NATIONAL UNIVERSITY OF SCIENCES AND TECHNOLOGY

PROGRAMMING FUNDAMENTALS
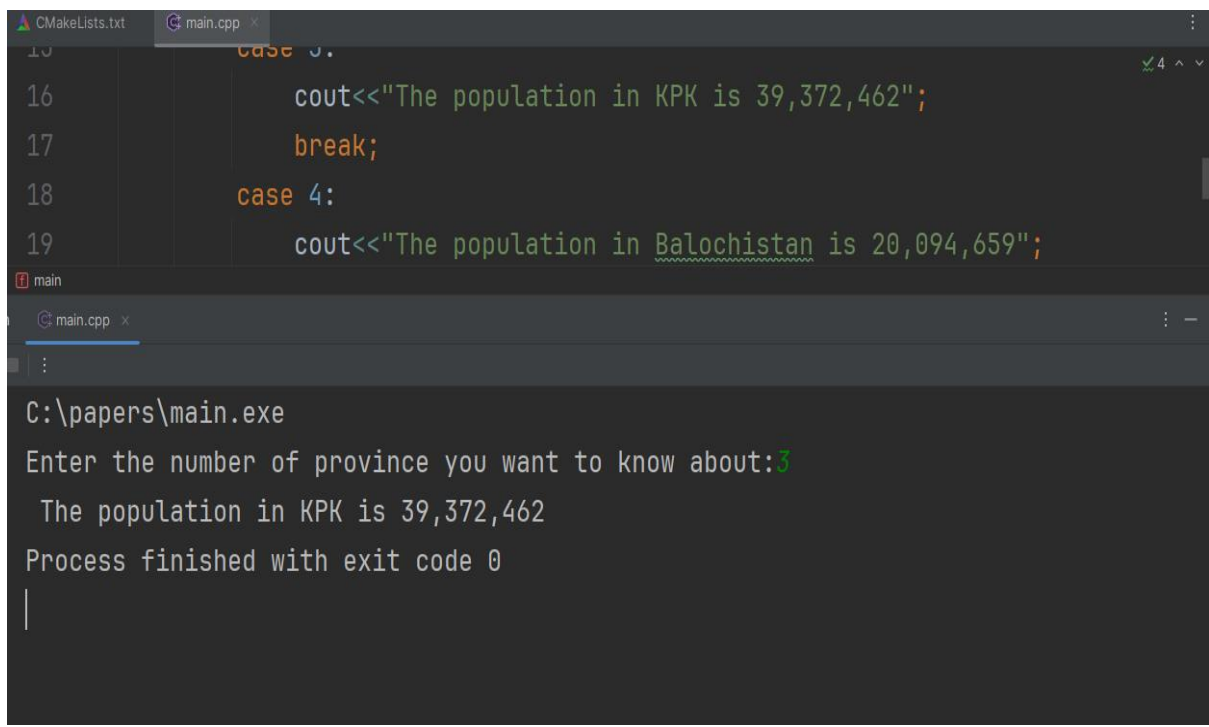
LAB ASSIGNMENT# 3

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Q 1:

```cpp
#include <iostream>
using namespace std;
int main() {
    int choice;
    cout<<"Enter the number of province you
want to know about: ";
    //1 for Punjab, 2 for Sindh, 3 for KPK, 4
for Balochistan
    cin>>choice;
    switch (choice) {
        case 1:
            cout<<"The population in Punjab is
127,474,000";
            break;
        case 2:
            cout<<"The population in Sindh is
54,858,515";
            break;
        case 3:
            cout<<"The population in KPK is
39,372,462";
            break;
        case 4:
            cout<<"The population in
Balochistan is 20,094,659";
            break;
        default:
            cout<<"Wrong key pressed";
            break;
    }
    return 0;
}
```

Q 1 (results):

```
15              case 3:
16                  cout<<"The population in KPK is 39,372,462";
17                  break;
18              case 4:
19                  cout<<"The population in Balochistan is 20,094,659";
```

main

main.cpp

```
C:\papers\main.exe
Enter the number of province you want to know about:3
 The population in KPK is 39,372,462
Process finished with exit code 0
```

