



NUST

NATIONAL UNIVERSITY
OF SCIENCES & TECHNOLOGY

Programming lab assignment # 03

Name

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Reg. No

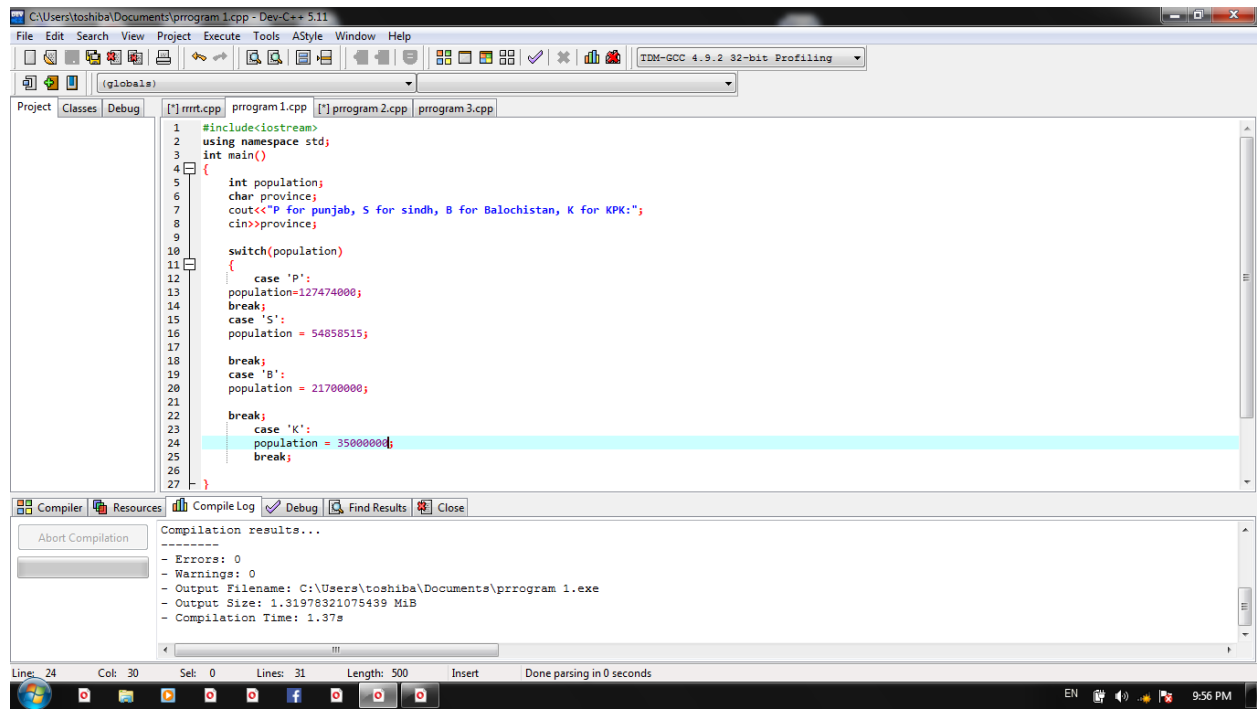
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Section

