Develop a Java program to create a class Bank that maintains two kinds of account for its customers, one called savings account and the other current account. The savings account provides compound interest and withdrawal facilities but no cheque book facility. The current account provides cheque book facility but no interest. Current account holders should also maintain a minimum balance and if the balance falls below this level, a service charge is imposed. Create a class Account that stores customer name, account number and type of account. From this derive the classes Cur-acct and Sav-acct to make them more specific to their requirements. Include the necessary methods in order to achieve the following tasks: a) Accept deposit from customer and update the balance. b) Display the balance. c) Compute and deposit interest d) Permit withdrawal and update the balance Check for the minimum balance, impose penalty if necessary and update the balance.

```
public class program5 {

    public static void main(String[] args) {

        Sav_acct savings = new Sav_acct("Alice", "S1001", 5000);
        Cur_acct current = new Cur_acct("Bob", "C2001", 15000);

        System.out.println("=== Savings Account Operations ===");
        savings.deposit(2000);
        savings.displayBalance();
        savings.computeInterest();
        savings.displayBalance();
```

```
        savings.withdraw(3000);
        savings.displayBalance();

        System.out.println("\n=== Current Account Operations ===");
        current.deposit(5000);
        current.displayBalance();
        current.withdraw(18000);
        current.displayBalance();
    }
}




class Account {
    protected String customerName;
    protected String accountNumber;
    protected double balance;
    protected String accountType;

    public Account(String name, String accNo, double bal, String type) {
        customerName = name;
        accountNumber = accNo;
        balance = bal;
```

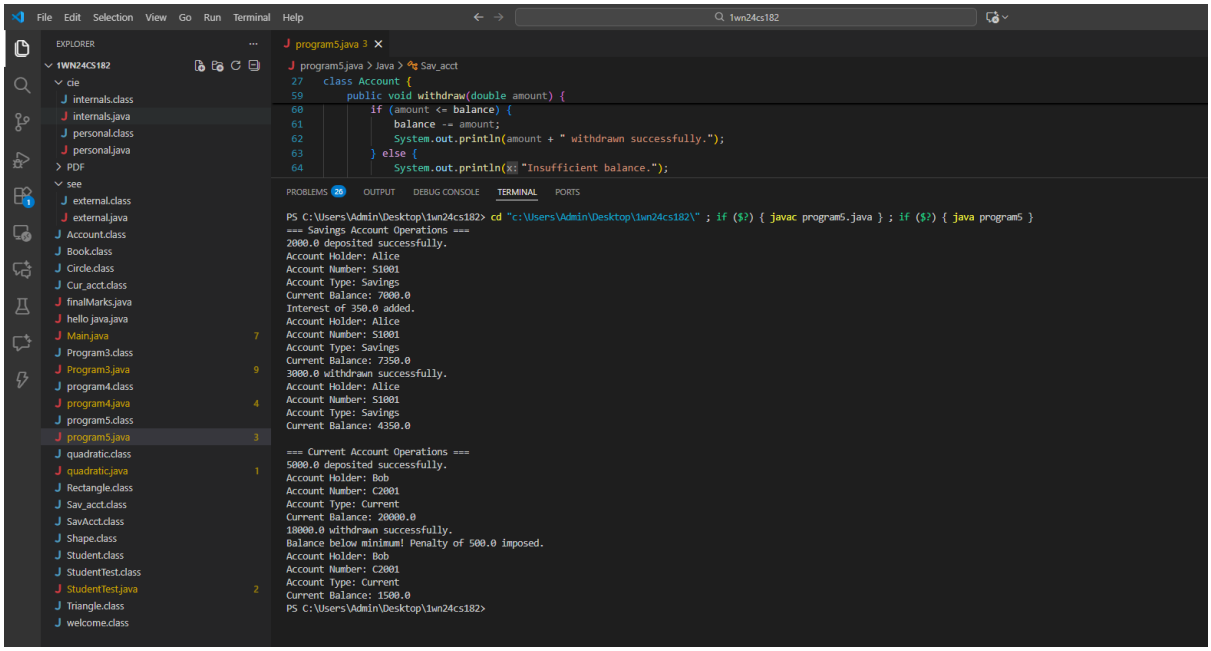
```
    accountType = type;
}

public void deposit(double amount) {
    if (amount > 0) {
        balance += amount;
        System.out.println(amount + " deposited successfully.");
    } else {
        System.out.println("Invalid deposit amount.");
    }
}

public void displayBalance() {
    System.out.println("Account Holder: " + customerName);
    System.out.println("Account Number: " + accountNumber);
    System.out.println("Account Type: " + accountType);
    System.out.println("Current Balance: " + balance);
}

public void withdraw(double amount) {
    if (amount <= balance) {
```

```
            balance -= amount;
            System.out.println(amount + " withdrawn successfully.");
        } else {
            System.out.println("Insufficient balance.");
        }
    }
}



class Sav_acct extends Account {

    private double interestRate = 0.05;

    public Sav_acct(String name, String accNo, double bal) {
        super(name, accNo, bal, "Savings");
    }


    public void computeInterest() {
        double interest = balance * interestRate;
        balance += interest;
        System.out.println("Interest of " + interest + " added.");
```

```
    }
}




class Cur_acct extends Account {

    private double minimumBalance = 5000;
    private double penaltyAmount = 500;

    public Cur_acct(String name, String accNo, double bal) {
        super(name, accNo, bal, "Current");
    }



    @Override
    public void withdraw(double amount) {
        if (amount > balance) {
            System.out.println("Insufficient balance.");
            return;
        }

        balance -= amount;
```

```
        System.out.println(amount + " withdrawn successfully.");



        if (balance < minimumBalance) {
            balance -= penaltyAmount;
            System.out.println("Balance below minimum! Penalty of "
                               + penaltyAmount + " imposed.");
        }
    }
}
```

OUTPUT:



```
```