

CS23333-Object Oriented Programming Using Java-2023

[Dashboard](#) / [My courses](#) / [CS23333-OOPJ-2023](#) / [Lab-05-Inheritance](#) / [Lab-05-Logic Building](#)

Quiz navigation



[Show one page at a time](#)  
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Question **1**  
Correct  
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Status	Finished
Started	Saturday, 5 October 2024, 10:19 PM
Completed	Saturday, 5 October 2024, 10:58 PM
Duration	38 mins 33 secs

Create a class known as "BankAccount" with methods called deposit() and withdraw().

Create a subclass called SavingsAccount that overrides the withdraw() method to prevent withdrawals if the account balance falls below one hundred.

**For example:**

Result
Create a Bank Account object (A/c No. BA1234) with initial balance of \$500: Deposit \$1000 into account BA1234: New balance after depositing \$1000: \$1500.0 Withdraw \$600 from account BA1234: New balance after withdrawing \$600: \$900.0 Create a SavingsAccount object (A/c No. SA1000) with initial balance of \$300: Try to withdraw \$250 from SA1000! Minimum balance of \$100 required! Balance after trying to withdraw \$250: \$300.0

**Answer:** (penalty regime: 0 %)

[Reset answer](#)

```
1 class BankAccount {
2     // Private field to store the account number
3     private String accountNumber;
4
5     // Private field to store the balance
6     private double balance;
7
8     // Constructor to initialize account number and balance
9
10    public BankAccount(String accountNumber,double balance)
11    {
12        this.accountNumber=accountNumber;
13        this.balance=balance;
14    }
15
16
17
18    // Method to deposit an amount into the account
19    public void deposit(double amount) {
20        // Increase the balance by the deposit amount
21        balance+=amount;
22    }
23
24    // Method to withdraw an amount from the account
25    public void withdraw(double amount) {
26        // Check if the balance is sufficient for the withdrawal
27        if (balance >= amount) {
28            // Decrease the balance by the withdrawal amount
29            balance -= amount;
30        } else {
31            // Print a message if the balance is insufficient
32            System.out.println("Insufficient balance");
33        }
34    }
35
36    // Method to get the current balance
37    public double getBalance() {
38        // Return the current balance
39        return balance;
40    }
41    public String getAccountNumber()
42    {
43        return accountNumber;
44    }
45 }
46
47 class SavingsAccount extends BankAccount {
48     // Constructor to initialize account number and balance
49     public SavingsAccount(String accountNumber,double balance) {
50         // Call the parent class constructor
51         super(accountNumber,balance);
52     }
53
54     // Override the withdraw method from the parent class
55     @Override
56     public void withdraw(double amount) {
57         // Check if the withdrawal would cause the balance to drop below $100
58         if (getBalance() - amount < 100) {
59             // Print a message if the minimum balance requirement is not met
60             System.out.println("Minimum balance of $100 required!");
61         } else {
62             // Call the parent class withdraw method
63             super.withdraw(amount);
64         }
65     }
66 }
67 }
```

Expected	Got
Create a Bank Account object (A/c No. BA1234) with initial balance of \$500: Deposit \$1000 into account BA1234: New balance after depositing \$1000: \$1500.0 Withdraw \$600 from account BA1234: New balance after withdrawing \$600: \$900.0 Create a SavingsAccount object (A/c No. SA1000) with initial balance of \$300: Try to withdraw \$250 from SA1000! Minimum balance of \$100 required! Balance after trying to withdraw \$250: \$300.0	Create a Bank Account object (A/c No. BA1234) with initial balance of \$500: Deposit \$1000 into account BA1234: New balance after depositing \$1000: \$1500.0 Withdraw \$600 from account BA1234: New balance after withdrawing \$600: \$900.0 Create a SavingsAccount object (A/c No. SA1000) with initial balance of \$300: Try to withdraw \$250 from SA1000! Minimum balance of \$100 required! Balance after trying to withdraw \$250: \$300.0
<div>Passed all tests!</div>	

Question **2**

create a class called College with attribute String name, constructor to initialize the name attribute , a method called Admitted(). Create a subclass called CSE that extends

Student class, with department attribute , Course() method to sub class. Print the details of the Student.

