**1:Write a program to create student class with data members rollno, marks1,mark2,mark3.**

**Accept data (acceptInfo()) and display using display member function.**

**Also display total,percentage and grade.**

**import** java.util.Scanner;

**class** Student {

**private** **int** rollno;

**private** **int** marks1;

**private** **int** marks2;

**private** **int** marks3;

**private** **int** total ;

**private** **float** percentage;

**private** String Grade;

**public** **void** acceptInfo(**int** rollno , **int** marks1 , **int** marks2 , **int** marks3) {

**this**.rollno = rollno;

**this**.marks1 = marks1;

**this**.marks2 = marks2;

**this**.marks3 = marks3;

}

**private** **void** calculations() { //helper function private

total = marks1+marks2+marks3;

percentage = (total\*100/300 );

**if**(percentage >= 90f) {

Grade="A+";

}**else** **if**(percentage >= 75f) {

Grade="A";

}**else** **if**(percentage >=55f) {

Grade="B+";

}**else** **if**(percentage >=35f) {

Grade="B";

}**else** {

Grade="FAIL";

}

}

**public** **void** display() {

calculations();

System.***out***.println("rollno : " + rollno);

System.***out***.println("total : " + total);

System.***out***.println("percentage : " + percentage);

System.***out***.println("Grade : " + Grade);

System.***out***.println("marks1 : " + marks1);

System.***out***.println("marks2 : " + marks2);

System.***out***.println("marks3 : " + marks3);

}

}

**public** **class** Day4\_Java {

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

// **TODO** Auto-generated method stub

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

System.***out***.println("Enter rollno marks1 mark2 mark3");

**int** rollno = sc.nextInt();

**int** marks1 = sc.nextInt();

**int** marks2 = sc.nextInt();

**int** marks3 = sc.nextInt();

Student d = **new** Student();

d.acceptInfo(rollno, marks1, marks2 , marks3);

d.display();

}

}

Enter rollno marks1 mark2 mark3

101

99

89

79

rollno : 101

total : 267

percentage : 89.0

Grade : A

marks1 : 99

marks2 : 89

marks3 : 79

**1. Create a class Person with data members as name, age, city. Write getters and setters for all the data**

**members. Also add the display function. Create Default and Parameterized constructors. Create the**

**object of this class in main method and invoke all the methods in that class.**

**import** java.util.Scanner;

**class** Person {

**private** String name;

**private** **int** age;

**private** String city;

Person(){ //default const

name="Demo1";

age= 0;

city="Temp1";

}

Person(String name , **int** age , String city){ //parameterized constructor

**this**.name=name;

**this**.age= age;

**this**.city=city;

}

//setters

**public** **void** setName(String name) {

**this**.name = name;

}

**public** **void** setAge(**int** age) {

**this**.age = age;

}

**public** **void** setCity(String city) {

**this**.city = city;

}

//getters

**public** String getName() {

**return** **this**.name;

}

**public** **int** getAge() {

**return** **this**.age;

}

**public** String getCity() {

**return** **this**.city;

}

**public** **void** display() {

System.***out***.println("name : " + getName());

System.***out***.println("age : " + getAge());

System.***out***.println("city : " + getCity());

System.***out***.println("--------------------------------------------");

}

}

**public** **class** Day4\_Java {

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

// **TODO** Auto-generated method stub

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

System.***out***.println("Enter name age city :");

Person d1 = **new** Person();

d1.display();

d1.setName("Name1");

d1.setAge(20);

d1.setCity("Varanasi");

d1.display();

Person d2 = **new** Person("New Name 2" , 100 , "Mumbai");

d2.display();

d2.setName("Name2");

d2.setAge(22);

d2.setCity("Bihar");

d2.display();

}

}

Enter name age city :

name : Demo1

age : 0

city : Temp1

--------------------------------------------

name : Name1

age : 20

city : Varanasi

--------------------------------------------

name : New Name 2

age : 100

city : Mumbai

--------------------------------------------

name : Name2

age : 22

city : Bihar

--------------------------------------------

**2. Create a class Date with data members as dd, mm, yy. Write getters and setters for all the data members. Also add the display function. Create Default and Parameterized constructors. Create the**

**object of this class in main method and invoke all the methods in that class.**

**import** java.util.Scanner;

**class** Date {

**private** **int** dd;

**private** **int** mm;

**private** **int** yy;

Date(){ //default const

dd= 01;

mm= 01;

yy=2000;

