***Dt : 5/11/2022***

***3.final:***

***=>The following are the final programming components:***

***(a)final variables***

***(b)final methods***

***(c)final classes***

***=>There is no concept of final blocks,final Constructors,final Interfaces***

***and final abstractClasses.***

***(a)final variables:***

***=>The variables which are declared with final keyword in classes are***

***known as final variables.***

***Coding Rule:***

***=>final variables must be initialized with values and once initialized***

***cannot be modified.***

***Note:***

***=>The final variables in classes can be initialized using constructor.***

***(b)final methods:***

***=>The methods which are declared with final keyword are known as final***

***methods***

***Coding Rule:***

***=>final methods cannot be overrided or cannot be replaced.***

***(c)final classes:***

***=>The classes which are declared with final keyword are known as final***

***classes.***

***Coding Rules:***

***=>final classes cannot be extented,which means cannot be inherited.***

***--------------------------------------------------------------***

***Note:***

***=>Using final programming components we can construct "Immutable classes"***

***define Immutable classes?***

***=>The classes which are constructed using the following rules are known***

***as "Immutable Classes".***

***Rule-1 : The class must be final class***

***Rule-2 : The variables in class must be "private and final" variables.***

***Rule-3 : The methods in class must be only "Getter methods".***

***Rule-4 : These "Getter methods" must be "final methods"***

***Note:***

***=>These Immutable classes will generate "Immutable Objects"***

***define Immutable Objects?***

***=>The objects once created cannot be modified are known as Immutable***

***Objects.(Secured Objects)***

***Note:***

***=>In realtime Immutable Objects will hold transaction details in banking***

***domains.***

***faq:***

***define Setter methods?***

***=>The methods which are used to set the data to the objects are known as***

***Setter methods.***

***faq:***

***define Getter methods?***

***=>The methods which are used to get the data from the objects are known***

***as Getter methods.***

***Ex-program:***

***TransLog.java***

***package test;***

***import java.util.\*;***

***public final class TransLog***

***{***

***private final long hAccNo,bAccNo;***

***private final double amt;***

***private final Date dateTime;***

***public TransLog(long hAccNo,long bAccNo,double amt,Date dateTime) {***

***this.hAccNo=hAccNo;***

***this.bAccNo=bAccNo;***

***this.amt=amt;***

***this.dateTime=dateTime;***

***}***

***public final long gethAccNo() {***

***return hAccNo;***

***}***

***public final long getbAccNo() {***

***return bAccNo;***

***}***

***public final double getAmt() {***

***return amt;***

***}***

***public final Date getDateTime() {***

***return dateTime;***

***}***

***}***

***DemoPoly4.java(MainClass)***

***package maccess;***

***import test.\*;***

***import java.util.\*;***

***public class DemoPoly4 {***

***public static void main(String[] args) {***

***Scanner s = new Scanner(System.in);***

***try(s;)***

***{***

***try***

***{***

***System.out.println("Enter the homeAccNo:");***

***long hAccNo = s.nextLong();***

***System.out.println("Enter the beneficieryAccNo:");***

***long bAccNo = s.nextLong();***

***System.out.println("Enter the amt:");***

***double amt = s.nextDouble();***

***TransLog ob = new TransLog(hAccNo,bAccNo,amt,new Date());***

***//Immutable object***

***System.out.println("\*\*\*\*\*Transaction Details\*\*\*\*");***

***System.out.println("HAccNo:"+ob.gethAccNo());***

***System.out.println("BAccNo:"+ob.getbAccNo());***

***System.out.println("Amt:"+ob.getAmt());***

***System.out.println("DateTime:"+ob.getDateTime());***

***}//end of try***

***catch(Exception e)***

***{***

***e.printStackTrace();***

***}***

***}//end of try-with-resource***

***}***

***}***

***o/p:***

***Enter the homeAccNo:***

***6123456***

***Enter the beneficieryAccNo:***

***313131***

***Enter the amt:***

***6000***

***\*\*\*\*\*Transaction Details\*\*\*\****

***HAccNo:6123456***

***BAccNo:313131***

***Amt:6000.0***

***DateTime:Sat Nov 05 08:31:29 PDT 2022***

***======================================================================***

***Note:***

***=>Based on Security Objects in Java are categorized into two types:***

***(i)Mutable Objects - can be modified***

***(ii)Immutable Objects - cannot be modified***

***===============================================================***