College:

```
String collegeName;

public College() {}

public admitted() {}
```

Student:

```
String studentName;

String department;

public Student(String collegeName, String studentName,String depart) {}

public toString()
```

Expected Output:

A student admitted in REC  
CollegeName : REC  
StudentName : Venkatesh  
Department : CSE

For example:

Result
A student admitted in REC CollegeName : REC StudentName : Venkatesh Department : CSE

Answer: (penalty regime: 0 %)

Reset answer

```
1 class College
2 {
3     protected String collegeName;
4
5     public College(String collegeName) {
6         // initialize the instance variables
7         this.collegeName=collegeName;
8     }
9
10    public void admitted() {
11        System.out.println("A student admitted in "+collegeName);
12    }
13 }
14 class Student extends College{
15
16     String studentName;
17     String department;
18
19     public Student(String collegeName, String studentName,String department) {
20         // initialize the instance variables
21         super(collegeName);
22         this.studentName=studentName;
23         this.department=department;
24     }
25 }
26
27 public String toString(){
28     // return the details of the student
29     return "CollegeName : "+collegeName+"\nStudentName : "+studentName+"\nDepartment : "+department;
30 }
31 }
32 public class Main {
33     public static void main (String[] args) {
34         Student s1 = new Student("REC","Venkatesh","CSE");
35         s1.admitted(); // invoke the admitted() method
36         System.out.println(s1.toString());
37     }
38 }
```

Expected	Got
A student admitted in REC CollegeName : REC StudentName : Venkatesh Department : CSE	A student admitted in REC CollegeName : REC StudentName : Venkatesh Department : CSE

Passed all tests!

Create a class Mobile with constructor and a method basicMobile().

Create a subclass CameraMobile which extends Mobile class , with constructor and a method newFeature().

Create a subclass AndroidMobile which extends CameraMobile, with constructor and a method androidMobile().

display the details of the Android Mobile class by creating the instance. .

```
class Mobile{

}

class CameraMobile extends Mobile {

}

class AndroidMobile extends CameraMobile {

}
```

expected output:

Basic Mobile is Manufactured  
Camera Mobile is Manufactured  
Android Mobile is Manufactured  
Camera Mobile with 5MG px  
Touch Screen Mobile is Manufactured

For example:

Result
Basic Mobile is Manufactured Camera Mobile is Manufactured Android Mobile is Manufactured Camera Mobile with 5MG px Touch Screen Mobile is Manufactured

Answer: (penalty regime: 0 %)

```
1 class Mobile
2 {
```

```

3      public Mobile()
4      {
5          System.out.println("Basic Mobile is Manufactured");
6      }
7      public void basicMobile()
8      {
9      }
10     }
11     class CameraMobile extends Mobile
12     {
13         public CameraMobile()
14         {
15             super();
16             System.out.println("Camera Mobile is Manufactured");
17         }
18         public void newFeature()
19         {
20             System.out.println("Camera Mobile with 5MG px");
21         }
22     }
23     class AndroidMobile extends CameraMobile
24     {
25         public AndroidMobile()
26         {
27             super();
28             System.out.println("Android Mobile is Manufactured");
29         }
30         public void androidMobile()
31         {
32             System.out.println("Touch Screen Mobile is Manufactured");
33         }
34     }
35     public class Main
36     {
37         public static void main(String args[])
38         {
39             AndroidMobile a =new AndroidMobile();
40             a.newFeature();
41             a.androidMobile();
42         }
43     }

```

Expected	Got
Basic Mobile is Manufactured	Basic Mobile is Manufactured
Camera Mobile is Manufactured	Camera Mobile is Manufactured
Android Mobile is Manufactured	Android Mobile is Manufactured
Camera Mobile with 5MG px	Camera Mobile with 5MG px
Touch Screen Mobile is Manufactured	Touch Screen Mobile is Manufactured

Passed all tests!

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