

Home Task 3

CS-114- Fundamental of Programming



Submitted by:

Haseeb Tahir

CMS ID: 453901

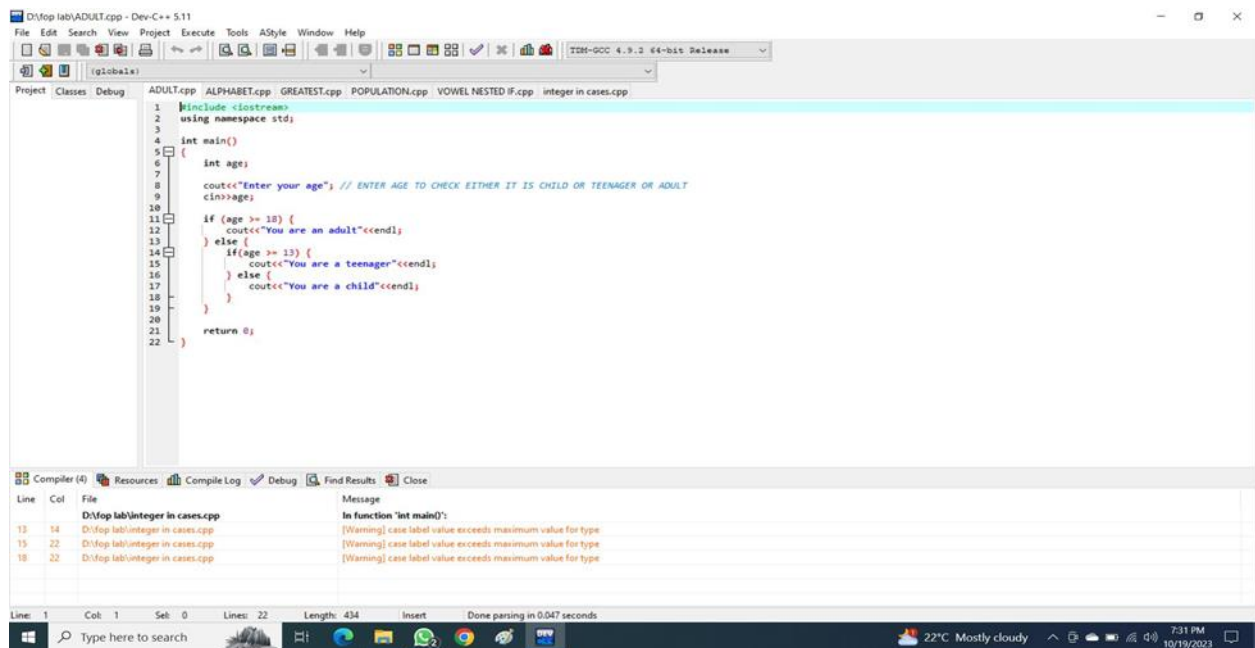
Section: C

Submitted to:

Muhammed Affan

**School of Mechanical and Manufacturing Engineering (SMME)
National University of Science and Technology (NUST), Islamabad**

Write a C++ to find out whether a person is an adult, teenager, or child using nested if-else.

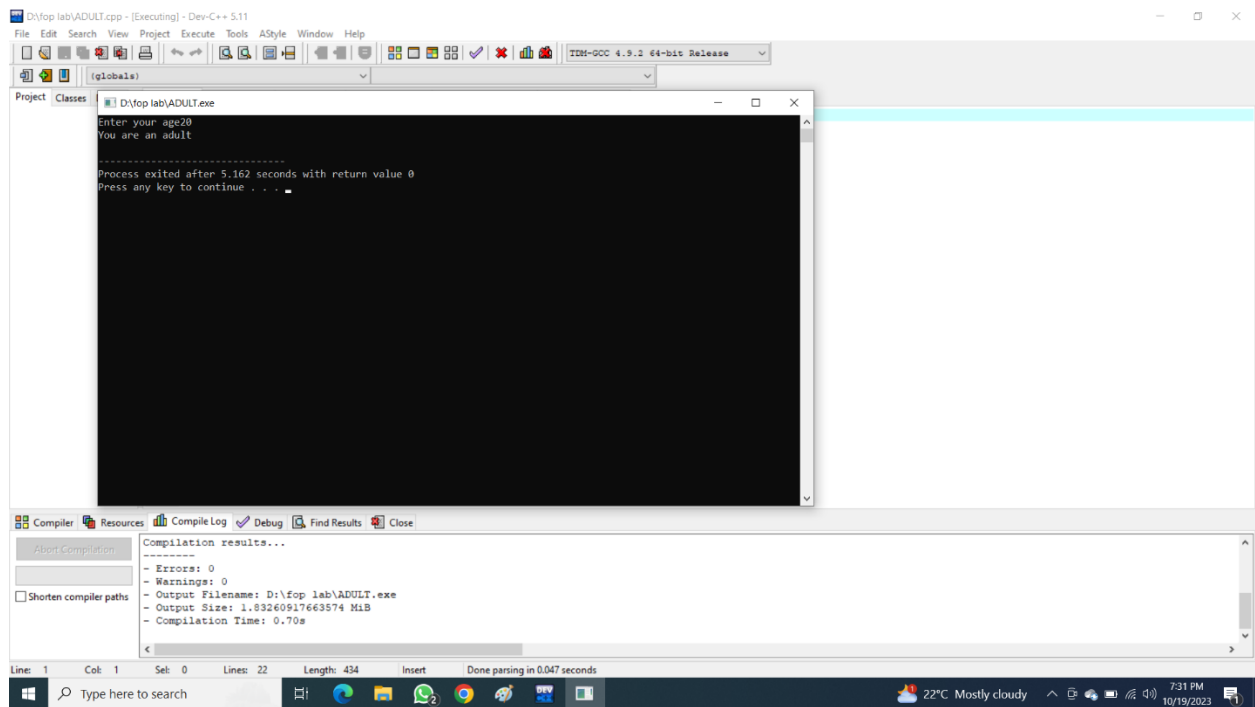


```
1 #include <iostream>
2 using namespace std;
3
4 int main()
5 {
6     int age;
7
8     cout<<"Enter your age"; // ENTER AGE TO CHECK EITHER IT IS CHILD OR TEENAGER OR ADULT
9     cin>>age;
10
11     if (age >= 18) {
12         cout<<"You are an adult"<<endl;
13     } else {
14         if (age >= 13) {
15             cout<<"You are a teenager"<<endl;
16         } else {
17             cout<<"You are a child"<<endl;
18         }
19     }
20
21     return 0;
22 }
```

