# <u>Dashboard</u> / <u>My courses</u> / <u>CS23333-OOPUJ-2023</u> / <u>Lab-05-Inheritance</u> / <u>Lab-05-Logic Building</u>

Status	Finished
Started	Sunday, 6 October 2024, 11:58 AM
Completed	Sunday, 6 October 2024, 1:07 PM
Duration	1 hour 8 mins

```
Question 1
Correct
Marked out of 5.00
```

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
    public College(String collegeNameP) {
 5
        collegeName=collegeNameP;
 6
 7
        // initialize the instance variables
 8
9
10
    public void admitted() {
11
12
        System.out.println("A student admitted in "+collegeName);
13
14
15 ,
    class Student extends College{
16
17
    String studentName;
18
    String depart;
19
    public Student(String collegeNameP, String studentNameP,String departP) {
20
21
        super(collegeNameP);
22
        studentName=studentNameP;
23
        depart=departP;
24
       // initialize the instance variables
25
26
27
28
29
    public String toString(){
        return "CollegeName : "+ collegeName +"\nStudentName : "+ studentName+"\nDepartment : "+ depart;
30
31
        // return the details of the student
32
33
    }
34
35 v class prog {
```

```
36 v public static void main (String[] args) {
37
38
38
39
40
40
41
41
42
}
public static void main (String[] args) {
    Student s1 = new Student("REC","Venkatesh","CSE");
    s1.admitted();
    // invoke the admitted() method
    System.out.println(s1.toString());
    }
}
```

	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! 🗸

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```
Question 2
Correct
Marked out of 5.00
```

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 v class Mobile{
 2 ,
        public Mobile(){
            System.out.println("Basic Mobile is Manufactured");
 3
4
 5
    }
 6 v class CameraMobile extends Mobile{
 7
        public CameraMobile(){
            System.out.println("Camera Mobile is Manufactured");
8
9
10
        public void newFeature(){
11
            System.out.println("Camera Mobile with 5MG px");
12
13
14
    class AndroidMobile extends CameraMobile{
15
        public AndroidMobile(){
16
            System.out.println("Android Mobile is Manufactured");
17
18
        void AndroidMobile(){
            System.out.println("Touch Screen Mobile is Manufactured");
19
20
21
22
    class prog{
23
        public static void main(String[] args){
            AndroidMobile o=new AndroidMobile();
24
25
            o.newFeature();
26
            o.AndroidMobile();
27
28
   }
```

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

Passed all tests! 🗸

```
Question 3
Correct
Marked out of 5.00
```

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 v class BankAccount {
        // Private field to store the account number
 2
 3
        private String accountNumber;
 4
 5
        // Private field to store the balance
 6
        private double balance;
        public BankAccount(String accountNumber,double balance){
 7
 8
            this.accountNumber=accountNumber;
9
            this.balance=balance;
10
11
12
        // Constructor to initialize account number and balance
13
14
15
16
17
        // Method to deposit an amount into the account
18
19
        public void deposit(double amount) {
            balance+=amount;
20
            // Increase the balance by the deposit amount
21
22
23
24
        // Method to withdraw an amount from the account
25
26
        public void withdraw(double amount) {
            // Check if the balance is sufficient for the withdrawal
27
28
            if (balance >= amount) {
                 // Decrease the balance by the withdrawal amount
29
30
                balance -= amount;
31
            } else {
                // Print a message if the balance is insufficient
32
                System.out.println("Insufficient balance");
33
34
            }
35
36
37
        // Method to get the current balance
        public double getBalance() {
38
39
            return balance;
40
            // Return the current balance
41
42
        }
43
    }
44
45
     class SavingsAccount extends BankAccount {
46
        // Constructor to initialize account number and balance
47
        public SavingsAccount(String accountNumber, double balance) {
48
            super(accountNumber,balance);
49
            // Call the parent class constructor
```

51 } 52

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

Passed all tests! 🗸

### **◄** Lab-05-MCQ

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