

Don Bosco Institute of Technology, Kurla(W)
Department of Electronics and Tele-Communication Engineering
ECL304 - Skill Lab: C++ and Java Programming
Sem III
2021-22

Lab Number:	4
Student Name:	SAKSHI KAILASH MOREY
Roll No :	34

Title:

4.1 Write a Java program to Create a class Student with two method getData() and printData(). getData() to get the value from the user and display the data in printData(). Create the two objects s1 ,s2 to declare and access the values from class Student Test.

4.2 Write a Java program for Basic bank Management System

Learning Objective:

- Students will be able to write C++ and java program for using classes and objects.

Learning Outcome:

- Ability to execute a simple C++ and Java program by accepting and displaying values using functions
- Understanding the classes and objects concept in C++ and Java.

Course Outcome:

ECL304.1	Understand object-oriented programming concepts and implement using C++ and Java
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Theory:

Explain about Constructor.

Explain about classes and objects in Java

How to access class attributes and methods? Explain with example

Algorithm :	<ol style="list-style-type: none">1. Start2. Define Class Student3. Define attributes – Name , Roll_no, cgpa, div , branch4. Define and declare method – getdata() to get input from user.5. Define and declare method – printdata() to print the values
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	<ol style="list-style-type: none">6. Define class student test7. Define public static Main function()8. Create object s1, s2 to call the class functionality.9. End.
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Program:	<pre>import java.util.Scanner;class Student { Scanner in=new Scanner(System.in);String name; int roll_no; float cgpa; char div; char branch; void getdata() { System.out.println("Enter your name:"); name=in.next(); System.out.println("Enter your roll number:"); roll_no=in.nextInt(); System.out.println("Enter your CGPA:"); cgpa=in.nextFloat(); System.out.println("Enter your Division:"); div=in.next().charAt(0); System.out.println("Enter branch:"); branch=in.next().charAt(0); } void getdata(String n,int r,float c,char d, char b) { name=n; roll_no=r;cgpa=c; div=d; branch=b; } }</pre>
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```
void printdata()
{
    System.out.println("Name of the student: "+name);
    System.out.println("Roll-no of the student: "+roll_no);
    System.out.println("Cgpa of the student: "+cgpa);
    System.out.println("Division of the student: "+div);
    System.out.println("branch of the student: "+branch);
}

};

public class StudentTest {

    public static void main(String[] args) {

        Student s1=new Student();Student
        s2=new Student();s1.getdata();
        s1.printdata(); s2.getdata();
        s2.printdata();