Compiler (4) Resources Compile Log Debug Find Results Close

Line	Col	File	Message
13	14	D:\fop lab\integer in cases.cpp	In function 'int main()':
15	22	D:\fop lab\integer in cases.cpp	[Warning] case label value exceeds maximum value for type
18	22	D:\fop lab\integer in cases.cpp	[Warning] case label value exceeds maximum value for type

Line: 1 Col: 1 Sel: 0 Lines: 22 Length: 434 Insert Done parsing in 0.047 seconds



```
Enter your age:20
You are an adult
.....
Process exited after 5.162 seconds with return value 0
Press any key to continue . . .
```

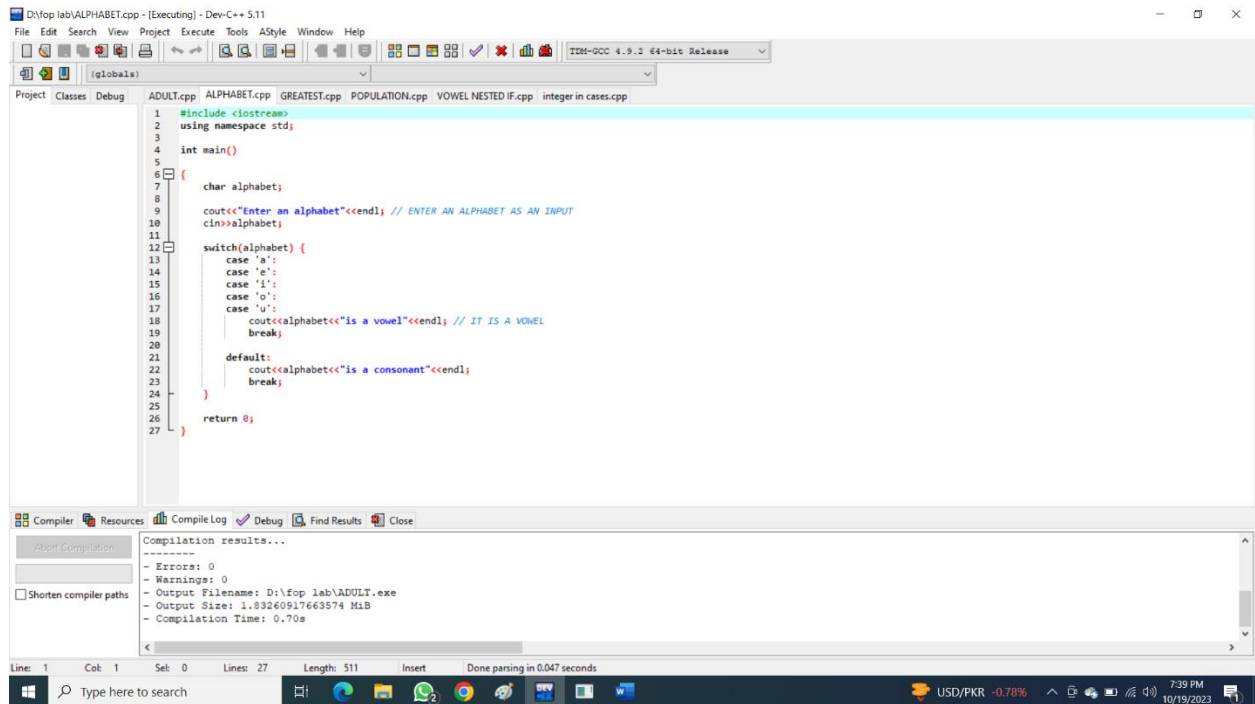
Compiler (4) Resources Compile Log Debug Find Results Close

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\fop lab\ADULT.exe
- Output Size: 1.83260917663574 MiB
- Compilation Time: 0.70s