C

Q.No. 1

Write a c++ program to find the population of the Pakistan Province

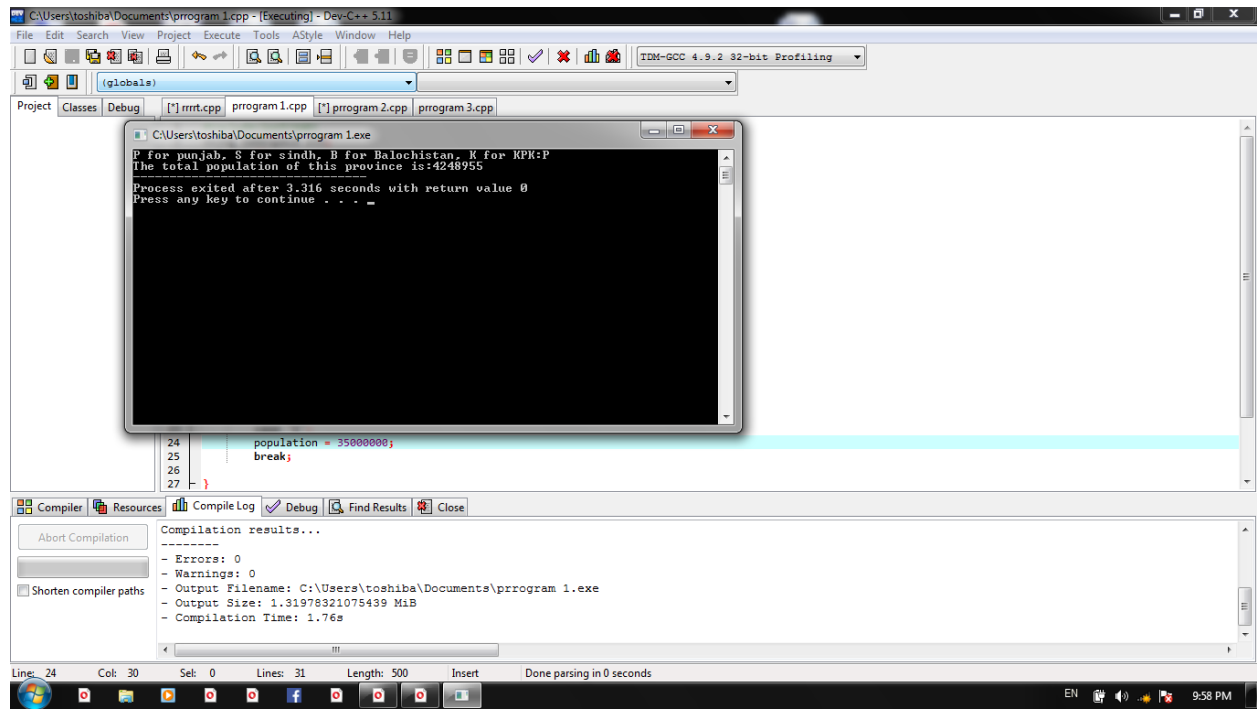


The screenshot shows the Dev-C++ IDE with the following C++ program in `program1.cpp`:

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int population;
6     char province;
7     cout<<"P for punjab, S for sindh, B for Balochistan, K for KPK:";
8     cin>>province;
9
10    switch(population)
11    {
12        case 'P':
13            population=127474000;
14            break;
15        case 'S':
16            population = 54858515;
17            break;
18        case 'B':
19            population = 21700000;
20            break;
21        case 'K':
22            population = 35000000;
23            break;
24    }
25 }
```

The compilation results are shown below the code editor:

```
Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\toshiba\Documents\program 1.exe
- Output Size: 1.31978321075439 MiB
- Compilation Time: 1.97s
```



The screenshot shows the program running in a console window. The user has entered 'P' for Punjab, and the program outputs the population of Punjab as 127474000.

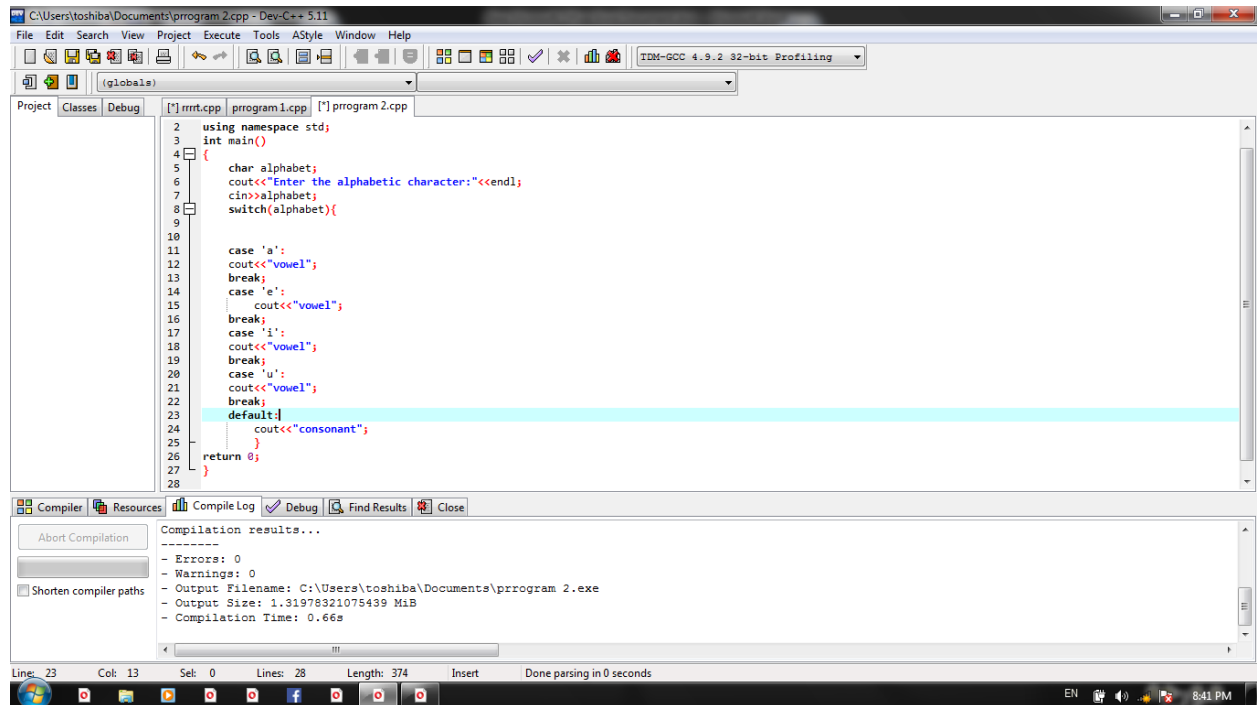
```
C:\Users\toshiba\Documents\program 1.exe
P for punjab, S for sindh, B for Balochistan, K for KPK:P
The total population of this province is:127474000
Process exited after 3.316 seconds with return value 0
Press any key to continue . . .
```

The compilation results are shown below the console window:

```
Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\toshiba\Documents\program 1.exe
- Output Size: 1.31978321075439 MiB
- Compilation Time: 1.76s
```

Q.No.2

Write a c++ program to check whether an alphabet is vowel or consonant.

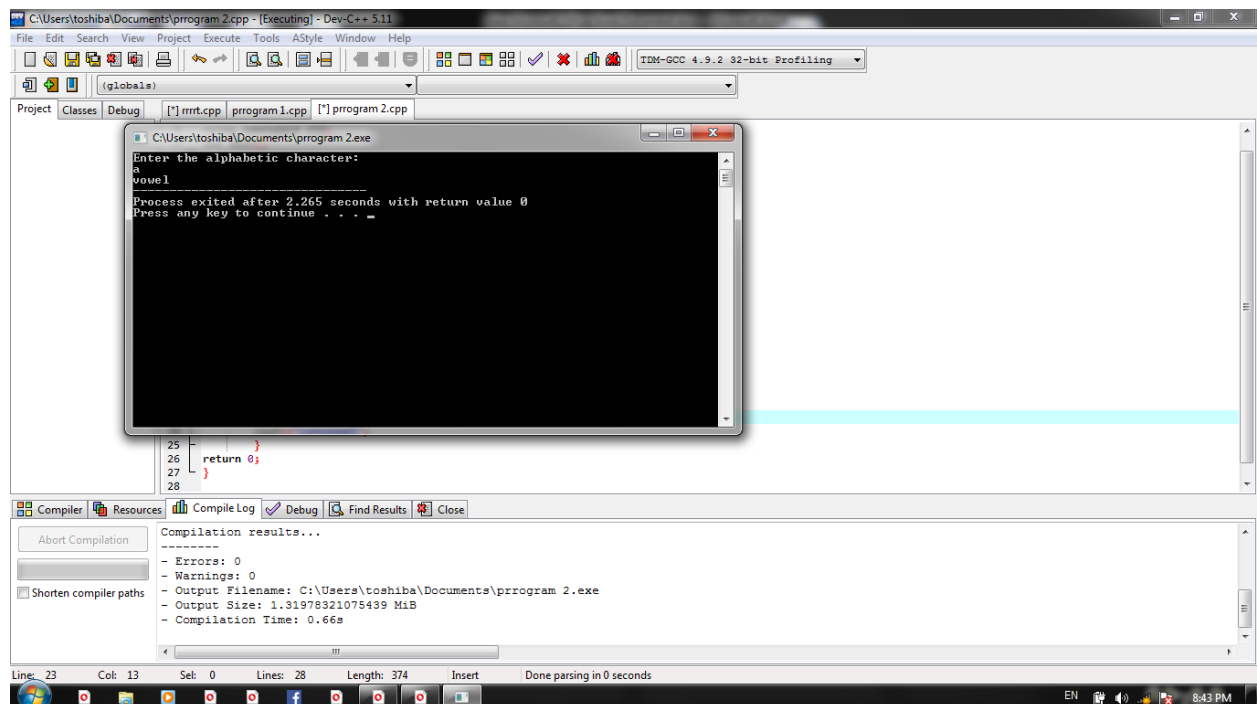


```
1  #include <iostream>
2  using namespace std;
3  int main()
4  {
5      char alphabet;
6      cout<<"Enter the alphabetic character:"<<endl;
7      cin>>alphabet;
8      switch(alphabet){
9
10
11         case 'a':
12             cout<<"vowel";
13             break;
14         case 'e':
15             cout<<"vowel";
16             break;
17         case 'i':
18             cout<<"vowel";
19             break;
20         case 'u':
21             cout<<"vowel";
22             break;
23         default:
24             cout<<"consonant";
25     }
26     return 0;
27 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\toshiba\Documents\program 2.exe
- Output Size: 1.31978321075439 MiB
- Compilation Time: 0.66s

Line: 23 Col: 13 Sel: 0 Lines: 28 Length: 374 Insert Done parsing in 0 seconds



```
25     }
26     return 0;
27 }
```

Compilation results...

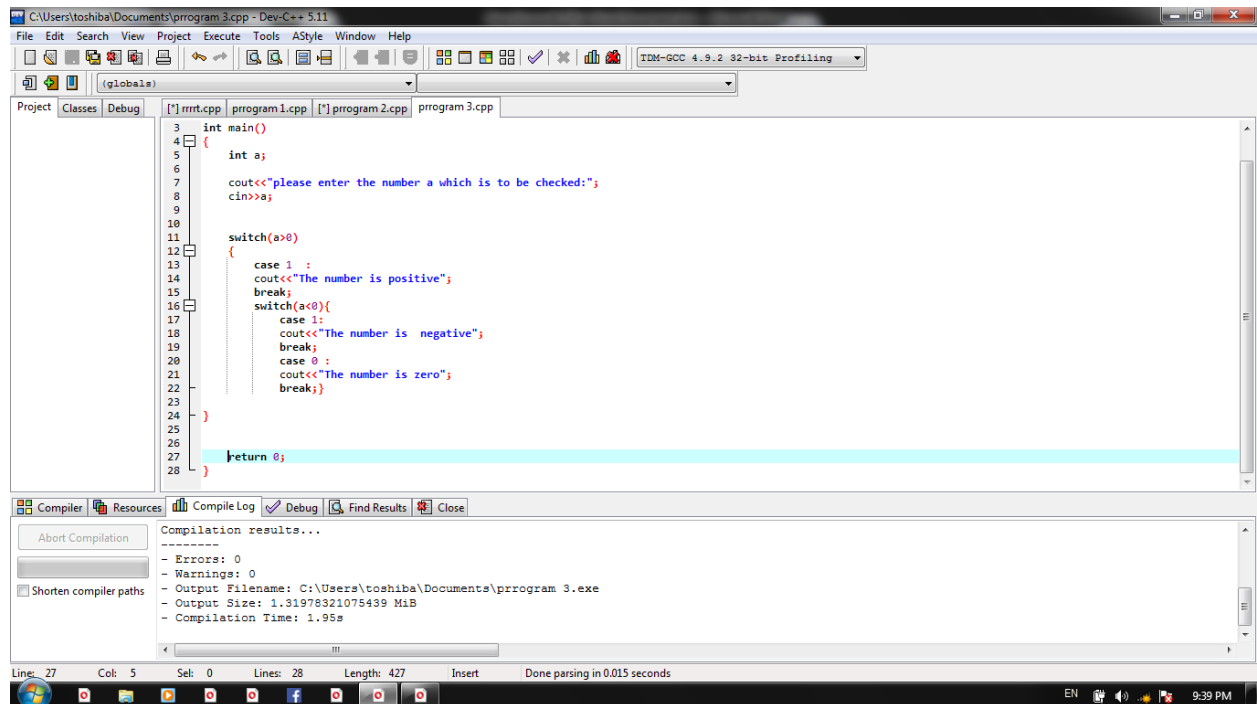
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\toshiba\Documents\program 2.exe
- Output Size: 1.31978321075439 MiB
- Compilation Time: 0.66s

