

# **“FUNDAMENTALS OF PROGRAMMING”**

LAB MANUAL: 03

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## “TASK: 01”

```
#include <iostream>

using namespace std;

int main() {

    enum Prov { PUNJAB, SINDH, KPK, BALOCHISTAN };

    int prov;

    cout<<"Enter 0 for Punjab, 1 for Sindh, 2 for KPK, 3 for Balochistan "<<endl;
    cout << "Enter the province:";
    cin >> prov;

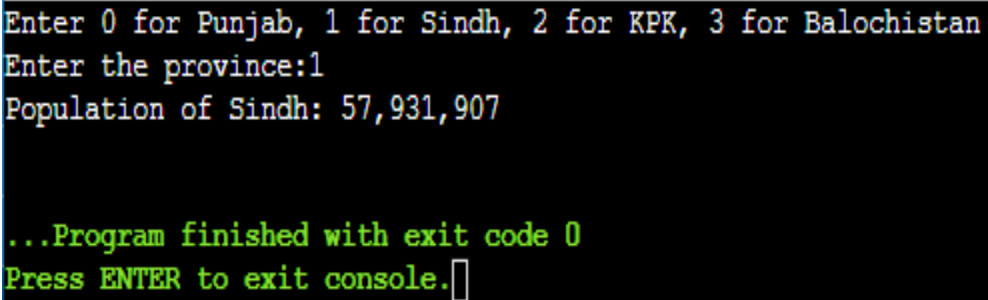
    switch (prov) {
        case PUNJAB:
            cout << "Population of Punjab: 127,474,000 "<<endl;
            break;
        case SINDH:
            cout << "Population of Sindh: 57,931,907 "<<endl;
            break;
        case KPK:
            cout << "Population of KPK: 39,596,664 "<<endl;
            break;
        case BALOCHISTAN:
            cout << "Population of Balochistan:      14,894,402 "<<endl;
            break;
        default:
```

```

        cout << "Invalid" << endl;
        break;
    }

    return 0;
}

```



```

Enter 0 for Punjab, 1 for Sindh, 2 for KPK, 3 for Balochistan
Enter the province:1
Population of Sindh: 57,931,907

...Program finished with exit code 0
Press ENTER to exit console.

```

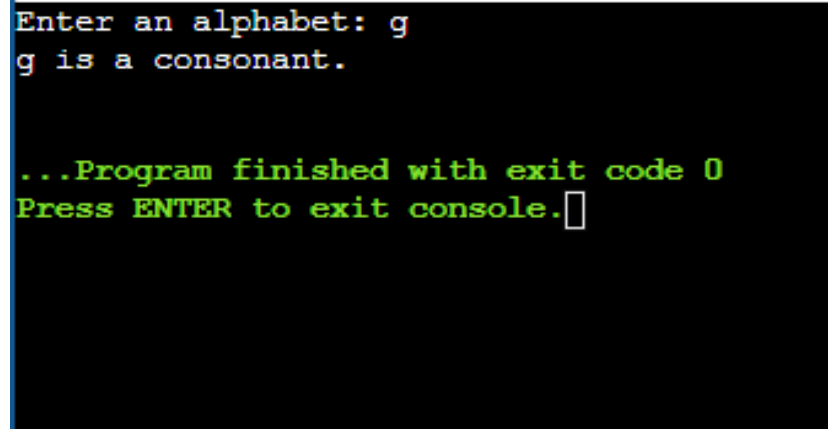
## “TASK: 02”

```

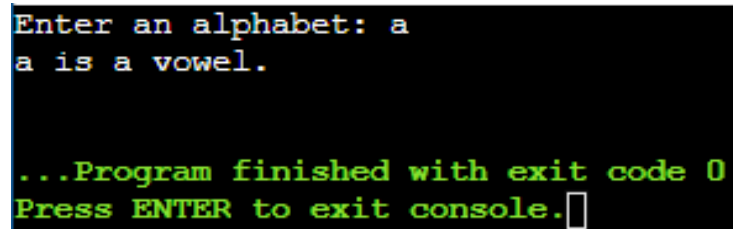
#include <iostream>
#include <string>
using namespace std;
int main() {
    char alphabet;
    cout << "Enter an alphabet: ";
    cin >> alphabet;
    switch (alphabet) {
        case 'a':
        case 'e':

```

```
case 'i':  
case 'o':  
case 'u':  
    cout << alphabet << " is a vowel." << endl;  
    break;  
default:  
    cout << alphabet << " is a consonant." << endl;  
}  
return 0;  
}
```



Enter an alphabet: g  
g is a consonant.  
  
