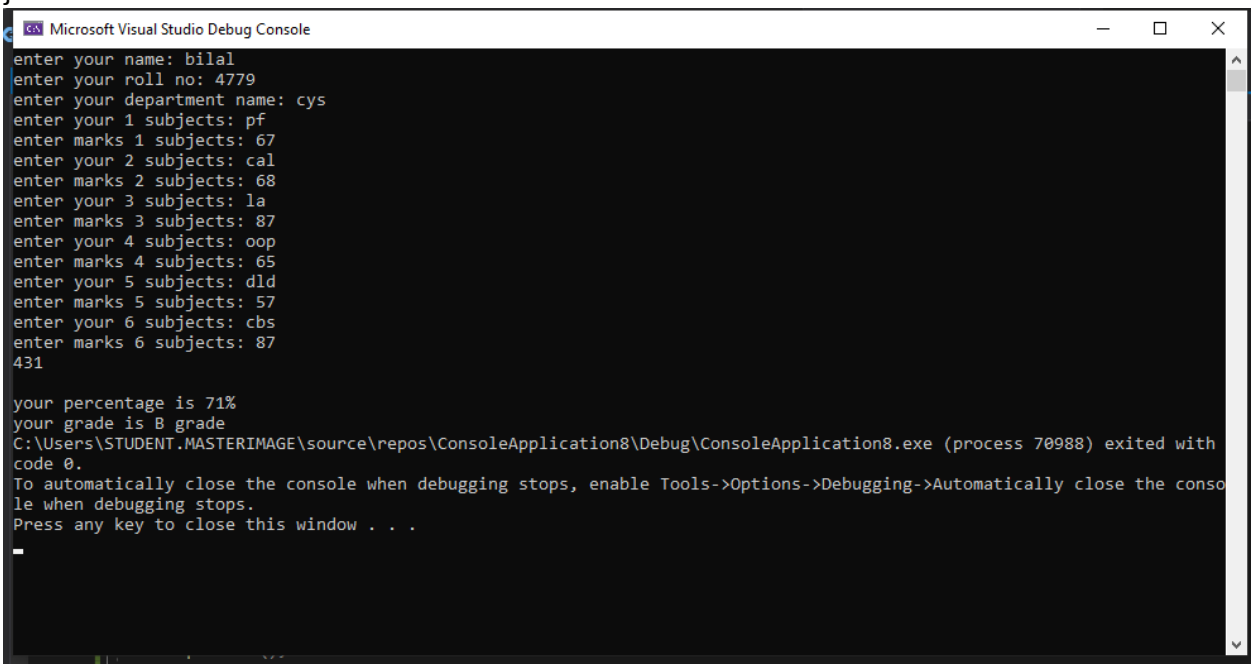
Exercise Lab 03

Q1.

