22/07/2022

Java Notes Day2

typing tutor

Day 2
1. Types of functions
2. OOPS concepts - Abstraction, Encapsulation, Polymorphism

Functions are of 4 types

Fns without taking any args and not returning value void my()
Fns taking args and not returning values void my(int i, String str)
Fns without taking args and returning value int my()
Fns taking args and returning value double my(int i, String str)

Stack memory Heap memory (Free store)
FIELD AREA

ref to an obj (obj1) is created ----------> accNumber accHolderName balance ----> allocator gives values to these global variables(new keyword)

BankAccount obj1 = new BankAccount(); METHOD AREA
BankAccount() ----> default constructor
Type ref allocator constructor withdraw()
deposit()
etc

obj1.withdraw(5000);
Class(BankAccount)--->Address(obj1)--->FIELD and METHOD AREA(variables and method passed(using value or not))

same reference can be overwritten - called and address is reassigned

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Understand System.out.println();

```
class Tiger
{
roar();
}

class Jungle
{
static Tiger sher = new Tiger();
}
```

```
Jungle.Tiger.roar();

Similarly : DataInputStream inp = new DataInputStream();

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OOPS concepts

Procedure Oriented Programming System - POPS

Object Oriented Programming System

There is a contract between data and function
Data governs the function


Abstraction
      It is the "what is" part of the object
      Hiding the complexity of an object and providing the usage through
simple accesible functions
      What is an ATM? ----> No need of knowing how it actually works ----
> abstraction layer
      Tailoring shop ----> each station has a different purpose ----->
without knowledge of the other stations
      Developer need not know how to code inbuilt functions ----> like
string functions or input functions

Encapsulation
      It is the "how is it" part of the object
      Coding for the complexity of an object
      capsule where data is hidden or encapsulated
      we only know the tablet function and name, but the contents and
their combination are unknown

Polymorphism
      Ability of a business entity to have multiple forms
       -class extension ----> class Doctor ----> class Surgeon extends
Doctor ----> class Neurosurgeon extends Surgeon
       -function overloading ----> void fn1(), int fn1(), int fn1(double
d, String str)
       -**function overriding ---->

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```