Line: 23 Col: 13 Sel: 0 Lines: 28 Length: 374 Insert Done parsing in 0 seconds

Enter the alphabetic character:
a
vowel
Process exited after 2.265 seconds with return value 0
Press any key to continue . . .

Q.No.3

Write a c++ program to check whether a number is positive , negative or zero?



```
int main()
{
    int a;

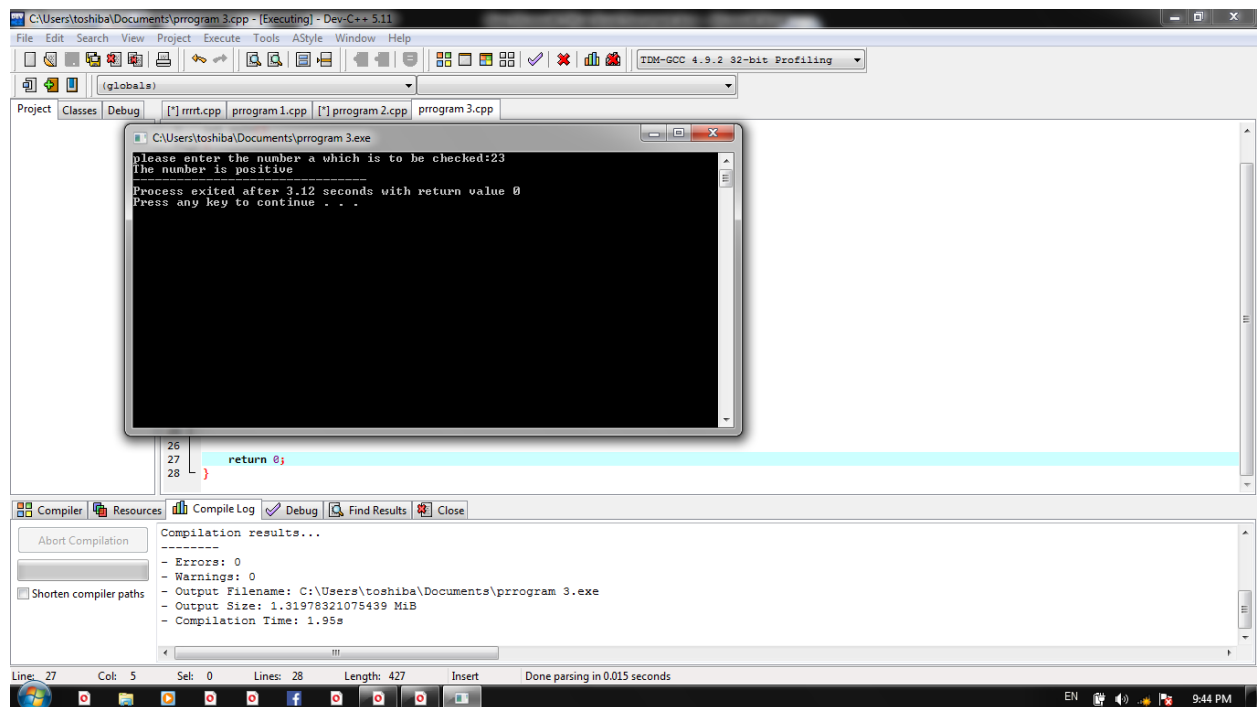
    cout<<"please enter the number a which is to be checked:";
    cin>>a;

    switch(a>0)
    {
        case 1 :
            cout<<"The number is positive";
            break;
        case 0 :
            switch(a<0){
                case 1:
                    cout<<"The number is negative";
                    break;
                case 0 :
                    cout<<"The number is zero";
                    break;
            }
    }

    return 0;
}
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\toshiba\Documents\program 3.exe
- Output Size: 1.31978921075439 MiB
- Compilation Time: 1.95s



