

9/01/24 Lab programs

```
import java.util.Scanner;
```

```
class BankAccount {
```

```
    protected String customerName;
```

```
    protected int accountNumber;
```

```
    protected double balance;
```

```
    public BankAccount(String customerName,  
        int accountNumber, double balance)
```

```
    {
```

```
        this.customerName = customerName;
```

```
        this.accountNumber = accountNumber;
```

```
        this.balance = balance;
```

```
    }
```

```
    public void displayAccountDetails()
```

```
    {
```

```
        System.out.println("customer name:" +  
            customerName);
```

```
        System.out.println("Account number:" +  
            accountNumber);
```

```
        System.out.println("Type of Account: Savings  
            Account");
```

```
        System.out.println("balance - " + balance);
```

```
    }
```

```
}
```

```
class SavingsAccount extends BankAccount {
```

```
    {
```

```
        private double interestRate;
```

```
        public SavingsAccount(String customerName,
```

```
            int accountNumber, double balance, double
```

InterestRate)

{

super(customerName, accountNumber, balance);
this. InterestRate = InterestRate;

}

public void deposit(double amount) {
balance += amount;

}

public void withdraw(double amount) {
balance -= amount;

}

public void computeInterest() {
balance += balance * InterestRate / 100;

}

public void displayAccountDetails()

super.displayAccountDetails();

System.out.println("Interest Rate: " + InterestRate
+ "%");

}

}

class Bank {

public static void main(String[] args)

{

Scanner scanner = new Scanner(System.in);

SavingsAccount[] accounts = new SavingsAccount[2];

int choice;

String customerName;

int accountNumber;

double balance;

double depositAmount;

double withdrawalAmount;

```
double interestRate;  
  
for (int i = 0; i < 2; i++)  
{  
    System.out.println("Enter customer Name:");  
    customerName = scanner.next();  
    System.out.println("Enter account number:");  
    accountNumber = scanner.nextInt();  
    System.out.println("Enter the deposit amount:");  
    balance = scanner.nextDouble();  
    accounts[i] = new SavingsAccount(customerName,  
    accountNumber, balance, 2);  
}  
do {  
    System.out.println("\n--- MENU ---");  
    System.out.println("1. Deposit");  
    System.out.println("2. Withdraw");  
    System.out.println("3. compute interest for  
        Savings Account");  
    System.out.println("4. Display Account details");  
    System.out.println("5. exit");  
    System.out.println("Enter your choice:");  
    choice = scanner.nextInt();  
  
    switch (choice) {  
        case 1:  
            System.out.println("Enter the type of  
                account:");  
            String accountType = scanner.next();  
            System.out.println("Enter the deposit  
                amount:");  
            depositAmount = scanner.nextDouble();
```

```
accounts[0].deposit(depositAmount);  
break;
```

```
case 2:
```

```
system.out.println("Enter the type of  
account:");
```

```
accountType = saScanner.next();
```

```
system.out.println("Enter the withdrawal  
amount:");
```

```
withdrawalAmount = saScanner.nextDouble();
```

```
accounts[0].withdraw(withdrawalAmount);
```

```
break;
```

```
case 3:
```

```
accounts[0].computeInterest();
```

```
break;
```

```
case 4:
```

```
accounts[0].displayAccountDetails();
```

```
break;
```

```
case 5:
```

```
system.out.println("Exiting...");
```

```
break;
```

```
default:
```

```
system.out.println("Invalid choice.  
Please try again.");
```

```
}  
}
```

```
while(choice != 5);
```

```
scanner.close();
```

```
}
```

```
}
```


output

Enter customer Name: prateek
 Enter account number: 112
 Enter the deposit amount: 20000
 Enter customer Name: Rachana
 Enter account number: 213
 Enter the deposit amount: 30000

--- MENU ---

1. Deposit
2. Withdraw
3. Compute Interest for Savings Account
4. Display account details
5. exit.

Enter your choice: 1

Enter the type of account: Savings

Enter the deposit amount: 30000

--- MENU ---

1. Deposit
2. Withdraw
3. Compute Interest for Savings Account
4. Display Account details
5. exit

Enter your choice: 3

--- Menu ---

1. Deposit
2. Withdraw
3. Compute Interest for Savings Account
4. Display Account details

PAGE NO :

DATE :

c.exit.

Enter your choice : 4

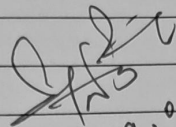
customer name : prabhu

Account number : 112

Type of Account : Savings Account

balance - 53000.0

Interest Rate : 2.0%


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Enter customer name: prakruthi
Enter account Number: 112
Enter the deposit amount: 20000
Enter customer name: rachana
Enter account Number: 213
Enter the deposit amount: 30000

-----MENU-----

1. Deposit
2. Withdraw
3. Compute interest for Savings Account
4. Display account details
5. Exit

Enter your choice: 1
Enter the type of account: Savings
Enter the deposit amount: 30000

-----MENU-----

1. Deposit
2. Withdraw
3. Compute interest for Savings Account
4. Display account details
5. Exit

Enter your choice: 1
Enter the type of account: savings
Enter the deposit amount: 2000

-----MENU-----

1. Deposit
2. Withdraw
3. Compute interest for Savings Account
4. Display account details
5. Exit

Enter your choice: 3

-----MENU-----

1. Deposit
2. Withdraw
3. Compute interest for Savings Account
4. Display account details
5. Exit

Enter your choice: 4
Customer name: prakruthi
Account number: 112
Type of Account: Savings account
balance - 53040.0
Interest Rate: 2.0%

-----MENU-----

1. Deposit
2. Withdraw
3. Compute interest for Savings Account
4. Display account details
5. Exit

Enter your choice: 5
Exiting...