}

Date(**int** dd , **int** mm , **int** yy){ //parameterized constructor

**this**.dd=dd;

**this**.mm= mm;

**this**.yy=yy;

}

//setters

**public** **void** setDD(**int** dd) {

**this**.dd = dd;

}

**public** **void** setMM(**int** mm) {

**this**.mm = mm;

}

**public** **void** setYY(**int** yy) {

**this**.yy = yy;

}

//getters

**public** **int** getDD() {

**return** **this**.dd;

}

**public** **int** getMM() {

**return** **this**.mm;

}

**public** **int** getYY() {

**return** **this**.yy;

}

**public** **void** display() {

System.***out***.println("dd : " + dd);

System.***out***.println("mm : " + mm);

System.***out***.println("yy : " + yy);

System.***out***.println("--------------------------------------------");

}

}

**public** **class** Day4\_Java {

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

// **TODO** Auto-generated method stub

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

System.***out***.println("Enter dd mm yy :");

Date D1 = **new** Date();

D1.display();

D1.setDD(21);

D1.setMM(11);

D1.setYY(2009);

D1.display();

Date d2 = **new** Date(10, 10 , 1990);

D2.display();

D2.setDD(27);

D2.setMM(12);

D2.setYY(2007);

D2.display();

}

}

Enter dd mm yy :

dd : 1

mm : 1

yy : 2000

--------------------------------------------

dd : 21

mm : 11

yy : 2009

--------------------------------------------

dd : 10

mm : 10

yy : 1990

--------------------------------------------

dd : 27

mm : 12

yy : 2007

--------------------------------------------

**3. Create a class Book with data members as bname,id,** **,price. Write getters and setters for all the**

**data members. Also add the display function. Create Default and Parameterized constructors. Create**

**the object of this class in main method and invoke all the methods in that class.**

**import** java.util.Scanner;

**class** Book {

**private** String bname;

**private** **int** id;

**private** String author;

**private** **float** price;

Book(){ //default const

bname= " New Book1 ";

id= 01;

author="Author 1";

price=101.11f;

}

Book(String bname , **int** id , String author , **float** price ){ //parameterized constructor

**this**.bname=bname;

**this**.id=id;

**this**.author= author;

**this**.price=price;

}

//setters

**public** **void** setBname(String bname) {

**this**.bname = bname;

}

**public** **void** setId(**int** id) {

**this**.id = id;

}

**public** **void** setAuthor(String author) {

**this**.author = author;

}

**public** **void** setPrice(**float** price) {

**this**.price = price;

}

//getters

**public** String getBname() {

**return** **this**.bname;

}

**public** **int** getId() {

**return** **this**.id;

}

**public** String getAuthor() {

**return** **this**.author;

}

**public** **float** getPrice() {

**return** **this**.price;

}

**public** **void** display() {

System.***out***.println("bname : " + getBname());

System.***out***.println("id : " + getId());

System.***out***.println("author : " + getAuthor());

System.***out***.println("price : " + getPrice());

System.***out***.println("--------------------------------------------");

}

}

**public** **class** Day4\_Java {

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

// **TODO** Auto-generated method stub

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

System.***out***.println("Enter bname id author price :");

Book d1 = **new** Book();

d1.display();

d1.setBname("Book Naming 1");

d1.setId(101);

d1.setAuthor("Author name 1");

d1.setPrice(1111.01f);

d1.display();

Book d2 = **new** Book("Defaut BK nam 1 ", 1001 , "Author naming 3 " , 111.111f);

d2.display();

d2.setBname("Book Naming 2");

d2.setId(111);

d2.setAuthor("Author name 2");;

d2.setPrice(10101.01f);

d2.display();

}

}

Enter bname id author price :

bname : New Book1

id : 1

author : Author 1

price : 101.11

--------------------------------------------

bname : Book Naming 1

id : 101

author : Author name 1

price : 1111.01

--------------------------------------------

bname : Defaut BK nam 1

id : 1001

author : Author naming 3

price : 111.111

--------------------------------------------

bname : Book Naming 2

id : 111

author : Author name 2

price : 10101.01

--------------------------------------------

**4. Create a class Point with data members as x,y. Create Default and Parameterized constructors. Write**

**getters and setters for all the data members. Also add the display function. Create the object of this**

**class in main method and invoke all the methods in that class.**

**import** java.util.Scanner;

**class** Point {

**private** **int** x;

**private** **int** y;

Point(){ //default const

x= 0 ;

y= 0 ;