Line: 1 Col: 1 Sel: 0 Lines: 22 Length: 434 Insert Done parsing in 0.047 seconds

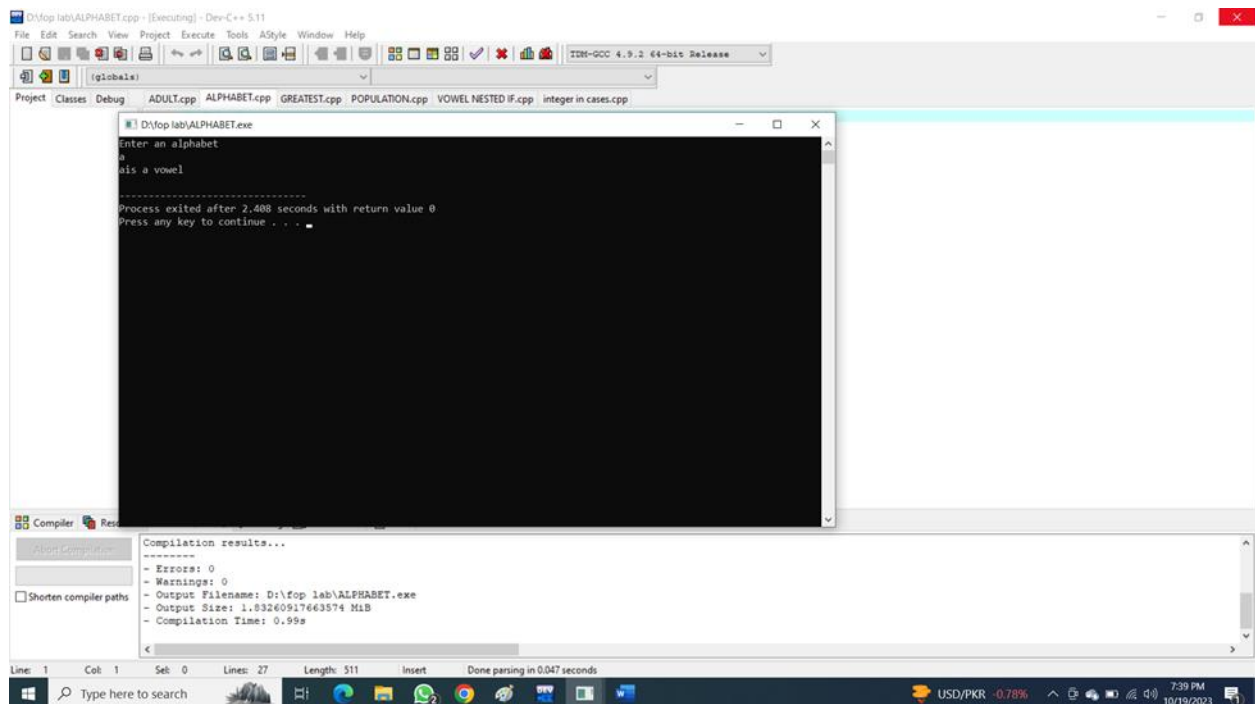
Write a C++ program to check whether an alphabet is a vowel or consonant using a switch case.



```
1 #include <iostream>
2 using namespace std;
3
4 int main()
5 {
6     char alphabet;
7
8     cout<<"Enter an alphabet"<<endl; // ENTER AN ALPHABET AS AN INPUT
9     cin>>alphabet;
10
11     switch(alphabet) {
12         case 'a':
13         case 'e':
14         case 'i':
15         case 'o':
16         case 'u':
17             cout<<alphabet<<"is a vowel"<<endl; // IT IS A VOWEL
18             break;
19
20         default:
21             cout<<alphabet<<"is a consonant"<<endl;
22             break;
23     }
24
25     return 0;
26 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\fop lab\ADULT.exe
- Output Size: 1.83260917663574 MiB
- Compilation Time: 0.70s



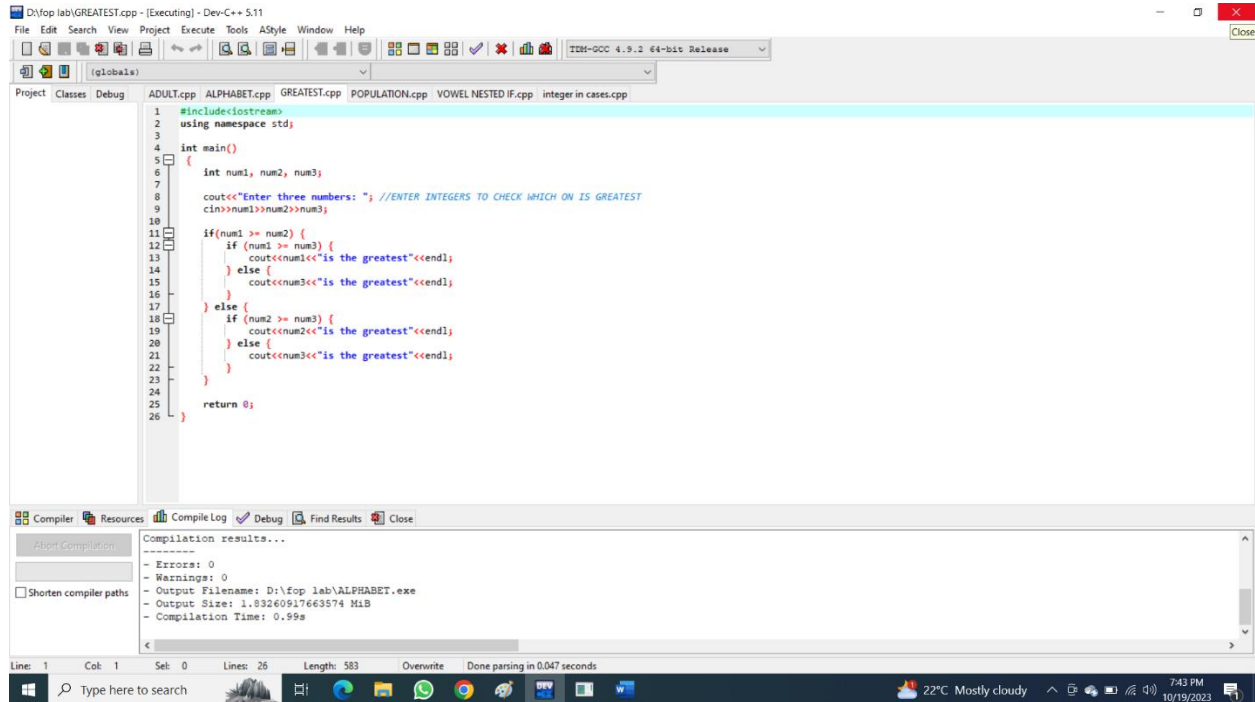
```
Enter an alphabet
a
a is a vowel

