Task10\_ans1

package javaTask10Answers;

public class Person {

// Attributes

private String name;

private int age;

// Constructors

public Person(String name, int age) {

this.name = name;

this.age = age;

} // Getting method from name

public String getName() {

return name;

}// Getting method form age

public int getAge() {

return age;

}

// Main.java

public static void main(String[] args) {

Person Person1 = new Person("Kavin Vikram", 23);

Person Person2 = new Person("Kirthic Sanjai", 22);

System.***out***.println(Person1.getName() + " is " + Person1.getAge() + " years old.");

System.***out***.println(Person2.getName() + " is " + Person2.getAge() + " years old.");

}

}

OUTPUT;

Kavin Vikram is 23 years old.

Kirthic Sanjai is 22 years old.

Ans2

package javaTask10Answers;

public class Employee {

// Attributes

private int id;

private String firstName;

private String lastName;

private int salary;

// Constructor

public Employee(int id, String firstName, String lastName, int salary) {

this.id = id;

this.firstName = firstName;

this.lastName = lastName;

this.salary = salary;

}

// return

public int getId() {

return id;

}

public String getFirstName() {

return firstName;

}

public String getLastName() {

return lastName;

}

public String getName() {

return firstName + " " + lastName;

}

public int getsalary() {

return salary;

}

public void setSalary(int Salary) {

this.salary = salary;

}

public int getAnnualSalary() {

return salary \* 12;

}

public int raiseSalary(int percent) {

salary = salary \* percent / 100;

return salary;

}

}

package javaTask10Answers;

public class EmployeeCalling {

public static void main(String[] args) {

// Create object with emp

Employee emp = new Employee(23, "Kavin", "Vikram", 85000);

// Print employee id

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

// Print employee firstname

System.***out***.println("Employee Firstname is : " + emp.getFirstName());

// Print employee lastname

System.***out***.println("Employee Lastname is : " + emp.getLastName());

// Print employeefullname

System.***out***.println("Employee Fullname is : " + emp.getName());

// Print employee salary

System.***out***.println("Employee Salary is : " + emp.getsalary());

// print employee annualsalary

System.***out***.println("Employee Annual Salary is : " + emp.getAnnualSalary());

// print employee raisedlsalary

System.***out***.println("Employee incremented Salary is : " + emp.raiseSalary(55));

}

}

OUTPUT;

Employee id is : 23

Employee Firstname is : Kavin

Employee Lastname is : Vikram

Employee Fullname is : Kavin Vikram

Employee Salary is : 85000

Employee Annual Salary is : 1020000

Employee incremented Salary is : 46750

Ans3

package javaTask10Answers;

public class CircleClass {

private double radius;

public CircleClass(double radius) {

this.radius = radius;

}

public double getRadius() {

return radius;

}

public void setRadius(double radius) {

this.radius = radius;

}

public double getArea() {

return Math.***PI*** \* radius \* radius;

}

public double getCircumference() {

return 2 \* Math.***PI*** \* radius;

}

}

package javaTask10Answers;

public class CircleClassCalling {

public static void main(String[] args) {

int r = 5;

CircleClass circle = new CircleClass(r);

System.***out***.println("Radius of the circle is " + r);

System.***out***.println("The area of the circle is " + circle.getArea());

System.***out***.println("The circumference of the circle is " + circle.getCircumference());

r = 8;

circle.setRadius(r);

System.***out***.println("\nRadius of the circle is " + r);

System.***out***.println("The area of the circle is now " + circle.getArea());

System.***out***.println("The circumference of the circle is now " + circle.getCircumference());

}

}

OUTPUT;

Radius of the circle is 5

The area of the circle is 78.53981633974483

The circumference of the circle is 31.41592653589793

Radius of the circle is 8

The area of the circle is now 201.06192982974676

The circumference of the circle is now 50.26548245743669

Ans4

package javaTask10Answers;

public class AccountClass {

// Data member

private double balance;

// Constructors

public AccountClass() {

// Constructor with no argument

this.balance = 0.0;

}

public AccountClass(double initialBalance) {

// Constructor with one argument to initialize balance

this.balance = initialBalance;

}

// Method to withdraw from balance

public void withdraw(double amount) {

if (amount > 0 && amount <= balance) {

balance -= amount;

System.***out***.println("Withdrawal successful. Remaining balance: " + balance);

} else {

System.***out***.println("Withdrawal failed. Insufficient funds.");

}

}

// Method to deposit to balance

public void deposit(double amount) {

if (amount > 0) {

balance += amount;

System.***out***.println("Deposit successful. New balance: " + balance);

} else {

System.***out***.println("Invalid deposit amount.");