}

Point(**int** x , **int** y ){ //parameterized constructor

**this**.x=x;

**this**.y=y;

}

//setters

**public** **void** setX(**int** x) {

**this**.x = x;

}

**public** **void** setY(**int** y) {

**this**.y = y;

}

//getters

**public** **int** getX() {

**return** **this**.x;

}

**public** **int** getY() {

**return** **this**.y;

}

**public** **void** display() {

System.***out***.println("x : " + getX());

System.***out***.println("y : " + getY());

System.***out***.println("--------------------------------------------");

}

}

**public** **class** Day4\_Java {

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

// **TODO** Auto-generated method stub

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

System.***out***.println("Enter x y :");

Point d1 = **new** Point();

d1.display();

d1.setX(1);

d1.setY(2);

d1.display();

Point d2 = **new** Point(20,20);

d2.display();

d2.setX(22);

d2.setY(22);

d2.display();

}

}

Enter x y :

x : 0

y : 0

--------------------------------------------

x : 1

y : 2

--------------------------------------------

x : 20

y : 20

--------------------------------------------

x : 22

y : 22

--------------------------------------------

**5. Create a class ComplexNumber with data members real, imaginary. Create Default and Parameterized constructors. Write getters and setters for all the data members. Also add the display function. Create the object of this class in main method and invoke all the methods in that class.**

**import** java.util.Scanner;

**class** ComplexNumber {

**private** **int** real;

**private** **int** imaginary;

ComplexNumber(){ //default const

real= 0 ;

imaginary= 0 ;

}

ComplexNumber(**int** real , **int** imaginary ){ //parameterized constructor

**this**.real=real;

**this**.imaginary=imaginary;

}

//setters

**public** **void** setReal(**int** real) {

**this**.real = real;

}

**public** **void** setImaginary(**int** imaginary) {

**this**.imaginary = imaginary;

}

//getters

**public** **int** getReal() {

**return** **this**.real;

}

**public** **int** getImaginary() {

**return** **this**.imaginary;

}

**public** **void** display() {

System.***out***.println("real : " + getReal());

System.***out***.println("imaginary : " + getImaginary());

System.***out***.println("--------------------------------------------");

}

}

**public** **class** Day4\_Java {

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

// **TODO** Auto-generated method stub

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

System.***out***.println("Enter bname id author price :");

ComplexNumber d1 = **new** ComplexNumber();

d1.display();

d1.setReal(1);

d1.setImaginary(2);

d1.display();

ComplexNumber d2 = **new** ComplexNumber(20,20);

d2.display();

d2.setReal(22);

d2.setImaginary(22);

d2.display();

}

}

Enter bname id author price :

real : 0

imaginary : 0

--------------------------------------------

real : 1

imaginary : 2

--------------------------------------------

real : 20

imaginary : 20

--------------------------------------------

real : 22

imaginary : 22

--------------------------------------------

**6:create BankAccount aaplication for operations like withdraw ,deposite and moneyTransfer.**

**Create menu drive program for bank operations..**

import java.util.Scanner;

class BankAccount {

private float amt ;

private int acct\_no ;

private static int act= 1;

BankAccount(){ //default constr

acct\_no= act++;

amt = 0;

}

BankAccount(float amt ){ //parameterized constructor

acct\_no= act++;

this.amt = amt;

}

//setters

public void withdraw(float amt) {

if(this.amt >= amt) {

this.amt-=amt;

}else {

System.out.println("Not Enough Amt Available!");

}

}

public void deposit(float amt) {

this.amt+=amt;

}

public void moneyTransfer(float amt , BankAccount receiver) {

if(this.amt >= amt) {

this.amt-=amt;

receiver.amt+=amt;

}else {

System.out.println("Not Enough Amt Available For Transfer!");

}

}

public void display() {

System.out.println("acct\_no : " + acct\_no);

System.out.println("amt : " + amt);

System.out.println("--------------------------------------------");

}

}

public class Day4\_Java {

public static void main(String[] args) {

// TODO Auto-generated method stub

Scanner sc = new Scanner(System.in);

System.out.println("New Account Created!");

BankAccount d1 = new BankAccount();

d1.deposit(1000);

d1.display();

d1.withdraw(100);

d1.display();

System.out.println("New Account 2 Created!");

BankAccount d2 = new BankAccount(2002.25f);

d2.deposit(10000);

d2.display();

d2.withdraw(999);

d2.display();

d2.moneyTransfer(111, d1);

d1.display();

d2.display();

}

}

New Account Created!

acct\_no : 1

amt : 1000.0

--------------------------------------------

acct\_no : 1

amt : 900.0

--------------------------------------------

New Account 2 Created!