Process exited after 2.488 seconds with return value 0
Press any key to continue . . .
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\fop lab\ALPHABET.exe
- Output Size: 1.83260917663574 MiB
- Compilation Time: 0.99s

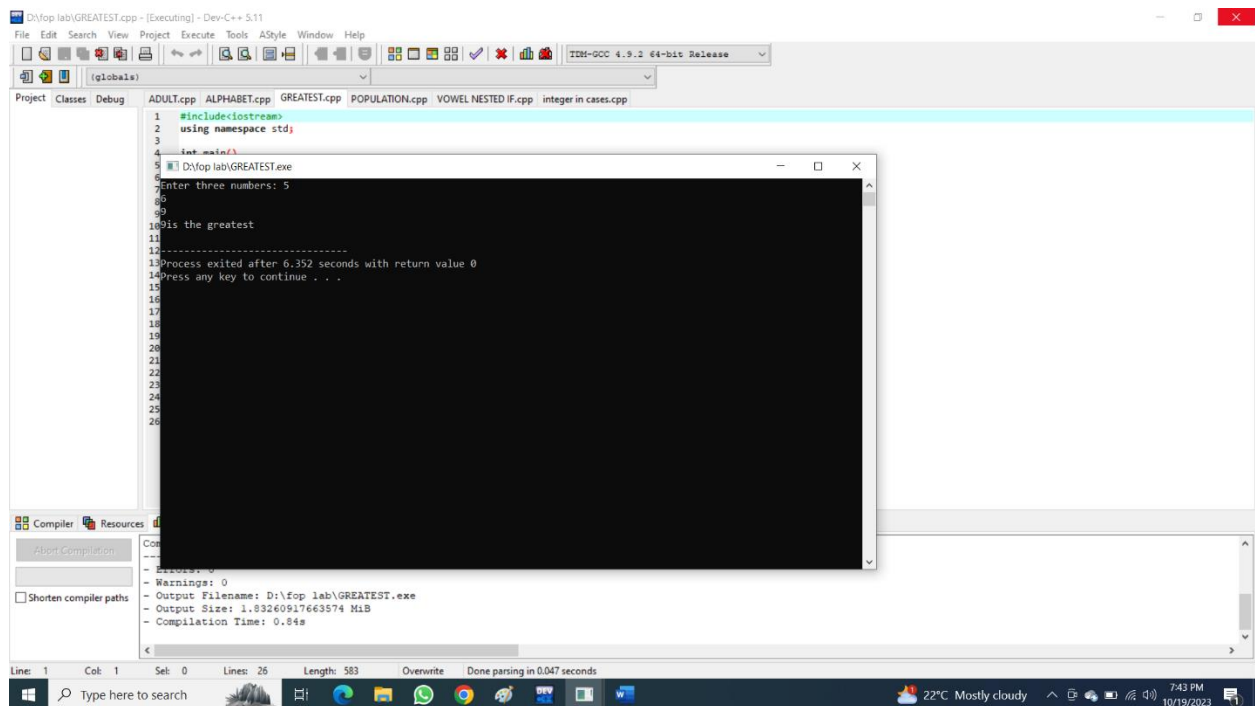
Write a C++ program that takes three number from the user and find the greatest number out of the three numbers using nested if-else statements.



```
1 #include<iostream>
2 using namespace std;
3
4 int main()
5 {
6     int num1, num2, num3;
7
8     cout<<"Enter three numbers: "; //ENTER INTEGERS TO CHECK WHICH ONE IS GREATEST
9     cin>>num1>>num2>>num3;
10
11     if(num1 >= num2) {
12         if (num1 >= num3) {
13             cout<<num1<<"is the greatest"<<endl;
14         } else {
15             cout<<num3<<"is the greatest"<<endl;
16         }
17     } else {
18         if (num2 >= num3) {
19             cout<<num2<<"is the greatest"<<endl;
20         } else {
21             cout<<num3<<"is the greatest"<<endl;
22         }
23     }
24
25     return 0;
26 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\fop lab\ALPHABET.exe
- Output Size: 1.83260917663574 MiB
- Compilation Time: 0.99s



