1BM19CS211

Java lab program 3:

```
import java.util.*;
import java.lang.*;
class Book {
    String name, author;
    double price;
    int num_pages;
    Scanner in = new Scanner(System.in);

    Book() {
        System.out.println("Enter name of book:");
        name = in.nextLine();
        System.out.println("Enter name of author:");
        author = in.nextLine();
        System.out.println("Enter price:");
        price = in.nextDouble();
        System.out.println("Enter no of pages:");
        num_pages = in.nextInt();
    }

    void show() {
        System.out.println("Name:" + name);
        System.out.println("Author:" + author);
        System.out.println("Price:" + price);
        System.out.println("No. of pages:" + no_pages);
    }

public String toString() {
        return name + ", By" + author + "for Rs." + price +
        "and has" + num_pages + "pages";
    }
```

```
public static void main(String[] args){
    Scanner in = new Scanner(System.in);
    int n, x;
    System.out.println("Enter no. of books: ");
    n = in.nextInt();
    Book B[] = new Book[n];
    for(int i=0; i<n; i++){
        System.out.println("Book" + (i+1));
        B[i] = new Book;
        System.out.println();
    }
    for(int i=0; i<n; i++){
        System.out.println("Book" + (i+1));
        System.out.println(B[i]);
        System.out.println();
    }
    do{
    System.out.println("Enter the book no. whose
        details you want to display: ");
        x = in.nextInt();
        }while(x<1 && x>n);
            B[x-1].show();
    }
}
```

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Java lab Program 5

```
import java.util.*;
import java.lang.*;

class Accant {
    String name, abc;
    int accNo;
    char accType;
    double bal=0;
    double deposit;
    Scanner in = new Scanner(System.in);

    void input_data() {
    System.out.println ("Enter your account type (S/C):" );
      abc = in.nextline();
       accType = abc.charAt(0);
    }

     void deposit() {
     System.out.println ("Enter an amount to deposit: ");
      deposit = in.nextDouble();
        bal += deposit;
        System.out.println ("Balance has been updated.");
    }
    void view_balance() {
      System.out.println ("Balance = " +bal);
    }
```

```
public static void main (String[] args) {
Scanner s: new Scanner( System.in);
  int x;
  Account a1 = new Account();
  a1. input_data();

  if (a1. accType == 'c' || a1.accType == 'C') {
     Current a2= new  ament();
   do
    {
      System.out.println ("Welcome to your current
                    account ");
   System. out. println("1. Deposit ");
   System. out. println ("2. Check Balance ");
   System.out.println ("3. Issue Cheque ");
   System. out.println ("4. Exit ");
  System. out.println (" Enter your choice: ");
   x: s.nextInt);

   Switch (x) {
      case 1:
        a2. deposit();
        break;
     case 2:
      a2. check_balance();
       break;
     Case 3:
        a2. issue_cheque();
        break
```

```
case 4:
    System.exit(0);
    break;
default:
    System.out.println("Error. Invalid choice.");
}
} while (x<=4 && x>=1);
} else if (al.accType == 's' || al.accType == 'S') {

    Savings a3 = new Savings();
    do {
        System.out.println("Welcome to your
            savings account");
        System.out.println("1. Deposit");
        System.out.println("2. View Balance");
        System.out.println("3. withdraw");
        System.out.println("4. Calculate CI");
        System.out.println("5. Exit");
        System.out.println("Enter your choice");
        x: S.nextInt();

        switch(x){
        case 1:
            a3.deposit();
            break;
        case 2
        a3.view-balance();
            break;
        case 4;
        a3.compute_CI();
        break;
```

```
case 5:
    System.exit(0);
    break;
  default:
    System.out.println ("Error!");
  }
} while (x<=5 && x>=1);
} else
  System.out.println ("Invalid account type");
}
}

class Current extends Account{
Current() {
  System.out.println ("Enter your name : ");
  name = in.nextLine();
  System.out.println (" Enter your acc. no. : ");
  accNo = in.nextInt();
    deposit();
}
double chq_amount ;
  void issue_cheque() {
  System.out.println("Enter amount for which cheque is to
  be issued.");
  chq_amount = in.nextDouble();
    if (chq_amount > bal) {
      System.out.println ("Error! Insufficient balance");
    } else {
          bal -= chq_amount;
    System.out.println ("Cheque has been issued successfully");
    }
}
```

```
void check_balance (){
    if (bal < 1000){
     System.out.println (" Amount balance is lesser than
        required balance.");
      bal -= 100;
     System.out.println (" Service charge of Rs. 100 has been
      deducted from your balance.");
     }
     view_balance ();
     }
   }
class Savings extends Account{
    double CI, withdrawal_amount, time;
    Saving (){
      System.out.println ("Enter your name:");
     name = in.nextLine ();
     System.out.println ("Enter your account no: ");
     AccNo = in.nextInt ();
      deposit ();
    }
     void compute_CI (){
     System.out.println ("Enter time period in years: ");
     time = in.nextInt ();
    CI = bal*Math.pow (1+(0.08/12), 12*time) - bal;
     System.out.println ("CI = "+CI");
    bal += CI;
     System.out.println ("CI has been deposited");
   }
```

```
void withdraw_balance() {
    System.out.println("Enter the amount you want to
    withdraw: ");
withdrawl_amount = in.nextDouble();
if (withdrawl_amount > bal) {
    System.out.println("Error! Amount greate than avilable
            balance ");
    } else {
        bal -= withdrawl_amount;
        System.out.println("Amount withdrawn successfully!");
        }
    }
}
```