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230701104

Object Oriented Programming Using Java

Week 5

1)



class Mobile{

public Mobile(){

System.out.println("Basic Mobile is Manufactured");

}

}

class CameraMobile extends Mobile{

public CameraMobile(){

System.out.println("Camera Mobile is Manufactured");

}

public void newFeature(){

System.out.println("Camera Mobile with 5MG px");

}

}

class AndroidMobile extends CameraMobile{

public AndroidMobile(){

System.out.println("Android Mobile is Manufactured");

}

void androidMobile(){

System.out.println("Touch Screen Mobile is Manufactured");

}

}

class prog{

public static void main(String[] args){

AndroidMobile o=new AndroidMobile();

o.newFeature();

o.androidMobile();

}

}



2)



class BankAccount {

private String accountNumber;

private double balance;

public BankAccount(String accountNumber, double balance){

this.accountNumber=accountNumber;

this.balance=balance;

}

// Method to deposit an amount into the account

public void deposit(double amount) {

// Increase the balance by the deposit amount

balance+=amount;

}

public void withdraw(double amount) {

if (balance >= amount) {

balance -= amount;

} else {

System.out.println("Insufficient balance");

}

}

// Method to get the current balance

public double getBalance() {

// Return the current balance

return balance;

}

}

class SavingsAccount extends BankAccount {

// Constructor to initialize account number and balance

public SavingsAccount(String accountNumber, double balance) {

// Call the parent class constructor

super(accountNumber,balance);

}

// Override the withdraw method from the parent class

@Override

public void withdraw(double amount) {

// Check if the withdrawal would cause the balance to drop below $100

if (getBalance() - amount < 100) {

// Print a message if the minimum balance requirement is not met

System.out.println("Minimum balance of $100 required!");

} else {

// Call the parent class withdraw method

super.withdraw(amount);

}

}

}

class prog {

public static void main(String[] args) {

// Print message to indicate creation of a BankAccount object

System.out.println("Create a Bank Account object (A/c No. BA1234) with initial balance of $500:");

// Create a BankAccount object (A/c No. "BA1234") with initial balance of $500

BankAccount BA1234 = new BankAccount("BA1234", 500);

// Print message to indicate deposit action

System.out.println("Deposit $1000 into account BA1234:");

// Deposit $1000 into account BA1234

BA1234.deposit(1000);

System.out.println("New balance after depositing $1000: $"+ BA1234.getBalance());

// Print the new balance after deposit

// Print message to indicate withdrawal action

System.out.println("Withdraw $600 from account BA1234:");

// Withdraw $600 from account BA1234

BA1234.withdraw(600);

// Print the new balance after withdrawal

System.out.println("New balance after withdrawing $600: $" + BA1234.getBalance());

// Print message to indicate creation of another SavingsAccount object

System.out.println("Create a SavingsAccount object (A/c No. SA1000) with initial balance of $300:");

// Create a SavingsAccount object (A/c No. "SA1000") with initial balance of $300

SavingsAccount SA1000 = new SavingsAccount("SA1000", 300);

// Print message to indicate withdrawal action

System.out.println("Try to withdraw $250 from SA1000!");

// Withdraw $250 from SA1000 (balance falls below $100)

SA1000.withdraw(250);

// Print the balance after attempting to withdraw $250

System.out.println("Balance after trying to withdraw $250: $" + SA1000.getBalance());

}

}



3)



class College

{

protected String collegeName;

public College(String collegeNameP) {

// initialize the instance variables

collegeName= collegeNameP;

}

public void admitted() {

System.out.println("A student admitted in "+collegeName);

}

}

class Student extends College{

String studentName;

String depart;

public Student(String collegeNameP, String studentNameP,String departP) {

// initialize the instance variables

super(collegeNameP);

studentName=studentNameP;

depart=departP;

}

public String toString(){

// return the details of the student

return "CollegeName : "+collegeName+"\nStudentName : "+studentName+"\nDepartment : "+depart ;

}

}

class prog {

public static void main (String[] args) {

Student s1 = new Student("REC","Venkatesh","CSE");

s1.admitted(); // invoke the admitted() method

System.out.println(s1.toString());

}

}