```
1 #include<iostream>
2 using namespace std;
3
4 int main()
5 {
6     int num1, num2, num3;
7
8     cout<<"Enter three numbers: "; //ENTER INTEGERS TO CHECK WHICH ONE IS GREATEST
9     cin>>num1>>num2>>num3;
10
11     if(num1 >= num2) {
12         if (num1 >= num3) {
13             cout<<num1<<"is the greatest"<<endl;
14         } else {
15             cout<<num3<<"is the greatest"<<endl;
16         }
17     } else {
18         if (num2 >= num3) {
19             cout<<num2<<"is the greatest"<<endl;
20         } else {
21             cout<<num3<<"is the greatest"<<endl;
22         }
23     }
24
25     return 0;
26 }
```

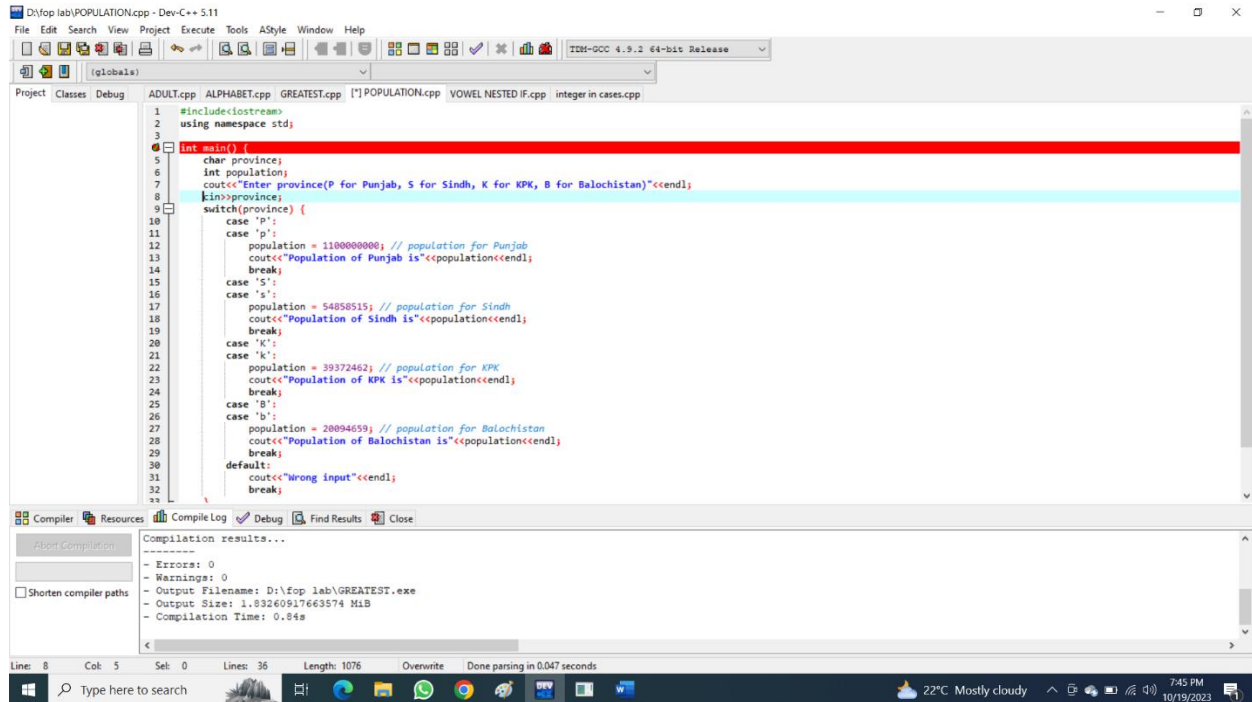
Execution Output:

```
D:\fop lab\GREATEST.exe
Enter three numbers: 5
10is the greatest
Process exited after 6.352 seconds with return value 0
Press any key to continue . . .
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\fop lab\GREATEST.exe
- Output Size: 1.83260917663574 MiB
- Compilation Time: 0.84s