```
return 0;
}
```

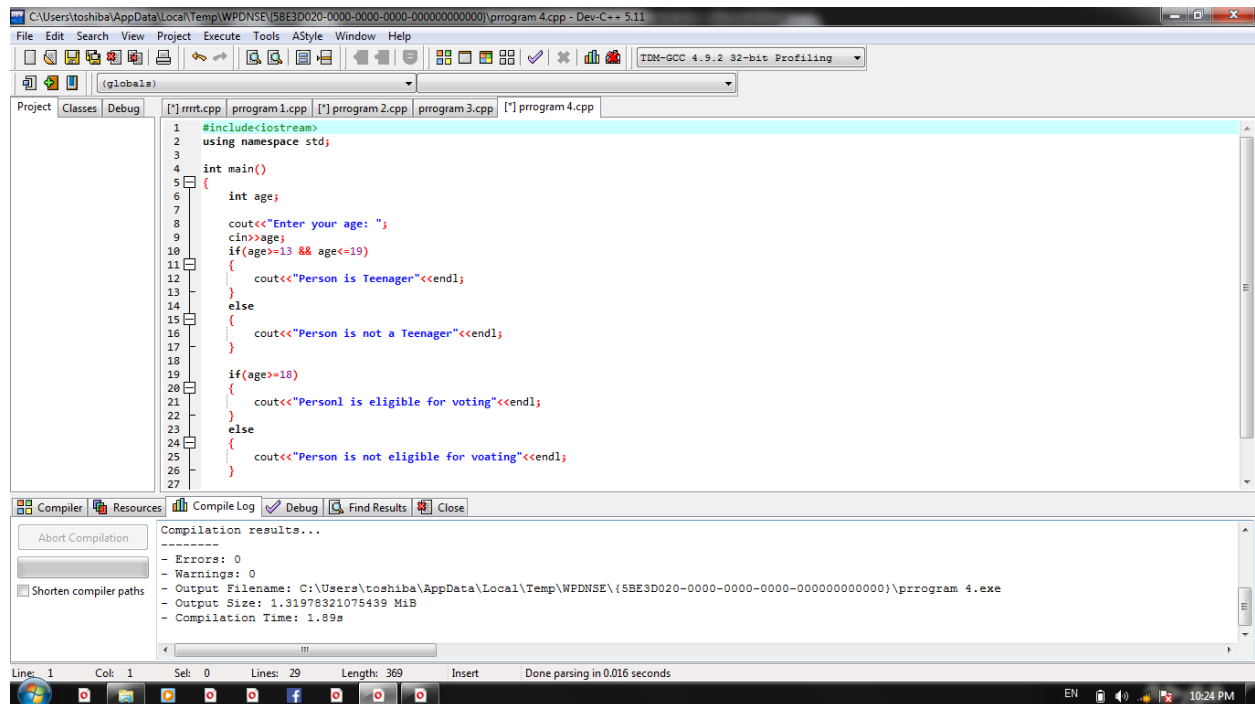
please enter the number a which is to be checked:23
The number is positive
Process exited after 3.12 seconds with return value 0
Press any key to continue . . .

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\toshiba\Documents\program 3.exe
- Output Size: 1.31978921075439 MiB
- Compilation Time: 1.95s

Q.No.4

Write a c++ program to check whether a person is an adult, teenager or child?

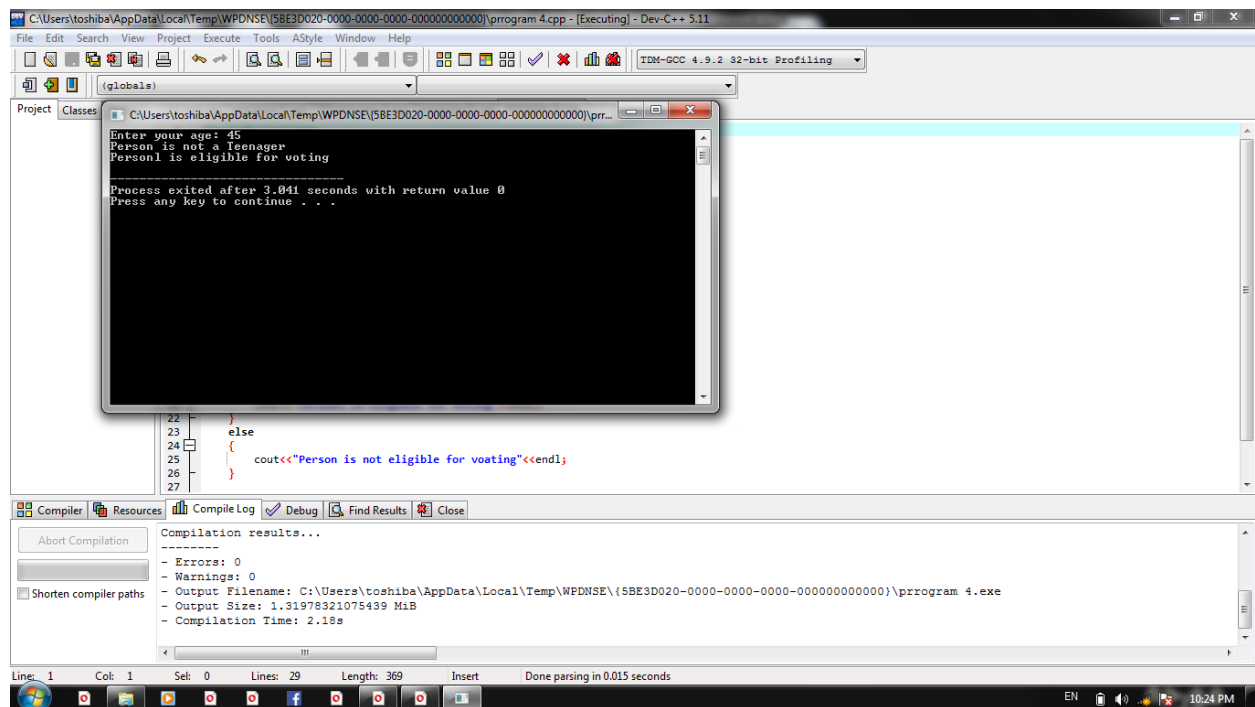


The screenshot shows the Dev-C++ IDE with a C++ program open. The program is designed to check if a person is a teenager or eligible for voting based on their age. The source code is as follows:

