

Fundamentals of Programming

Home Task: 3

Name: Malik Haseeb

Section: B

Roll no: 468333

Submitted to : Sir M. Affan

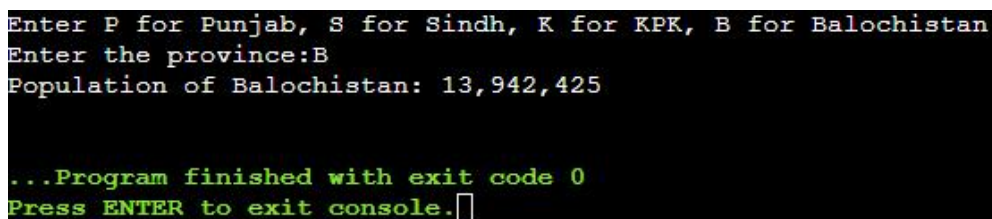
Task:1

Code:

```
#include <iostream>
using namespace std;
int main() {

    char prov;
    cout<<"Enter P for Punjab, S for Sindh, K for KPK, B for Balochistan "<<endl;
    cout << "Enter the province:";
    cin >> prov;
    switch (prov) {
    case 'P':
        cout << "Population of Punjab: 127,500,450 "<<endl;
        break;
    case 'S':
        cout << "Population of Sindh: 56,456,312 "<<endl;
        break;
    case 'K':
        cout << "Population of KPK: 39,865,368 "<<endl;
        break;
    case 'B':
        cout << "Population of Balochistan: 13,942,425 "<<endl;
        break;
    default:
        cout << "Invalid" <<endl;
        break;
    }
    return 0;
}
```

Output:

A screenshot of a terminal window showing the output of the C++ program. The text is as follows:

```
Enter P for Punjab, S for Sindh, K for KPK, B for Balochistan
Enter the province:B
Population of Balochistan: 13,942,425

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

```
Enter P for Punjab, S for Sindh, K for KPK, B for Balochistan
Enter the province:S
Population of Sindh: 56,456,312

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

Task: 2

Code:

```
#include <iostream>

using namespace std;

int main() {
    char alphabet;
    cout << "Enter any 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;
}
```

Output:

```
Enter any alphabet: a
a is a vowel.

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

```
Enter any alphabet: h
h is a consonant.

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

Task: 3

Code:

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

int main() {
    int num;

    cout << "Enter any integer.";
    cin >> num;

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

Output:

```
Enter any integer.456
This number is positive.

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

```
Enter any integer.0
The number is 0.

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

Task: 4

Code:

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

int main() {
    int age;
    cout << "Enter your age.";
    cin >> age;
    if (age < 18) {
        if (age < 13) {
            cout << "You are a child.";
        } else if ((age >= 13) && (age < 18)) {
            cout << "You are a teenager.";
        }
        } else if (age >= 18) {
            cout << "You are an adult";
        } else {
            cout << "Invalid";
        }
    }
    return 0;
}
```

Output:

```
Enter your age.23
You are an adult

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

```
Enter your age.16
You are a teenager.

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

Task: 5

Code:

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

int main() {

    int number1,number2,number3, greatest;
    cout<<"Enter the 1st number"<<endl;
    cin>>number1;

    cout<<"Enter the second number"<<endl;
    cin>>number2;

    cout <<"Enter the Third number"<<endl;
    cin>>number3;

    if(number1>number2)
    {
        if(number1>number3)
            greatest = number1;
        else
            greatest = number3;
    }
    else
    {
        if(number2>number3)
            greatest=number2;
        else
            greatest=number3;
    }
    cout<<"Greatest Number is: "<<greatest<<endl;
    return 0; }
```

Output:

```
Enter the 1st number
34
Enter the second number
56
Enter the Third number
97
Greatest Number is: 97

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

Task: 6

Code:

```
#include <iostream>
using namespace std;
int main() {
    char alphabet;

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

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

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

        cout << "Please enter an alphabet." << endl;
    }
    return 0;
}
```

Output:

```
Enter any alphabet: i
You've entered a vowel.
```

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

```
Enter any alphabet: h
You've entered a consonant.
```

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