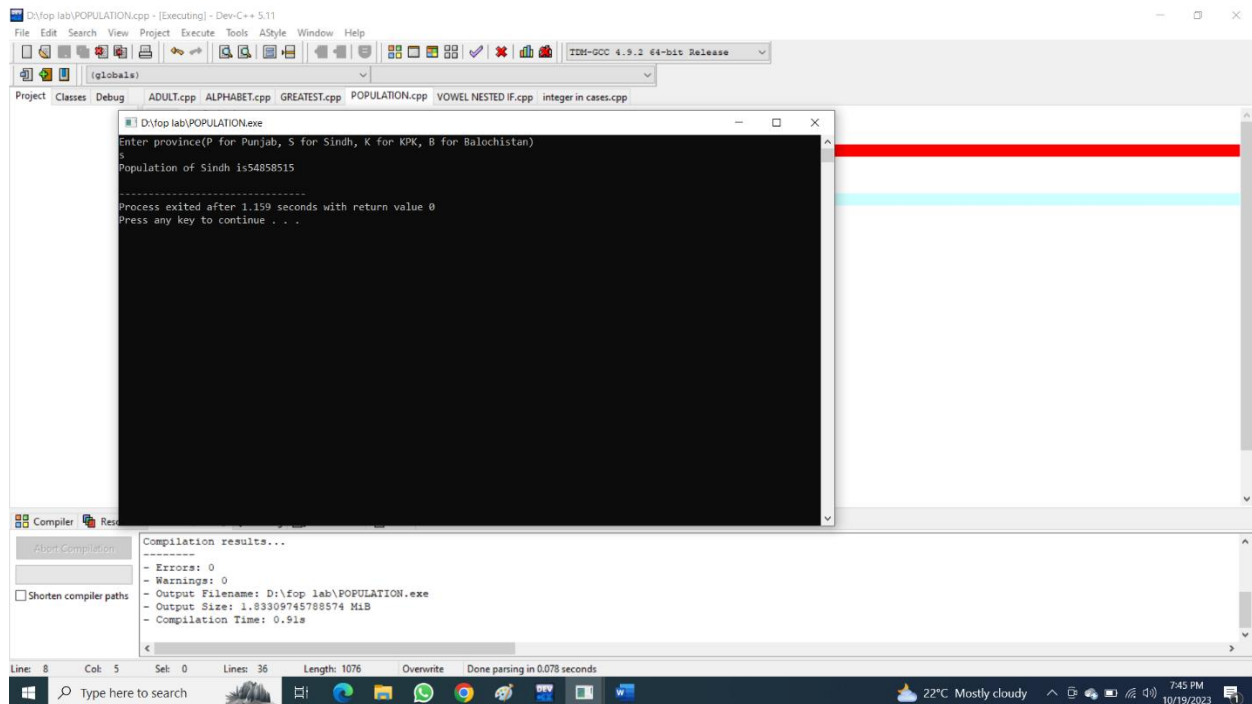
Write a C++ program to print the total number of populations in Punjab, Sindh, KPK, and Balochistan using a switch case.



```
1 #include <iostream>
2 using namespace std;
3
4 int main() {
5     char province;
6     int population;
7     cout<<"Enter province(P for Punjab, S for Sindh, K for KPK, B for Balochistan)"<<endl;
8     cin>>province;
9     switch(province) {
10         case 'P':
11             population = 1100000000; // population for Punjab
12             cout<<"Population of Punjab is"<<population<<endl;
13             break;
14         case 'S':
15             population = 54858515; // population for Sindh
16             cout<<"Population of Sindh is"<<population<<endl;
17             break;
18         case 'K':
19             population = 39372462; // population for KPK
20             cout<<"Population of KPK is"<<population<<endl;
21             break;
22         case 'B':
23             population = 20094659; // population for Balochistan
24             cout<<"Population of Balochistan is"<<population<<endl;
25             break;
26         default:
27             cout<<"Wrong input"<<endl;
28             break;
29     }
30 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\fop lab\GREATEST.exe
- Output Size: 1.83260917663574 MiB
- Compilation Time: 0.84s



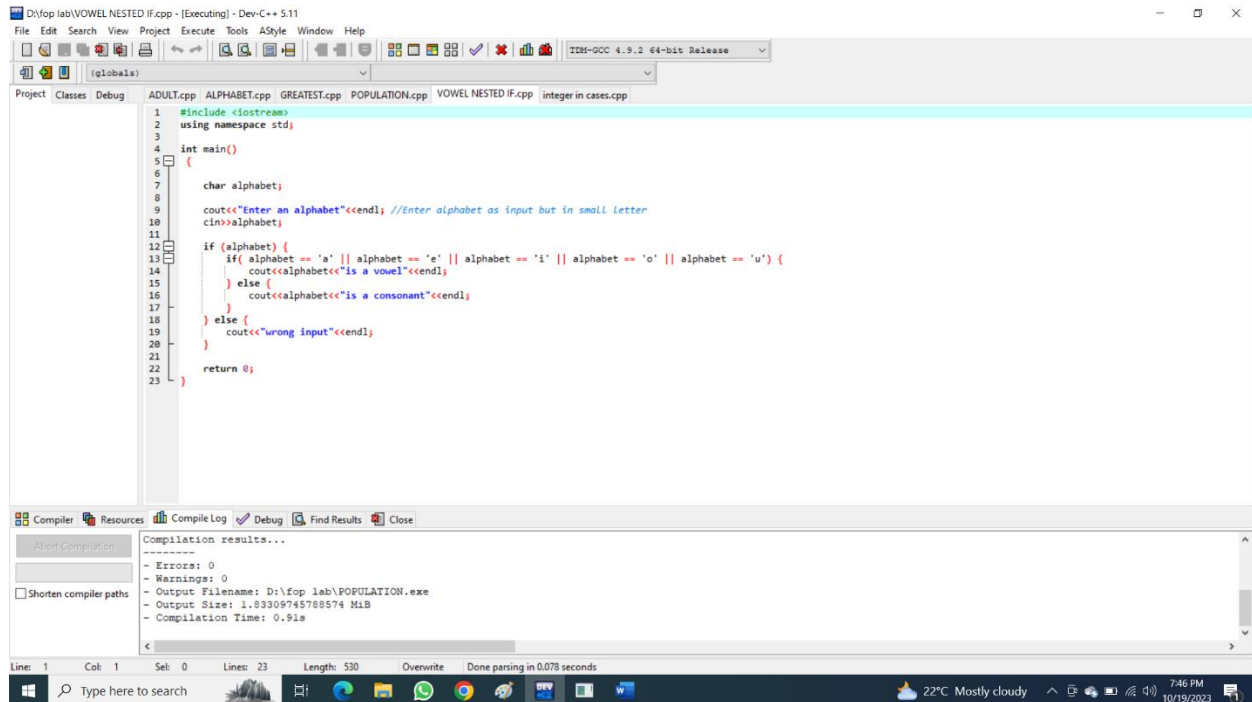
```
Enter province(P for Punjab, S for Sindh, K for KPK, B for Balochistan)
S
Population of Sindh is54858515

Process exited after 1.159 seconds with return value 0
Press any key to continue . . .
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\fop lab\POPULATION.exe
- Output Size: 1.83309745788574 MiB
- Compilation Time: 0.91s

