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:	**Omkar Bidwai**
Roll No :	**19**

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

Theory:

Explain about Constructor.

Explain about classes and objects in Java

How to access class attributes and methods? Explain with example

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 StudentTest.

Algorithm:-

Step 1:- Input name, roll no, cgpa, div, branch.

Step 2:- Enter all the getData() condition for inputs.

Step 3:- give value for getData().

Step 4:-Give the data for printData() to grt outpt.

Step 5:- Output.

Faculty: Ms. Deepali Kayande

Program:-

```
import java.util.Scanner;

public 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;

        }

        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();
```

```
        }


}
```

Input and Output:-

```
Enter your name:
omkar
Enter your roll number:
19
Enter your CGPA:
9.27
Enter your Division:
B
Enter your branch:
_EXTERN_C
Name of the student: omkar
Roll-no of the student: 19
Cgpa of the student: 9.27
Division of the student: B
Branch of the student: Extc
```

4.2 Write a Java program for Basic bank Management System

Algorithm:-

Step 1:- Input name, account_type,account_number,amount,balance.

Step 2:- Enter for a deposit and all the condition.

Step 3:- Enter for a withdraw and all the condition.

Step 4:- Enter for a display and all the conditions.

Step 5:- Enter the option for yes and no

Step 5:- Output

Program:-

```
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 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:" +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)
                                                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");
                    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');
        }
}
```

Input and Output:-

```
Menu
1.Deposit
2.Withdraw
3.Display
Enter option
1
Please enter your account number:
1
Enter the amount to     deposit: 100
Do you want to continue?[Y/N]Y

Menu
1.Deposit
2.Withdraw
3.Display
Enter option
3
Please enter your account number:
1
Your Balance= 2000Enter amount to withdraw: 2100
Do you want to continue?[Y/N]N
```

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