```
1 #include<iostream>
2 using namespace std;
3
4 int main()
5 {
6     int age;
7
8     cout<<"Enter your age: ";
9     cin>>age;
10    if(age>=13 && age<=19)
11    {
12        cout<<"Person is Teenager"<<endl;
13    }
14    else
15    {
16        cout<<"Person is not a Teenager"<<endl;
17    }
18
19    if(age>=18)
20    {
21        cout<<"Person is eligible for voting"<<endl;
22    }
23    else
24    {
25        cout<<"Person is not eligible for voting"<<endl;
26    }
27 }
```

The compilation results are shown below the code editor:

```
Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\toshiba\AppData\Local\Temp\WPDNSE\{5BE3D020-0000-0000-0000-000000000000}\prrogram 4.exe
- Output Size: 1.31978921075439 MiB
- Compilation Time: 1.89s
```



The screenshot shows the same Dev-C++ IDE, but now the program is running. A console window is open, displaying the output of the program. The user has entered the age 45, and the program has determined that the person is not a teenager and is eligible for voting. The console output is as follows:

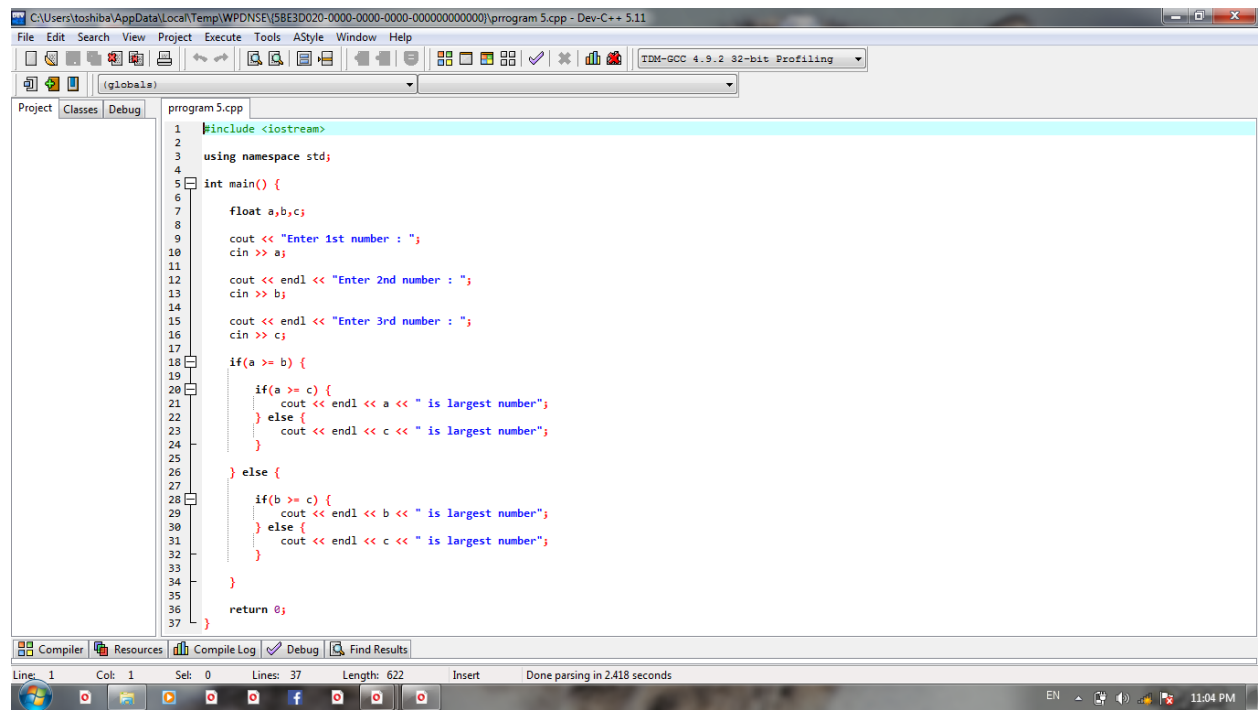
```
Enter your age: 45
Person is not a Teenager
Person is eligible for voting