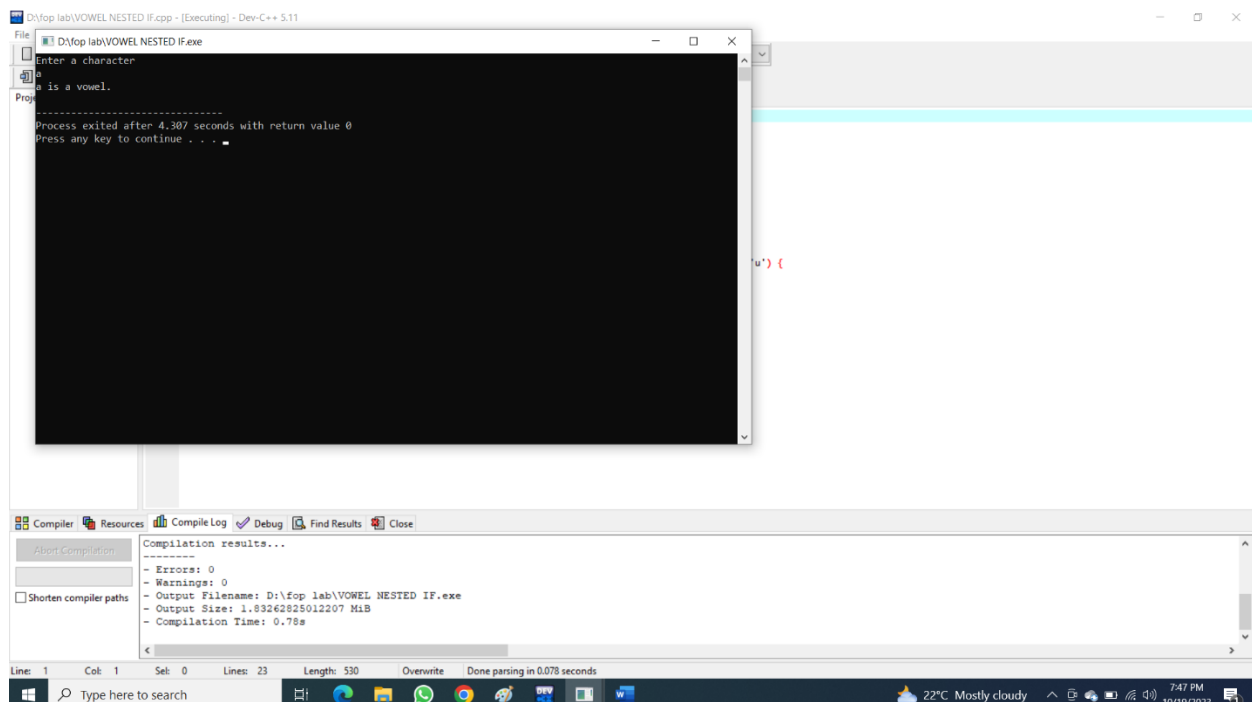
Write a C++ program to check whether the alphabet entered by the user is Vowel or consonant using nested if-else



```
1 #include <iostream>
2 using namespace std;
3
4 int main()
5 {
6     char alphabet;
7
8     cout<<"Enter an alphabet"<<endl; //Enter alphabet as input but in small letter
9     cin>>alphabet;
10
11     if (alphabet) {
12         if (alphabet == 'a' || alphabet == 'e' || alphabet == 'i' || alphabet == 'o' || alphabet == 'u') {
13             cout<<alphabet<<" is a vowel"<<endl;
14         } else {
15             cout<<alphabet<<" is a consonant"<<endl;
16         }
17     } else {
18         cout<<"wrong input"<<endl;
19     }
20
21     return 0;
22 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\fop lab\POPULATION.exe
- Output Size: 1.83309745788574 MiB
- Compilation Time: 0.91s

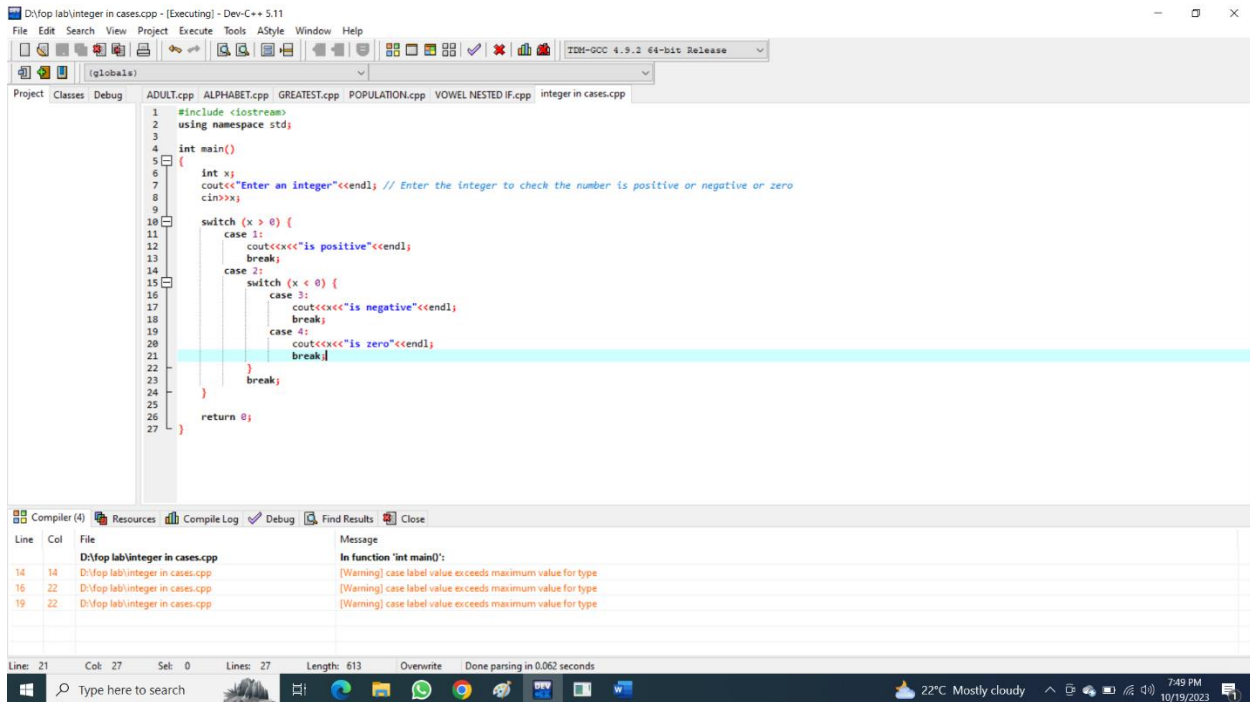