```
#include <iostream>
using namespace std;
class student {
	string name, dep, id, sub[6];
	int marks[6], total = 0, percent;
public:
	void rollno() {
		cout << "enter your roll no: ";
		cin >> id;
	}
	void names() {
		cout << "enter your name: ";
		cin >> name;
	}
	void department() {
		cout << "enter your department name: ";
		cin >> dep;
	}
	void subjects() {
		for (int i = 0; i < 6; i++)
		{
			cout << "enter your " <<  i +1 << " subjects: ";
			cin >> sub[i];
			cout << "enter marks " << i+1 << " subjects: ";
			cin >> marks[i];
			total = total + marks[i];
		}
		cout << total;
		cout << "\n";
		percent = (total / 6) ;
		cout << "\n";
		cout <<  "your percentage is " << percent << "%" ;
		cout << "\n";
		if (percent >= 80) {
			cout << "your grade is A grade";
		}
		else if (percent >= 70 && percent <= 80)
	{
			cout << "your grade is B grade";
		}
		else if (percent >= 60 && percent <= 70)
		{
			cout << "your grade is C grade";
		}
		else if (percent >= 50 && percent <= 60)
```

```
		{
			cout << "your grade is F grade";
		}
		else if (percent < 50)
		{
			cout << "your grade is U grade";
		}

	}
};

int main()
{
	student s;
	s.names();
	s.rollno();
	s.department();
	s.subjects();

}
```

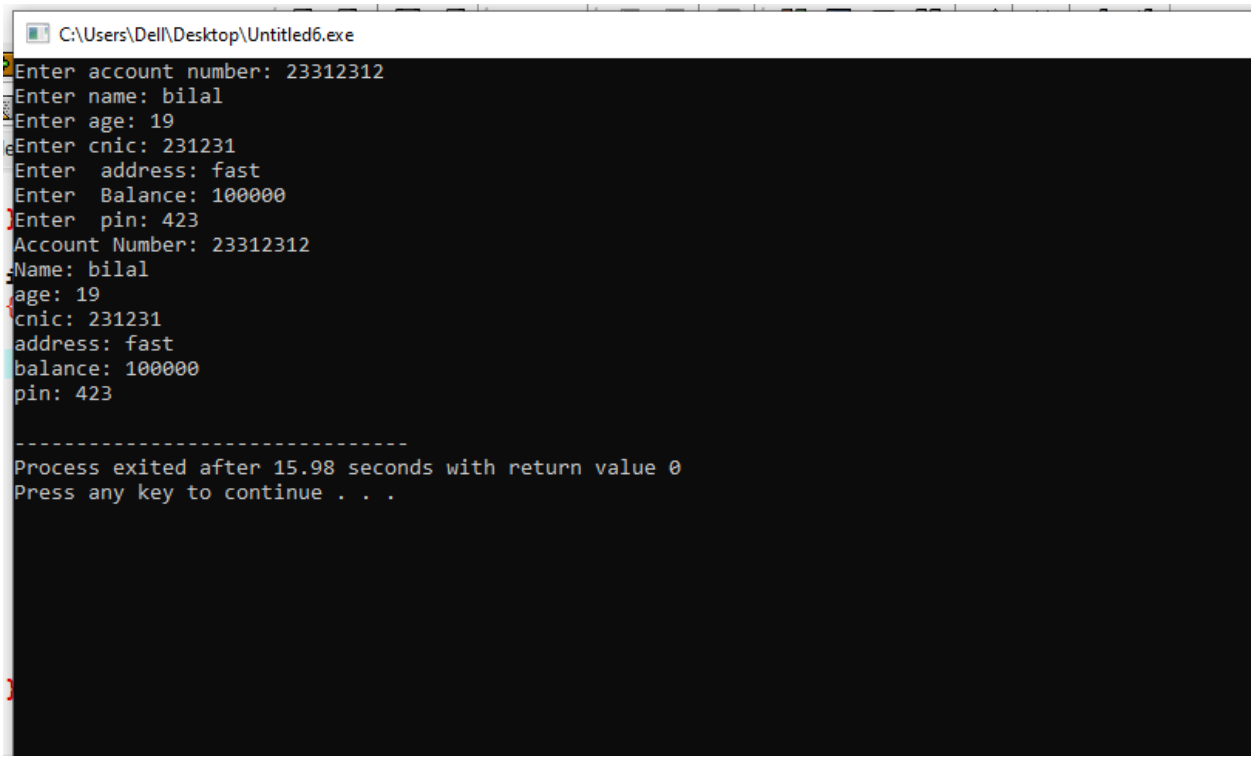


Q2.

