



```
#include<iostream>
#include<string>
using namespace std;
class Account {
protected:
    string acc_title;    //account title (name of account holder)
    int ser_number;      //serial number
    string acc_number;   //account number
    float balance;
    float credit = 0;
public:
    void getdata() {
        cout << "Enter account title: \n";
        cin >> acc_title;
        cout << "Enter serial number:\n";
        cin >> ser_number;
        cout << "Enter account number:\n";
        cin >> acc_number;
        cout << "Enter balance:\n";
        cin >> balance;
    }

    virtual void tcredit() {}
    virtual void debit() {}
    virtual void getfixed(){}
    virtual void countfee(){}
}
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    virtual void check() {}

    virtual string getAccountType() {}
};

class PlusAccount : public Account {
protected:
    float fixed;
    float interest;
public:
    void getfixed() {
        cout << "What is the fixed amount of minimum balance? \n";
        cin >> fixed;
        cout << "What is the interest rate?\n";
        cin >> interest;
    }

    void debit() {
        float amount;

        cout << "Enter the amount:\n";
        cin >> amount;

        if (amount <= (balance-fixed)) {
            cout << "Rs. " << amount << " has been paid.\n";

            int remaining = amount * (interest / 100);    //interest on amount
            balance=balance-amount-remaining;
            cout << "After deducting interest: " << balance << " is available!\n";
        }
        else {
            cout << "You should maintain the amount of Rs. " << fixed << " in your account\n";
        }
    }
};

```

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    }

    void tcredit() {
        // PlusAccount does not have a specific credit functionality
    }

    string getAccountType() {
        return "Plus Account";
    }
};

class FreedomAccount : public Account {
protected:
    float fixedfee;
    float fixedinterest;
public:
    void countfee() {
        cout << "Enter the fixed fee to be deducted from each transaction:\n";
        cin >> fixedfee;
        cout << "What is the fixed interest?\n";
        cin >> fixedinterest;
    }
    void check() {
        int choose;
        do {
            cout << "Choose: \n1. Credit\n2. Debit\n";
            cin >> choose;
            if (choose == 1) {
                tcredit();
            }
            else if (choose == 2) {
                debit();
            }
        } while (choose != 1 && choose != 2);
    }
};

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    }

    void tcredit() {
        float amount;
        cout << "Enter the amount:\n";
        cin >> amount;
        cout << "Rs. " << amount << " has been paid.\n";
        credit += amount;
        credit += fixedfee;
        cout << " Credit = Rs. " << credit << " !\n"<< endl;
    }

    void debit() {
        float amount;
        cout << "Enter the amount:\n";
        cin >> amount;
        if ((amount + fixedfee) <= balance) {
            cout << "Rs. " << amount << " has been paid.\n";
            balance -= (amount + fixedfee); //deducting fixed fee
            float interest=amount*(fixedinterest/100);
            balance += interest;          // adding interest to balance
            cout << "Now your total balance is Rs. " << balance << endl;
        }
        else {
            cout << "You don't have sufficient money!\n";
            cout << "Your available balance is Rs. " << balance << endl;
        }
    }

    string getAccountType(){
        return "Freedom Account";
    }
};

int main() {

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Account* acc[10]; //array of 10 pointers to account, as said in question statement
int choice;
for (int i = 0; i < 5; i++) { //creating 5 accounts using dynamic memory allocation
    do {
        cout<<"\n-----\n\n\n";
        cout << "Choose the type of account number " << i+1 << " :\n1. Plus Account\n2. Freedom
Account\n";
        cin >> choice;
        if (choice == 1) {
            acc[i] = new PlusAccount;
            acc[i]->getdata();
            cout<<"Your Plus Account has been created!\n\n";
        }
        if (choice == 2) {
            acc[i] = new FreedomAccount;
            acc[i]->getdata();
            cout<<"Your Freedom Account has been created!\n\n";
        }
    } while (choice != 1 && choice != 2);
}

```

//As per statement, we have to perform functions only on first account, So

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if (acc[0]->getAccountType() == "Plus Account") {

    cout << "\nAs account 1 is a Plus Account!\n" << endl;

    // Perform operations specific to PlusAccount
    acc[0]->getfixed();
    acc[0]->debit();
}
else if (acc[0]->getAccountType() == "Freedom Account") {
    cout << "\nAs account 1 is a Freedom Account!\n" << endl;
}

```

```

// Perform operations specific to FreedomAccount

acc[0]->countfee();

acc[0]->check();

}

return 0;

}

```

Output:

For Plus Account

<pre> ----- Choose the type of account number 1 : 1. Plus Account 2. Freedom Account 1 Enter account title: sobia Enter serial number: 12 Enter account number: 41234 Enter balance: 8900 Your Plus Account has been created! ----- </pre>	<pre> Choose the type of account number 3 : 1. Plus Account 2. Freedom Account 1 Enter account title: sda Enter serial number: 343 Enter account number: 42312 Enter balance: 432423 Your Plus Account has been created! ----- </pre>
<pre> ----- Choose the type of account number 2 : 1. Plus Account 2. Freedom Account 1 Enter account title: das Enter serial number: 34 Enter account number: 432 Enter balance: 5323 Your Plus Account has been created! ----- </pre>	<pre> Choose the type of account number 4 : 1. Plus Account 2. Freedom Account 2 Enter account title: dfaf Enter serial number: 32 Enter account number: 432 Enter balance: 43432 Your Freedom Account has been created! ----- </pre>

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Choose the type of account number 5 :
1. Plus Account
2. Freedom Account
1
Enter account title:
sde
Enter serial number:
43
Enter account number:
423
Enter balance:
34324
Your Plus Account has been created!

As account 1 is a Plus Account!

What is the fixed amount of minimum balance?
2000
What is the interest rate?
10
Enter the amount:
5000
Rs. 5000 has been paid.
After deducting interest: 3400 is available!

-----
Process exited after 51.75 seconds with return value 0
Press any key to continue . . .

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For Freedom Account

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-----
Choose the type of account number 1 :
1. Plus Account
2. Freedom Account
1
Enter account title:
dsd
Enter serial number:
121
Enter account number:
1212
Enter balance:
34234
Your Plus Account has been created!

-----
Choose the type of account number 2 :
1. Plus Account
2. Freedom Account
2
Enter account title:
sd
Enter serial number:
121`
Enter account number:
121
Enter balance:
121
Your Freedom Account has been created!

-----
Choose the type of account number 3 :
1. Plus Account
2. Freedom Account
1
Enter account title:
s
Enter serial number:
21
Enter account number:
1212
Enter balance:
121212
Your Plus Account has been created!

-----
Choose the type of account number 4 :
1. Plus Account
2. Freedom Account
1
Enter account title:
sas
Enter serial number:
12`12
Enter account number:
21
Enter balance:
21
Your Plus Account has been created!

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Choose the type of account number 5 :
1. Plus Account
2. Freedom Account
2
Enter account title:
3123
Enter serial number:
2123
Enter account number:
22323
Enter balance:
323232
Your Freedom Account has been created!

As account 1 is a Plus Account!

What is the fixed amount of minimum balance?
2000
What is the interest rate?
10
Enter the amount:
5000
Rs. 5000 has been paid.
After deducting interest: 25810.6 is available!

-----
Process exited after 75.57 seconds with return value 0
Press any key to continue . . . █
```