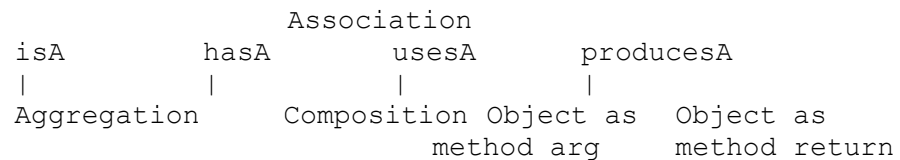


26/07/2022

Java Notes Day4

Day 4

1. Association in Inheritance
2. static, final and abstract keywords
3. Types of methods



type

Class ---> data + functions

Initializing an object of another class as a global variable of the class.

Can be initialized only using reference

The object contains null as the values within

isA - extends

>Employee isA Student, Person

>Student isA Person

hasA - containment, consists of within

>hasA is non linear, falls under one parent horizontally

>Employee hasA salary, job

>Student hasA grade, qualification

class 0

class1 > objRef(class 0) >

Passing an object as an argument for another object

Stack memory

Heap memory (Free store)

FIELD AREA(100)

FIELD AREA(200)

ref to an obj (obj1) is created ----->accNumber accHolderName

balance ref1(DL) ---> name type issueDate

100 | 200

This creates a

reference to another object

BankAccount obj1 = new BankAccount();

METHOD AREA

| | | |

| | | |

Type ref allocator constructor

BankAccount()
withdraw()

deposit()
etc

	static	final	abstract
field	shared across all objs of the class	cannot be changed immutable	NA
method	is used to refer other It is the partial contract static data /method members by the child		cannot be overridden of a
class	NA	cannot be extended	It contains partial contract
of class			

Class data - Static data which can be accessed with class name since it belongs to the class

- Preloaded in the memory
- Stored in the Stack memory

Object data - Can only be accessed through instance of a class(object creation)

- Stored in heap storage
- Loaded in the memory only after object creation

Static - static int - can be accessed multiple times

private static int - can be accessed only within the class

void showDets() - can only be accessed through object

static void showDets() - can be accessed multiple times w/o object

Static function cannot access non-static data, but non-static

functions can access static data

static object reference

final - data member value cannot be changed - but can be created multiple times

final - function is created and it cannot be overridden, only inherited

final - class is final, and it cannot be extended by another class, last hierarchy of the project

static - data member can only be created once

abstract = incomplete = partial

The method declared in the parent class using the abstract keyword, is a mandate for the child class to implement a method of the same name only

4 types of methods

- > Exclusive
- > Inherited
- > Overriding
- > Implemented

```

    parent      child      child
abstract class1 > abstract class2 > class > contract on this class for
implementation of both abstract classes 1 & 2
    |            |
abstract method1 abstract method2

```

abstract class is only a mansate and it does not contain any code
only reference of an abstract class can be created, and not the object

Super class reference can point to a child class

Early binding - compile time binding - objReference.methodOfSameClass()
Late binding(lazy loading)(polymorphism) - run time binding -
objReference.methodOfParentClass() / parentReference

```

|-----
-----> At run time the decision changes

```

->Super class reference can point to any one of the child class
object - eg - BankAccount ba = new BankAccount(); SavingsBankAccount
extends BA

similarly, it works for abstract classes, since only ref can..
SavingsBankAccount sa = new SavingsBankAccount();

ba = sa;

-> only works for inherited methods
-> not exclusive methods of the class - Doctor knows diagnose, but
not HeartSurgery exclusive methods