```
#include <iostream>
using namespace std;

class Bank {
private:
    int acnum;
    char name[30];
    long balance;
    int num,age,pin;
    char address[30];

public:
    void OpenAccount()
    {
          cout << "Enter account number: ";
        cin >> acnum;
        cout << "Enter name: ";
        cin >> name;
        cout << "Enter age: ";
        cin >> age;
        cout << "Enter cnic: ";
        cin >> num;
        cout << "Enter  address: ";
        cin >> address;
        cout << "Enter  Balance: ";
        cin >> balance;
        cout << "Enter  pin: ";
```

```
        cin >> pin;
    }
    void ShowAccount()
    {
        cout << "Account Number: " << acnum << endl;
        cout << "Name: " << name << endl;
        cout << "age: " << age << endl;
        cout << "cnic: " << num << endl;
        cout << "address: " << address << endl;
        cout << "balance: " << balance << endl;
        cout << "pin: " << pin << endl;
    }

    int Search(int);
};

int Bank::Search(int a)
{
    if (acnum == a) {
        ShowAccount();
        return (1);
    }
    return (0);
}

int main()
{
    Bank C;

    int found = 0, a, ch, i;
```

```
        C.OpenAccount()
        C.ShowAccount();
    return 0;
}
```



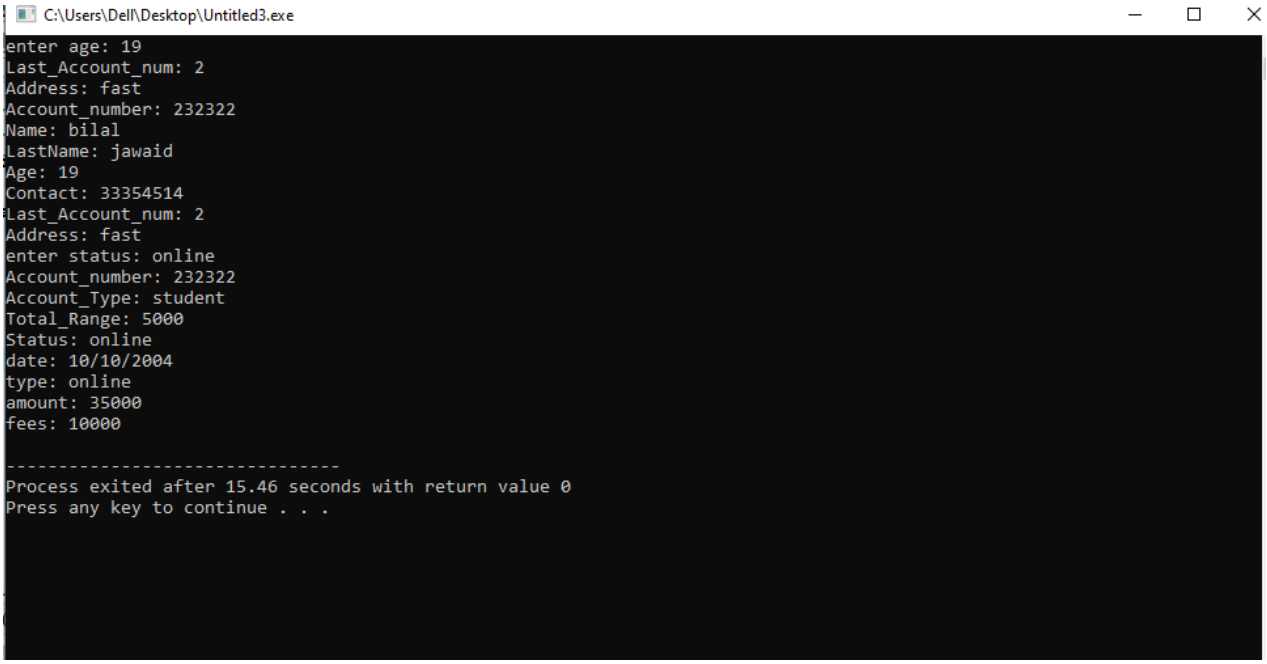
Q3.

