parseInt(); method…etc.

For printing many methods are there in java, like println , print, printf..etc…they are used as:-

System.out.println(“Hello world”);

Here System is the class , which can be observed since it has first letter as capital, then out is its object and println() is the method, here println is for printing and moving the cursor to the next line.

We can also do normal print, and it will just print normally, printf will work as it does in C.

Final keyword is just like const keyword in c/c++, so as once it has assigned the value you cant change it, and you can/have assign it in ctor .

For GUI :-

//We need to

import javax.swing.JOptionPane;

//Here J , O and P should be in caps…

String testObj1 = JOptionPane.showInputDialog(“Enter first number”);

//what this will basically do is take input from a GUI box which more like a promt kinda thing…

//We can make it print or display in a GUI kinda thing by:-

JOptionPane.showMessageDialog(null , “The thing which is to be displayed” , “this will be shown in the title bar, i.e. like in cmd it says Command Promt , likewise” , JOptionPane.PLAIN\_MESSAGE);

//here the first argument says the displacement that how far it will be displayed, giving null to it puts it //at center…second parameter is the actual thing which is to be displayed , third para is as shown above //, and fourth parameter can have multiple different thing, but one at a time…

Using GUI which change in particular with the Operating system…:-

//using JFrame

Import java.awt.FlowLayout;

Import javax.swing.JFrame; //gives the minimizer , maximize, window features

Import javax.swing.JLabel;

P c tuna extends JFrame{

Private JLabel item1;

Public tuna(){

Super(“The Title bar”); //this statement is almost common when working with gui n JFrame

setLayout(new FlowLayout()); //this statement is almost common when working with gui n JFrame

item1= new JLabel(“this is a sentence”);

item1.setToolTipText(“This is gonna show up on hover”);

add(item1);

}

}

-------

StringBuffer is used when we need to take in space in a string, just as cin and gets…

Use is similar to as we do in normal object of any class, just that the ctor parameter contains the string which should be there in the StreamBuffer variable.

Difference between final , finally and finalize():-

Final is a specifier , which can be given to a class , method or object, if given to class , then it cannot be inherited, if given to method then that method cannot be overridden and if given to object , its value can not be changed after initializing it.

Finally is a block associated with the try catch block , i.e. after the catch block for the cleanup activities for the try catch block…

Finalize() is a method which is called by Garbage collector just before destroying an object to close or terminate the connection between say for example connection between the object and the database or say connection between object and network. It is used for cleanup activities for the object.

However, Java has a feature called "named breaks" in which you can name your loops and then specify which one to break out of. For example:

A: while (true) {

B: while (true) {

break A;

}

}

This code will not loop forever, because the break explicitly leaves loop A.

A non static method can use non static and static both members , but a static method **can only** use static members only.

In Interface, if we have some method declared with no specifier, java by default makes it public , so where we define it, we need to give it access specifier public and no less then that.

We can create compound statements in a class outside a function too, and that too can be static as well as non static…like:-

Class ex{

Int a; //not required to show this concept , but taken as usual

Ex(){ //not required to show this concept , but taken as usual

//ctor of ex…}

}

{System.out.println(“this is a non static compound statement”);}

Psvm(){

}

Static {Systme.out.println(“This is a static compound statement”);}

}

/////

Explanation :-

Here when parsing of class happens , at that time even before the main method is executed, the compound blocks are executed, no matter if they are before the psvm or after they are executed before psvm. From that static compound block is executed first and then the non static one is executed.

If more than one static or non static compound statements exist then , the order of execution among them is acc. To FCFS , i.e. acc. To order , as in who is used/defined /declared first would be executed first among them….

Import java.io.File;

IT does not create file or something, it just has functions which just say if it exists or not…

Firstly it needs to create an object of the class File and in parenthesis put the file name including path like in c++

Function like, exits() function returns true if it exists and false if not…

////in event listeners …we have to create a class whose object works as an handler to the things we ///have and the object is given as a parameter….

Exception Handling…

///

In a method I receive a general Object as parameter and I have to retrieve the name of the class

public void myMethod(Object o)

String className = o.getClass().getName();

...

