- inheritence is supported by the “extends” keyword

- when a class extends another class, it becomes the child class or sub class.

For example:

public class Manager extends Employee{

}

- Manager is the sub class or child class

- Employee is the superclass or parent class

- when the extends keyword is used whatever methods in employee will be available to the manager as well as the methods written in manager

Engineer

Director

Manager

Employee

Classes become more generic

Classes become more specialised

Manager is an employee

Director is an employee

Director is a manager

single class inheritance only have 1 parent class

multiple class inheritance has more than 1 parent class

java supports only single class inheritance. all classes in java have 1 parent class

if you don’t extend a class, java will automatically extend java.lang.object

object class is the only class without a parent

important methods

- clone()

- toString()

- equals()

UML Diagram

- when you see a dotted arrow linking 2 entities in a UML diagram, lets say A ---> B, it means B is somwhere in the class definition of A in the form of a parameter for a method in A or a local variable in a method in A.

Accesibility Modifiers

private keyword --- you can only use the variable within the class it is declared in

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Access Modifier** | **within class** | **within package** | **outside package by subclass only** | **outside package** |
| **Private** | Y | N | N | N |
| **Default** | Y | Y | N | N |
| **Protected** | Y | Y | Y | N |
| **Public** | Y | Y | Y | Y |

generally the aim is to be as private as possible

Method definition in Java

<access modifier> <return data type> <method name> (attribute 1, attribute 2) {

}