```
#include<iostream>
#include<string>
using namespace std;
class customer {
        public:
        string Name="bilal";
        string LastName="jawaid";
        int Age;
        long int Contact=33354514;
    private:
        int Last_Account_num;
        string Address;
        public:
        void setcustomer(int a, string c)
        {
                Last_Account_num = a;
                Address = c;
        }
        void customerdetails()
        {
                cout << "Name: " << Name << endl;
                cout << "LastName: " << LastName << endl;
                cout << "Age: " << Age << endl;
                cout << "Contact: " << Contact << endl;
                cout << "Last_Account_num: " << Last_Account_num << endl;
                cout << "Address: " << Address << endl;
        }
};
```

```
class account {
public:
	int Account_number;
	string Account_Type="student";
	int Total_Range=5000;
private:
	string Status;
	public:
	void setaccount(string d)
	{
		Status = d;
}
	void accountdetails()
	{
		cout << "Account_number: " << Account_number << endl;
		cout << "Account_Type: " << Account_Type << endl;
		cout << "Total_Range: " << Total_Range << endl;
		cout << "Status: " << Status << endl;
	}
};
class transaction {
	public:
		string date= "10/10/2004";
		string type="online";
		int	amount=35000;
		int fees=10000;
		void transactiondetails()
		{
			cout << "date: " << date << endl;
			cout << "type: " << type << endl;
```

```
                cout << "amount: " << amount << endl;
                cout << "fees: " << fees << endl;
        }
};
int main()
{
        customer ce;
        account acc;
        transaction tra;
        int a;
        char b;
        string c, d;
        cout<<"enter age: ";
        cin>>ce.Age;
        if(ce.Age<18)
        {
                cout<<"error";
        }
        else
        {
        cout << "Last_Account_num: ";
        cin >> a;
        cout << "Address: ";
        cin >>c;
}
    cout<<"Account_number: ";
    cin>>acc.Account_number;
    if(acc.Account_number==a)
    {
        cout<<"error";
```

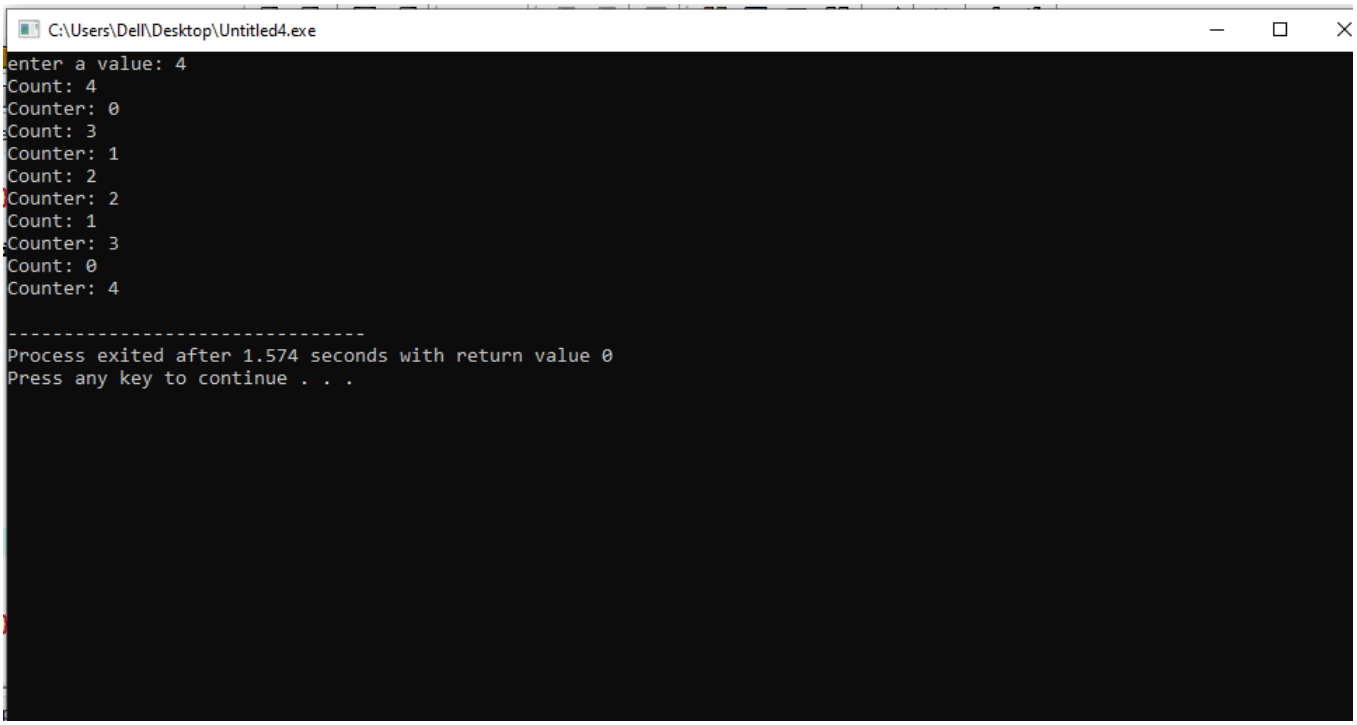
```
        }
        ce.setcustomer(a,c);
        ce.customerdetails();
        cout << "enter status: ";
        cin >> d;
        acc.setaccount(d);
        acc.accountdetails();
        tra.transactiondetails();
}
```



Q4.

```
#include <iostream>
using namespace std;
class CounterType {