...Program finished with exit code 0  
Press ENTER to exit console.



Enter an alphabet: a  
a is a vowel.  
  
...Program finished with exit code 0  
Press ENTER to exit console.

## “TASK: 03”

```
#include <iostream>

using namespace std;

int main() {
    int number;

    cout << "Enter a number: ";
    cin >> number;

    switch (number) {
        case (0):
            cout << "The number is Zero." ;
            break;
        default:
            if (number>0){
                cout<<"The number is positive.";}
            else
                { cout<<"The number is negative.";}
            }

    return 0;
}
```

```
Enter a number: -7
The number is negative.

...Program finished with exit code 0
Press ENTER to exit console.
```

```
Enter a number: 3
The number is positive.

...Program finished with exit code 0
Press ENTER to exit console.
```

## “TASK: 04”

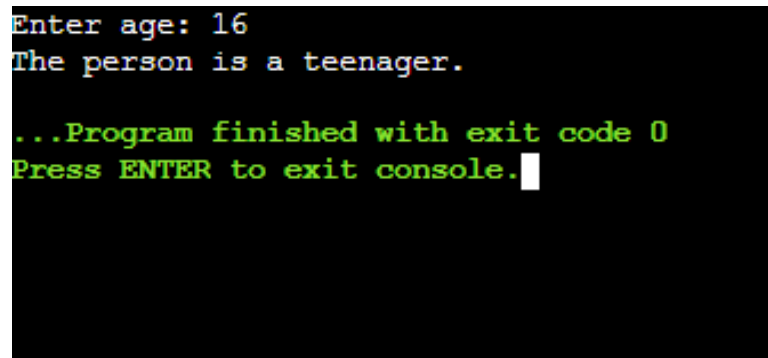
```
#include <iostream>
using namespace std;
```

```
int main() {
    int age;

    cout << "Enter age: ";
    cin >> age;
```

```
    if (age < 18) {
```

```
    if (age < 13) {  
        cout << "The person is a child.";  
    } else if ((age >= 13) && (age < 18)) {  
        cout << "The person is a teenager.";  
    }  
} else if (age >= 18) {  
    cout << "The person is an adult";  
} else {  
    cout << "Invalid";  
}  
  
return 0;  
}
```



A screenshot of a console window with a black background. The text is displayed in a monospaced font. The first line is 'Enter age: 16' in light blue. The second line is 'The person is a teenager.' in light blue. The third line is '...Program finished with exit code 0' in green. The fourth line is 'Press ENTER to exit console.' in green, followed by a white cursor block.

```
Enter age: 16  
The person is a teenager.  
  
...Program finished with exit code 0  
Press ENTER to exit console.
```

## “TASK:05”

```
#include <iostream>
```

```
using namespace std;

int main() {

    int num1, num2, num3;

    cout << "Enter three numbers: ";

    cin >> num1 >> num2 >> num3;

    if (num1 > num2) {

        if (num1 > num3) {

            cout << num1 << " is the greatest number." << endl;

        } else {

            cout << num3 << " is the greatest number." << endl;

        }

    } else {

        if (num2 > num3) {

            cout << num2 << " is the greatest number." << endl;

        } else {

            cout << num3 << " is the greatest number." << endl;

        }

    }

    return 0;

}
```

```
Enter three numbers: 5
6
9
9 is the greatest number.
```

```
...Program finished with exit code 0
Press ENTER to exit console.
```



## “TASK: 06”

```
#include <iostream>

using namespace std;

int main() {
    char alphabet;

    cout << "Enter an alphabet: ";
    cin >> alphabet;

    if (alphabet >= 'a' && alphabet <= 'z') {

        if (alphabet == 'a' || alphabet == 'e' || alphabet == 'i' || alphabet == 'o' || alphabet == 'u') {
            cout << "The entered alphabet is a vowel." << endl;
        } else {
            cout << "The entered alphabet is a consonant." << endl;
        }
    } else {

        cout << "Invalid input. Please enter an alphabet." << endl;
    }

    return 0;
}
```

}

```
Enter an alphabet: l
The entered alphabet is a consonant.

...Program finished with exit code 0
Press ENTER to exit console.
```

THE END.