acct\_no : 2

amt : 12002.25

--------------------------------------------

acct\_no : 2

amt : 11003.25

--------------------------------------------

acct\_no : 1

amt : 1011.0

--------------------------------------------

acct\_no : 2

amt : 10892.25

--------------------------------------------

**7:Create array of BankAccount class and store 5 objects....create menu driven application for same.....ex. show all account , names ,balance,email...**

import java.util.Scanner;

class BankAccount {

private String email;

private String name ;

private float amt ;

private int acct\_no ;

private static int act= 1;

BankAccount(){ //default constr

acct\_no= act++;

amt = 0;

}

BankAccount(String name , String email , float amt ){ //parameterized constructor

acct\_no= act++;

this.name = name;

this.email = email;

this.amt = amt;

}

//Accesors , Moduler

public String getEmail() {

return email;

}

public void setEmail(String email) {

this.email = email;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public float getAmt() {

return amt;

}

public int getAcct\_no() {

return acct\_no;

}

public void withdraw(float amt) {

if(this.amt >= amt) {

this.amt-=amt;

}else {

System.out.println("Not Enough Amt Available!");

}

}

public void deposit(float amt) {

this.amt+=amt;

}

public void moneyTransfer(float amt , BankAccount receiver) {

if(this.amt >= amt) {

this.amt-=amt;

receiver.amt+=amt;

}else {

System.out.println("Not Enough Amt Available For Transfer!");

}

}

public void display() {

System.out.print("acct\_no : " + getAcct\_no());

System.out.print(" amt : " + getAmt());

System.out.print(" name : " + getName());

System.out.print(" email : " + getEmail() + "\n");

System.out.println("--------------------------------------------");

}

}

public class Day1\_Java {

public static void main(String[] args) {

// TODO Auto-generated method stub

Scanner sc = new Scanner(System.in);

System.out.println("Enter your Choice");

System.out.println("1.Create New Accounts 2.Display Accounts info 3.Display Acct & balance 4.Display Email 5.Change Email 6.Exit ");

BankAccount[] bk = new BankAccount[5];

boolean status = true;

while(status == true) {

int choice = sc.nextInt();

switch(choice) {

case 1:

System.out.println("Enter Name , Email , initial deposit amt ");

for(int i=0;i<5;i++) {

String name = sc.next();

String email = sc.next();

float amt = sc.nextFloat();

bk[i] = new BankAccount(name , email , amt);

System.out.println("------------------------------------------");

}

System.out.println("Done!");

break;

case 2:

System.out.println("Below are the Accounts Info");

for(int i=0;i<5;i++) {

bk[i].display();

System.out.println("------------------------------------------");

}

break;

case 3:

System.out.println("Below are the Accounts and Balance");

for(int i=0;i<5;i++) {

System.out.println(bk[i].getAcct\_no() + "\t" + bk[i].getAmt() );

System.out.println("------------------------------------------");

}

break;

case 4:

System.out.println("Below are the Accounts and Emails");

for(int i=0;i<5;i++) {

System.out.println(bk[i].getAcct\_no() + "\t" + bk[i].getEmail());

System.out.println("------------------------------------------");

}

break;

case 5:

System.out.println("Enter the Account & email which you want to edit : ");

int acct\_no = sc.nextInt();

String email = sc.next();

for(int i=0;i<5;i++) {

if(bk[i].getAcct\_no() == acct\_no) {

bk[i].setEmail(email);

System.out.println("Email Changed");

break;

}

}

break;

default :

status = false;

System.out.println("Exiting...");

}

}

}

}

Enter your Choice

1.Create New Accounts 2.Display Accounts info 3.Display Acct & balance 4.Display Email 5.Change Email 6.Exit

1

Enter Name , Email , initial deposit amt

name1 email1 1000

------------------------------------------

name2 email2 100

------------------------------------------

name3 email3 10

------------------------------------------

name4 email4 188

------------------------------------------

name5 email5 199

------------------------------------------

Done!

2

Below are the Accounts Info

acct\_no : 1 amt : 1000.0 name : name1 email : email1

--------------------------------------------

------------------------------------------

acct\_no : 2 amt : 100.0 name : name2 email : email2

--------------------------------------------

------------------------------------------

acct\_no : 3 amt : 10.0 name : name3 email : email3

--------------------------------------------

------------------------------------------

acct\_no : 4 amt : 188.0 name : name4 email : email4

--------------------------------------------

------------------------------------------

acct\_no : 5 amt : 199.0 name : name5 email : email5

--------------------------------------------

------------------------------------------

6

Exiting...