# java.lang

# introduction

public class Hello {

    public static void main(String[] args) {

        System.out.println("Hello java");

    } (String s = new String(“Hello java”);

}

Without java.lang package we can’t write any code

String, Object is within this package

Hello is child of Object (every classes in java is child of Object class directly or indirectly)

public class A extends B{

|  |  |
| --- | --- |
| Object  B  A  multilevel inheritance | Object  B    A  multiple inheritance |

In java there is no chance to multiple inheritance in class level

# Object

Object

String StringBuffer Student Employee ….

because Object class contains most commonly required methods for any objects

## methods

public String toString();

public native int hashCode();

public native boolean equals();

protected native Object clone() throws CloneNotSupportredException;

protected void finalize() throws Throwable;

public Class getClass();

public final void wait() throws InterruptedException;

public final native void wait(long ms) throws InterruptedException;

public final void wait(long ms, int ns) throws InterruptedException;

public native final void notify();

public native final void notifyAll();

### toString()

|  |  |
| --- | --- |
| public class Student {  String name;  int sid;  public Student(String name, int sid){  this.name = name;  this.sid = sid;  }  } | public static void main(String[] args) {  Student s1= new Student("tharsi",1001);  Student s2= new Student("thulasi",1002);  System.out.println(s1);   System.out.println(s1.toString());  }  Output: Student@15db9742  Student@15db9742 |

Because when we try to print s1 object, s1.toString() method will be called internally.

But our Student class doesn’t contains toString() method, so it calls parent class Object’s toString() method.

public class Object {

public String toString() {

return getClass().getName() + "@" + Integer.toHexString(hashCode());

}

To provide meaning full output we need to Override toString()

public class Student {

String name;

int sid;

public Student(String name, int sid){

this.name = name;

this.sid = sid;

}

public String toString(){

        return "Student : name= "+ name+ ", sid= "+sid;

  }

}

Like this ….

In all **wrapper** classes,

All **Collection** classes,

**String**, **StringBuffer**, **StringBuilder** classes

toSting() method is overridden to provide meaningful output

String s = new String("hello");

System.out.println(s); // hello

Integer i = new Integer(12);

System.out.println(i); // 12

ArrayList l = new ArrayList();

l.add(12);

l.add(13);

l.add("thari");

System.out.println(l); // [12, 13, thari]

### hashCode()