private:
    int count;
    int counter = 0;
public:
    CounterType() {
            count = 0;}
    CounterType(int c) {
            count = c;}
    void increseCounter() {
            counter++; }
    int decreaseCount() {
        if (count == 0)
        return 0;
count--;
        return 1;}
    int getCount() {
            return count;
            }
    int getCounter() {
return counter;
            }
    void print_c(ostream &cout) {
        cout << "Count: " << getCount() << "\n";
        cout << "Counter: " << getCounter() << "\n";
    }
```

```
};
int main(int argc, char const *argv[]) {
    int value;
    cout << "enter a value: ";
    cin >> value;
    CounterType c(value);
    while (1) {
        c.print_c(cout);
        c.increseCounter();
        int t = c.decreaseCount();
        if (!t) {
            break;
        }
    }
    return 0;
}
```



Q5.

```
#include<iostream>
#include<stdio.h>
#include<string.h>

using namespace std;
class bank
{
        int acnum;
        char nm[100], acctype[100];
        float bal;
   public:
        bank(int acc_no, char *name, char *acc_type, float balance)
        {
                acnum=acc_no;
                strcpy(nm, name);
                strcpy(acctype, acc_type);
                bal=balance;
        }
        void deposit();
        void withdraw();
        void display();
};
void bank::deposit()
{
        int damt1;
        cout<<"\n";
        cout<<"Enter Deposit Amount = ";
        cin>>damt1;
```

```
        bal+=damt1;
}
void bank::withdraw()
{
        int wamt1;
        cout<<"\n";
        cout<<"Enter Withdraw Amount = ";
        cin>>wamt1;
        if(wamt1>bal){

                cout<<"\n";
                                        cout<<"Cannot Withdraw Amount";
                                }
        bal-=wamt1;
}
void bank::display()
{
        cout<<"\n";
        cout<<"Accout Num: "<<acnum<<"\n";
        cout<<"Name: "<<nm<<"\n";
        cout<<"Account Type: "<<acctype<<"\n";
        cout<<"Balance: "<<bal<<"\n";
}
int main()
{
        int acc_no;
        char name[100], acc_type[100];
        float balance;

        cout<<"Accout Num: ";
```

```
    cin>>acc_no;
    cout<<"Name: ";
    cin>>name;
    cout<<"Account Type: ";
    cin>>acc_type;
    cout<<"Balance: ";
    cin>>balance;

    bank b1(acc_no, name, acc_type, balance);
    b1.deposit();
    b1.withdraw();
    b1.display();
    return 0;
}
```