}

}

public static void main(String[] args) {

// Create an account with no initial balance

AccountClass account1 = new AccountClass();

account1.deposit(1000); // Deposit some amount

account1.withdraw(500); // Withdraw some amount

System.***out***.println("Current balance: " + account1.balance);

// Create an account with initial balance

AccountClass account2 = new AccountClass(2000);

account2.withdraw(250); // Withdraw some amount

account2.deposit(1000); // Deposit some amount

System.***out***.println("Current balance: " + account2.balance);

}

}

OUTPUT

Deposit successful. New balance: 1000.0

Withdrawal successful. Remaining balance: 500.0

Current balance: 500.0

Withdrawal successful. Remaining balance: 1750.0

Deposit successful. New balance: 2750.0

Current balance: 2750.0

Ans5

package javaTask10Answers;

import javax.annotation.processing.SupportedSourceVersion;

public class Teacls {

protected boolean isPrepared;

private boolean hasMilk;

private boolean hasSugar;

public Teacls() {

this.isPrepared=false;

this.hasMilk=false;

this.hasMilk=false;

}

//creating a method for tea

public void prepareTea() {

if(!isPrepared) {

System.***out***.println("Preparing basic tea with hot water and tea leaves.");

isPrepared=true;

}else {

System.***out***.println("Tea has already been prepared");

}

}

//Creating a method for milk

public void addMilk() {

if(isPrepared) {

if(!hasMilk) {

System.***out***.println("Adding milk to the the tea");

hasMilk =true;

}else {

System.***out***.println("Tea has already been prepared.");

}

}

}

//Creating a method for Sugar

public void addSugar() {

if(isPrepared) {

if(!hasSugar) {

System.***out***.println("Adding sugar to the the tea");

hasSugar=true;

}else {

System.***out***.println("Please prepare the tea first.");

}

}

}

public static void main(String[] args) {

Teacls tea =new Teacls();

tea.prepareTea();

tea.addMilk();

tea.addSugar();

tea.addMilk();

tea.addSugar();

}

}

Ans6

package javaTask10Answers;

//black tea subclass

public class BLackTea extends Teacls {

*@Override*

public void prepareTea() {

if (!isPrepared) {

System.***out***.println("Preparing black tea with hot water and black tea leaves.");

System.***out***.println("Brewing time: 5 minutes");

isPrepared = true;

} else {

System.***out***.println("Black tea has already been prepared.");

}

}

}

package javaTask10Answers;

public class GreenTea extends Teacls {

//black tea subclass

*@Override*

public void prepareTea() {

if (!isPrepared) {

System.***out***.println("Preparing Geenrtea with hot water and black tea leaves.");

System.***out***.println("Brewing time: 5 minutes");

isPrepared = true;

} else {

System.***out***.println("Green tea has already been prepared.");

}

}

}

package javaTask10Answers;

public class HearbalTea extends Teacls {

public void preparedTea() {

if(!isPrepared) {

System.***out***.println("Preparing herbal tea with hot water and herbal tea ingredients.");

System.***out***.println("Brewing time: 7 minutes");

isPrepared=true;

}else {

System.***out***.println("Herbal tea has already been prepared.");

}

}

}

package javaTask10Answers;

public class TeacallingCls {

public static void main(String[] args) {

BLackTea blacktea=new BLackTea();

blacktea.prepareTea();

blacktea.addMilk();

blacktea.addSugar();

GreenTea greentea=new GreenTea();

greentea.prepareTea();

greentea.addSugar();

HearbalTea hbtea=new HearbalTea();

hbtea.preparedTea();

hbtea.addSugar();

}

}

Output;

Preparing black tea with hot water and black tea leaves.

Brewing time: 5 minutes

Adding milk to the the tea

Adding sugar to the the tea

Preparing Geenrtea with hot water and black tea leaves.

Brewing time: 5 minutes

Adding sugar to the the tea

Preparing herbal tea with hot water and herbal tea ingredients.

Brewing time: 7 minutes

Adding sugar to the the tea

Ans7

package javaTask10Answers;

public class Main {

public static void main(String[] args) {

Teacls[] teas = new Teacls[3];

teas[0] = new BLackTea();

teas[1] = new GreenTea();

teas[2] = new HearbalTea();

for (Teacls tea : teas) {

tea.prepareTea();

tea.addSugar();

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

}

}

}

Output;

Preparing black tea with hot water and black tea leaves.

Brewing time: 5 minutes

Adding sugar to the the tea

Preparing Geenrtea with hot water and black tea leaves.

Brewing time: 5 minutes

Adding sugar to the the tea

Preparing basic tea with hot water and tea leaves.

Adding sugar to the the tea