```
Enter a character
a
a is a vowel.
Process exited after 4.307 seconds with return value 0
Press any key to continue . . .
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\fop lab\VOWEL NESTED IF.exe
- Output Size: 1.83242825012207 MiB
- Compilation Time: 0.78s

Write a C++ program to check whether a number is positive, negative, or zero using a switch case



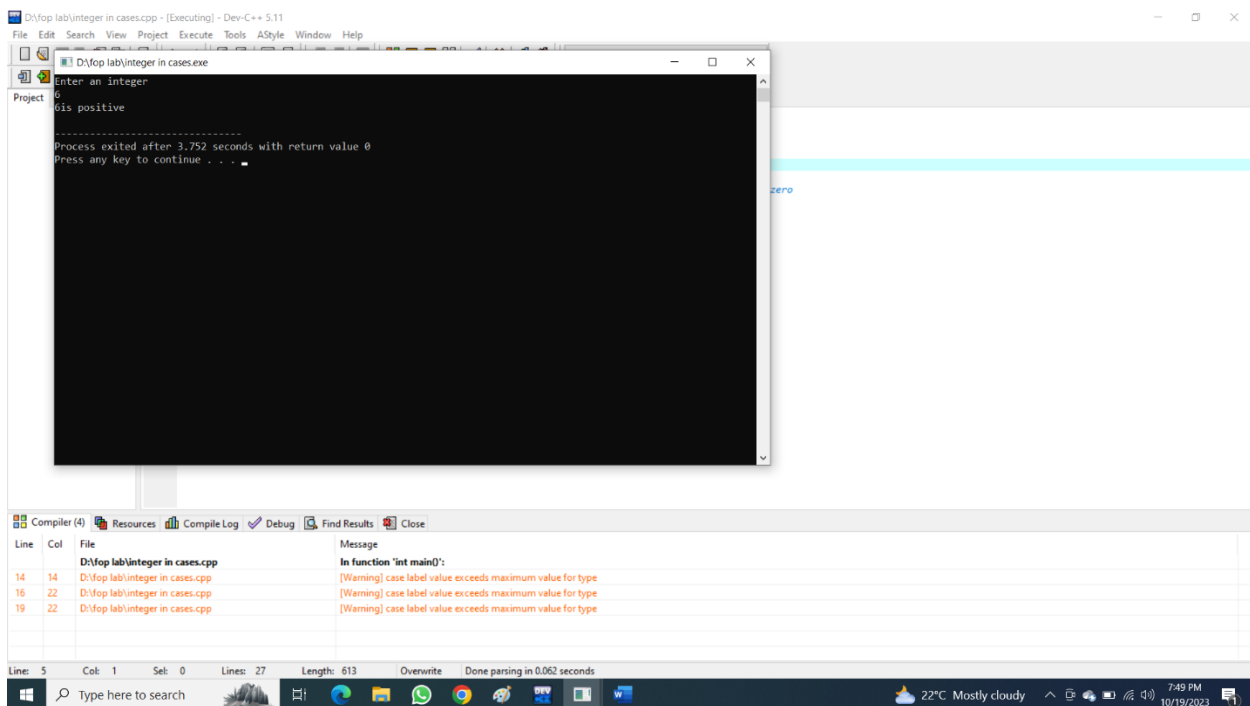
```
1 #include <iostream>
2 using namespace std;
3
4 int main()
5 {
6     int x;
7     cout<<"Enter an Integer"<<endl; // Enter the integer to check the number is positive or negative or zero
8     cin>>x;
9
10    switch (x > 0) {
11        case 1:
12            cout<<"is positive"<<endl;
13            break;
14        case 2:
15            switch (x < 0) {
16                case 3:
17                    cout<<"is negative"<<endl;
18                    break;
19                case 4:
20                    cout<<"is zero"<<endl;
21                    break;
22            }
23        }
24    }
25    return 0;
26 }
```

Compiler (4) Resources Compile Log Debug Find Results Close

Line	Col	File	Message
14	14	D:\top lab\integer in cases.cpp	In function 'int main()':
16	22	D:\top lab\integer in cases.cpp	[Warning] case label value exceeds maximum value for type
19	22	D:\top lab\integer in cases.cpp	[Warning] case label value exceeds maximum value for type
19	22	D:\top lab\integer in cases.cpp	[Warning] case label value exceeds maximum value for type

Line: 21 Col: 27 Sel: 0 Lines: 27 Length: 613 Overwrite Done parsing in 0.062 seconds

Type here to search 22°C Mostly cloudy 7:49 PM 10/19/2023



```
Enter an Integer
6
is positive
-----
Process exited after 3.752 seconds with return value 0
Press any key to continue . . .
```

Compiler (4) Resources Compile Log Debug Find Results Close

Line	Col	File	Message
14	14	D:\top lab\integer in cases.cpp	In function 'int main()':
16	22	D:\top lab\integer in cases.cpp	[Warning] case label value exceeds maximum value for type
19	22	D:\top lab\integer in cases.cpp	[Warning] case label value exceeds maximum value for type
19	22	D:\top lab\integer in cases.cpp	[Warning] case label value exceeds maximum value for type

Line: 5 Col: 1 Sel: 0 Lines: 27 Length: 613 Overwrite Done parsing in 0.062 seconds

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