Process exited after 3.841 seconds with return value 0
Press any key to continue . . .
```

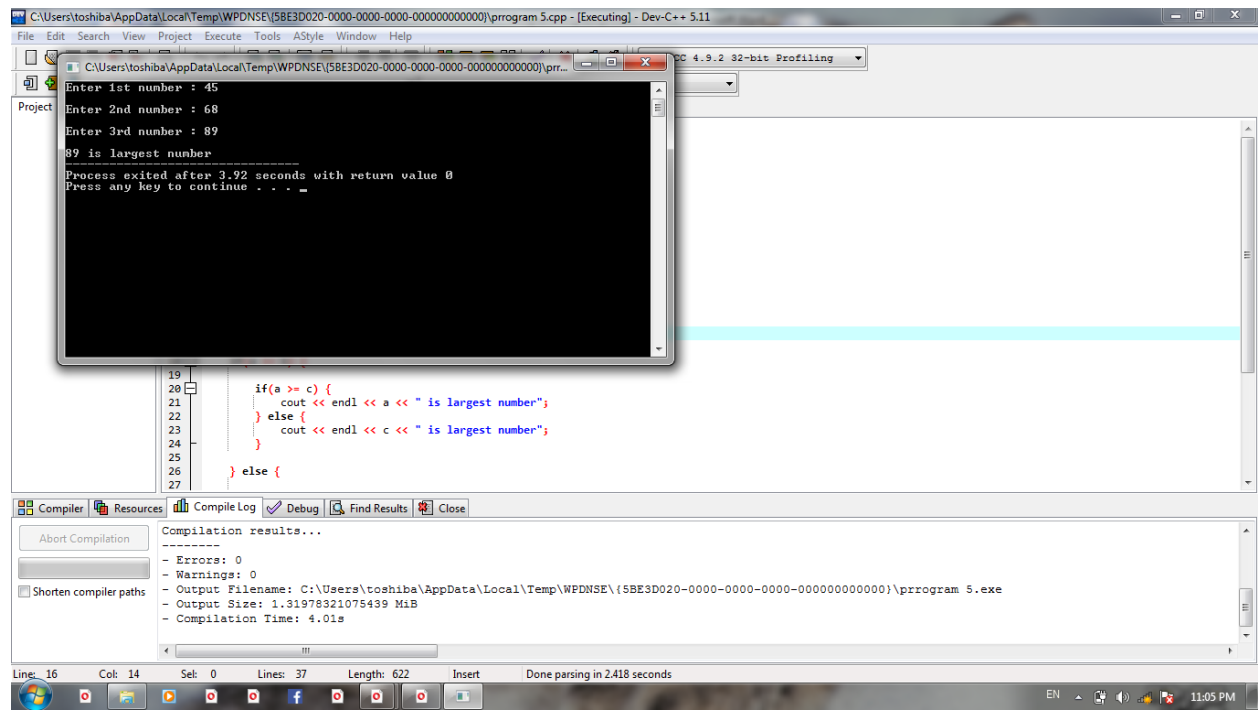
The compilation results are also shown below the console window:

```
Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\toshiba\AppData\Local\Temp\WPDNSE\{5BE3D020-0000-0000-0000-000000000000}\prrogram 4.exe
- Output Size: 1.31978921075439 MiB
- Compilation Time: 2.18s
```

Q.No.5 to find largest three number



```
1 #include <iostream>
2
3 using namespace std;
4
5 int main() {
6
7     float a,b,c;
8
9     cout << "Enter 1st number : ";
10    cin >> a;
11
12    cout << endl << "Enter 2nd number : ";
13    cin >> b;
14
15    cout << endl << "Enter 3rd number : ";
16    cin >> c;
17
18    if(a >= b) {
19
20        if(a >= c) {
21            cout << endl << a << " is largest number";
22        } else {
23            cout << endl << c << " is largest number";
24        }
25
26    } else {
27
28        if(b >= c) {
29            cout << endl << b << " is largest number";
30        } else {
31            cout << endl << c << " is largest number";
32        }
33
34    }
35
36    return 0;
37 }
```

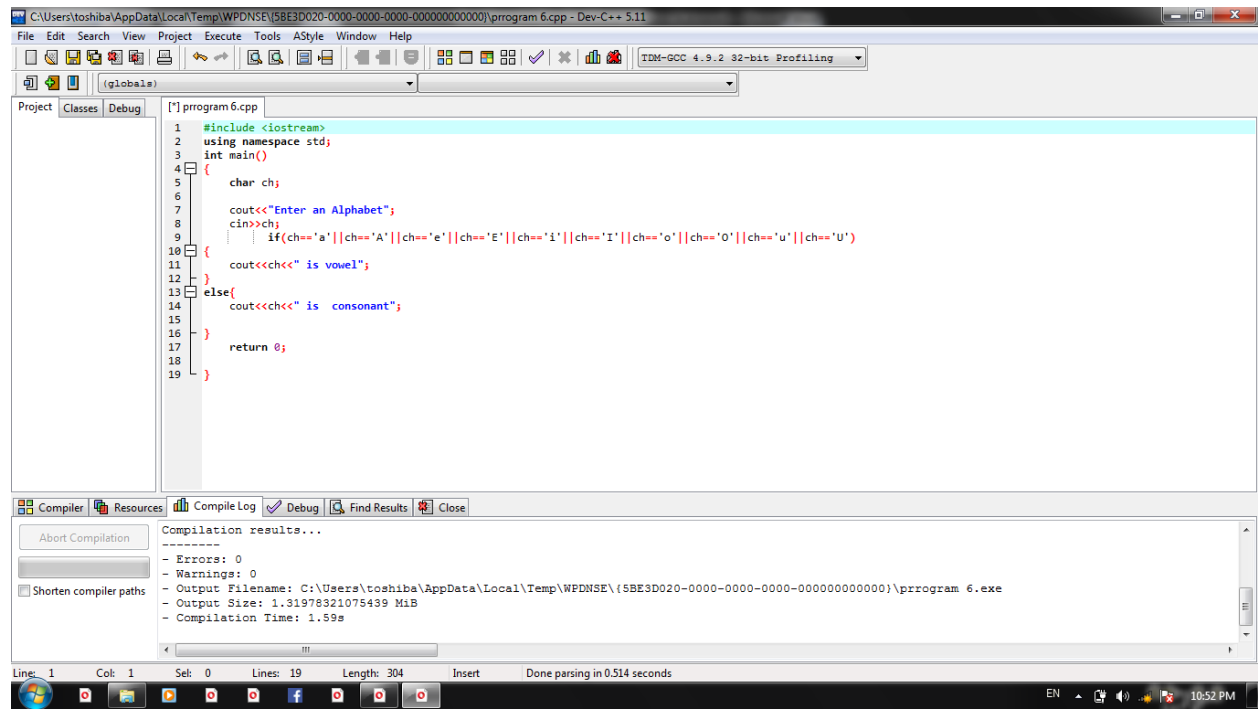