    }

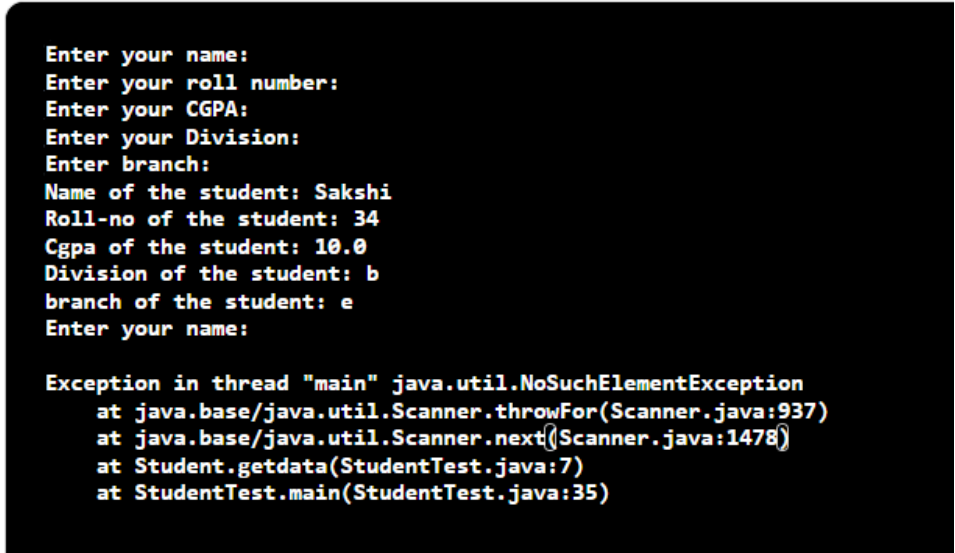
}
```

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Input given:	Enter your name: Enter your roll number: Enter your CGPA: Enter your Division: Enter branch:
Output Screenshot:	<p>Result CPU Time: 0.35 sec(s), Memory: 37776 kilobyte(s)</p>  <pre> Enter your name: Enter your roll number: Enter your CGPA: Enter your Division: Enter branch: Name of the student: Sakshi Roll-no of the student: 34 Cgpa of the student: 10.0 Division of the student: b branch of the student: e Enter your name: Exception in thread "main" java.util.NoSuchElementException at java.base/java.util.Scanner.throwFor(Scanner.java:937) at java.base/java.util.Scanner.next(Scanner.java:1478) at Student.getdata(StudentTest.java:7) at StudentTest.main(StudentTest.java:35) </pre>

Algorithm :	<ol style="list-style-type: none"> 1. Start 2. Define Class BankLab 2 3. Define attributes – Name , account_type , account_number, amount, balance 4. Declare attributes by using constructor of class. 5. Define and declare method – deposit() to deposit the amount 6. Define and declare method – withdraw() to withdraw the amount 7. Define and declare method – display() to display the account details 8. Define static void Main function()
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	<p>9. Create object b1, b2, b3 to call the class functionality.</p> <p>10. Do – while loop to repeat the process.</p> <p>11. End</p>
Program:	<pre>import java.util.Scanner; public class BankLab2 { Scanner in=new Scanner(System.in); String name; char account_type; int account_number,amount; float balance; public BankLab2(String n,int a, char t, float b) { // TODO Auto-generated constructor stub name = n; account_number=a; account_type=t; balance=b; } int deposit() { System.out.println("Enter the amount to deposit: "); int amount=in.nextInt(); if(amount<0) { System.out.println("Invalid amount,Enter a</pre>

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	<pre>valid amount"); return 0; } balance=balance+amount; return 1; } int withdraw() { System.out.println("Your Balance= " +balance); System.out.println("Enter amount to withdraw: "); int amount=in.nextInt(); if (balance<amount) { System.out.println("Insufficient Balance: "); return 0; } if(amount<0) { System.out.println("Invalid amount"); return 0; } balance=balance-amount; return 1; } void display() { System.out.println("Name :"+name); System.out.println("Account Number:"</pre>
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	<pre>+account_number); System.out.println("Account Type:" +account_type); System.out.println("Balance: " +balance); } public static void main(String[] args) { // TODO Auto-generated method stub Scanner in=new Scanner(System.in); BankLab2 b1=new BankLab2("salman",1,'s',2000); BankLab2 b2=new BankLab2("makarand",2,'s',2000); BankLab2 b3=new BankLab2("siddharth",3,'s',2000); System.out.println("Menu"); System.out.println("1.Deposit"); System.out.println("2.Withdraw"); System.out.println("3.Display"); System.out.println("Enter option"); int op=in.nextInt(); char ans; do { System.out.println("Please enter your account number:"); int account_number=in.nextInt(); switch(account_number) { case 1: if(op==1)</pre>
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	<pre> b1.deposit(); if(op==2) b1.withdraw(); if(op==3) b1.display(); break; case 2: if(op==1) b2.deposit(); if(op==2) b2.withdraw(); if(op==3) b2.display(); break; case 3: if(op==1) b3.deposit(); if(op==2) b3.withdraw(); if(op==3) b3.display(); break; default: System.out.println("Enter value between 1 to 3"); </pre>
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	<pre> break; } System.out.println("Do you want to continue?[Y/N]"); ans=in.next().charAt(0); //char input in variable ans if(ans=='Y' ans == 'y') { System.out.println("Menu"); System.out.println("1.Deposit"); System.out.println("2.Withdraw"); System.out.println("3.Display"); System.out.println("Enter option"); op=in.nextInt(); } } while(ans!='N'); } } </pre>
Input given:	Menu 1.Deposit 2.Withdraw 3.Display Enter option

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Output Screenshot:

CPU Time: 0.19 sec(s), Memory: 37240 kilobyte(s)

```
Menu
1.Deposit
2.Withdraw
3.Display
Enter option
Please enter your account number:
Your Balance= 2000.0
Enter amount to withdraw:

Exception in thread "main" java.util.NoSuchElementException
    at java.base/java.util.Scanner.throwFor(Scanner.java:937)
    at java.base/java.util.Scanner.next(Scanner.java:1594)
    at java.base/java.util.Scanner.nextInt(Scanner.java:2258)
    at java.base/java.util.Scanner.nextInt(Scanner.java:2212)
    at BankLab2.withdraw(BankLab2.java:73)
    at BankLab2.main(BankLab2.java:181)
```