}

Objects in java are some times assigned value null(NOTE: in java null should be strictly in lower case , i.e. null and not NULL or Null , that would generate error)

Ex:

//say for class Test

Test T1 = new Test();

…

//after lines of code or maybe the next line, we can dereference it by:-

T1=null;

/\*This is generally used when that curly braces are used for a long time or we can say that the object would live for quite long memory which is not required and would consume space and connections(if any with say DB or the Server or something) , it will keep it open until its in scope , so it is dereferenced so that the G.C. releases its blocked memory and also calls finalize() method at times if needed to terminate any open connection \*/

Null is not an object nor a type it’s a special value.

null can only be assigned to reference type, you cannot assign null to primitive variables e.g. int, double, float or boolean. Compiler will complain if you do so, as shown below.

instanceof operator will return false if used against any reference variable with null value or null literal itself, e.g.

**Integer** iAmNull **=** **null**;

**if**(iAmNull instanceof **Integer**){

**System**.out.println("iAmNull is instance of Integer");

}**else**{

**System**.out.println("iAmNull is NOT an instance of Integer");

}

**Output** **:** **iAmNull** **is** **NOT** **an** **instance** **of** **Integer**

The covariant return type specifies that the return type may vary in the same direction as the subclass.

Before Java5, it was not possible to override any method by changing the return type. But now, since Java5, it is possible to override method by changing the return type if subclass overrides any method whose return type is Non-Primitive but it changes its return type to subclass type. Let's take a simple example:

The **java instanceof operator** is used to test whether the object is an instance of the specified type (class or subclass or interface).

Simple1 s=**new** Simple1();

System.out.println(s **instanceof** Simple1);//true

//

In java every method is called by value since there are no pointers in java…

Though changes done in arrays n collection are reflected back to the calling method

If not initialized then to arrays of nude data types do not contain garbage value, they are by default initialized to 0

//

We can overload main method , and the overloaded main method may not be static but should have to be called from the p.s.v.m.

only.

//

We can have recursive main method calls too

//

public static void arraycopy(

Object src, int srcPos,Object dest, int destPos, int length

)

//

RunTimeException and their subCLasses are the only ones that are not checked

//

class TestArrayCopyDemo {

public static void main(String[] args) {

char[] copyFrom = { 'd', 'e', 'c', 'a', 'f', 'f', 'e',

'i', 'n', 'a', 't', 'e', 'd' };

char[] copyTo = new char[7];

System.arraycopy(copyFrom, 2, copyTo, 0, 7);

System.out.println(new String(copyTo));

}

}

Output:caffein

//

Simple example of Covariant Return Type

class A{

A get(){return this;}

}

class B1 extends A{

B1 get(){return this;}

void message(){System.out.println("welcome to covariant return type");}

public static void main(String args[]){

new B1().get().message();

}

}

//

To solve these problems, a new language standard was developed i.e. Unicode System.

In unicode, character holds 2 byte, so java also uses 2 byte for characters.

lowest value:\u0000

highest value:\uFFFF

//

public class LabeledForExample {

public static void main(String[] args) {

aa:

for(int i=1;i<=3;i++){

bb:

for(int j=1;j<=3;j++){

if(i==2&&j==2){

break aa;

}

System.out.println(i+" "+j);

}

}

}

}

//

Abstract class Interface

1) Abstract class can have abstract and non-abstract methods. Interface can have only abstract methods.

2) Abstract class doesn't support multiple inheritance. Interface supports multiple inheritance.

3) Abstract class can have final, non-final, static and non-static variables. Interface has only static and final variables.

4) Abstract class can have static methods, main method and constructor. Interface can't have static methods, main method or constructor.

5) Abstract class can provide the implementation of interface. Interface can't provide the implementation of abstract class.

6) The abstract keyword is used to declare abstract class. The interface keyword is used to declare interface.

7) Example:

public abstract class Shape{

public abstract void draw();

} Example:

public interface Drawable{

void draw();

}

//

The java.lang.Cloneable interface must be implemented by the class whose object clone we want to create. If we don't implement Cloneable interface, clone() method generates CloneNotSupportedException.

Java strictfp keyword ensures that you will get the same result on every platform if you perform operations in the floating-point variable. The precision may differ from platform to platform that is why java programming language have provided the strictfp keyword, so that you get same result on every platform. So, now you have better control over the floating-point arithmetic.

**/\*\* documentation \*/**

This is a documentation comment and in general its called **doc comment**. The **JDK javadoc** tool uses *doc comments* when preparing automatically generated documentation.