```
Enter 1st number : 45
Enter 2nd number : 68
Enter 3rd number : 89
89 is largest number
Process exited after 3.92 seconds with return value 0
Press any key to continue . . .
```

```
Compilation results...
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\toshiba\AppData\Local\Temp\WPDNSE\{5BE3D020-0000-0000-0000-000000000000}\prrogram.exe
- Output Size: 1.31978321075439 MiB
- Compilation Time: 4.01s
```

Q.No.6

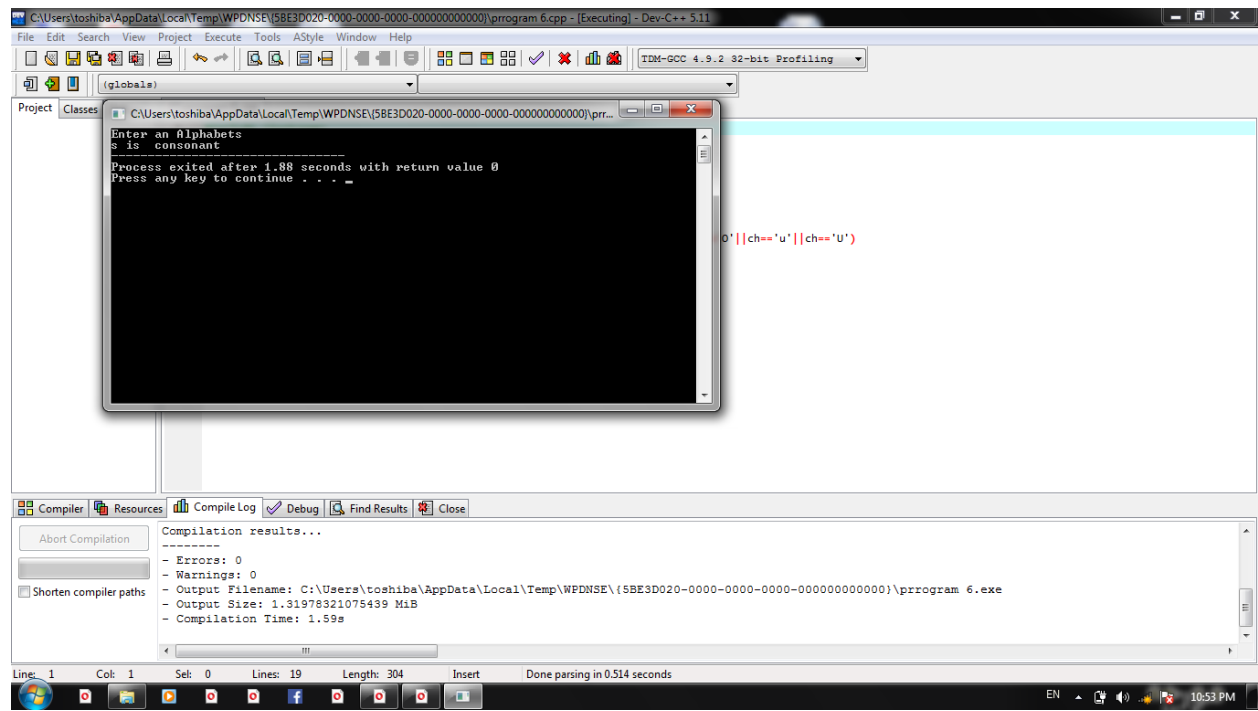
Write c++ program to check the consonants or vowel using nested if else?



```
1 #include <iostream>
2 using namespace std;
3 int main()
4 {
5     char ch;
6
7     cout<<"Enter an Alphabet";
8     cin>>ch;
9     if(ch=='a' || ch=='A' || ch=='e' || ch=='E' || ch=='i' || ch=='I' || ch=='o' || ch=='O' || ch=='u' || ch=='U')
10    {
11        cout<<ch<<" is vowel";
12    }
13    else{
14        cout<<ch<<" is consonant";
15    }
16
17    return 0;
18 }
19 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\toshiba\AppData\Local\Temp\WPDNSE\{5BE3D020-0000-0000-0000-000000000000}\prprogram 6.exe
- Output Size: 1.31978921075439 MiB
- Compilation Time: 1.59s



```
Enter an Alphabets
s
s is consonant
Process exited after 1.88 seconds with return value 0
Press any key to continue . . .
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\toshiba\AppData\Local\Temp\WPDNSE\{5BE3D020-0000-0000-0000-000000000000}\prprogram 6.exe
- Output Size: 1.31978921075439 MiB
- Compilation Time: 1.59s