Q 2:

```cpp
#include <iostream>
using namespace std;
int main() {
    char letter;
    cout<<"Enter a letter: ";
    cin>>letter;
    switch (letter) {
        case 'a':
            cout<<"It is a vowel!";
            break;
        case 'e':
            cout<<"It is a vowel!";
            break;
        case 'i':
            cout<<"It is a vowel!";
            break;
        case 'o':
            cout<<"It is a vowel!";
            break;
        case 'u':
            cout<<"It is a vowel!";
            break;
        default:
            cout<<"It is a consonant!";
            break;
    }

    return 0;
}
```

Q 2 (results):


```
 8          case 'a':
 9              cout<<"It is a vowel!";
10              break;
11          case 'e':
```

```
C:\papers\main.exe
Enter a letter:u
 It is a vowel!
Process finished with exit code 0
```

Q 3:

```cpp
#include <iostream>
using namespace std;
int main() {
    int num, sign;
    cout<<"Enter the number: ";
    cin>>num;
        if (num > 0) {
            sign=1;
        } else if (num < 0) {
            sign=2;
        } else {
            sign=3;
        }
    switch (sign) {
        case 1:
            cout<<"The number is positive";
            break;
        case 2:
            cout<<"The number is negative";
            break;
        case 3:
            cout << "The number is zero";
            break;
    }
    return 0;
}
```

Q 3 (results):

```cpp
1    #include <iostream>
2    using namespace std;
3    int main() {
4        int num, sign;
5        cout<<"Enter the number: ";
6        cin>>num;
```

```
C:\papers\main.exe
Enter the number:-69
 The number is negative
Process finished with exit code 0
```

Q 4:

```cpp
#include <iostream>
using namespace std;
int main() {
    int age;
    cout<<"Enter your age:";
    cin>>age;
    if (age>0){
        if (age>12){
            cout<<"You are a teenager!";
        } else if (age>19){
            cout<<"You are an adult!";
        } else{
            cout<<"You are a child!";
        }
    } else{
        cout<<"In appropriate age entered!";
    }
    return 0;
}
```

Q 4 (result):

```cpp
#include <iostream>
using namespace std;
int main() {
    int age;
    cout<<"Enter your age:";
    cin>>age;
```

```
C:\papers\main.exe
Enter your age:26
You are a teenager!
Process finished with exit code 0
```

Q 5:

```cpp
#include <iostream>
using namespace std;
int main() {
    int num1, num2, num3;
    cout<<"Enter three numbers:";
    cin>>num1;
    cin>>num2;
    cin>>num3;
    if (num1>num2){
        if (num2>num3){
            cout<<"The largest number
is:"<<num1;
        } else {
            cout<<"The largest number
is:"<<num3;
        }
    }else  {
        if (num2>num3) {
            cout << "The largest number
is:"<<num2;
        } else {
            cout<<"The largest number
is:"<<num3;
        }
    }
    return 0;
}
```

Q 5 (results):

```
5          cout<<"Enter three numbers:";
6          cin>>num1;
7          cin>>num2;
8          cin>>num3;
9          if (num1>num2){
```

main

main.cpp ×

```
C:\papers\main.exe
Enter three numbers:8
-10
26
The largest number is:26
Process finished with exit code 0
```

main.cpp   7:15   LF   UTF-8   .clang-tidy   4 spaces

Q 6:

```cpp
#include <iostream>
using namespace std;
int main() {
    char letter;
    cout << "Enter the letter: ";
    cin >> letter;
    if (letter != 'a') {
        if (letter != 'e') {
            if (letter != 'i') {
                if (letter != 'o') {
                    if (letter != 'u') {
                        cout<<"The letter is a consonant!";
                    }else{
                        cout<<"The letter is a vowel";
                    }
                }else{
                    cout<<"The letter is a vowel";
                }
            }else{
                cout<<"The letter is a vowel";
            }
        }else{
            cout<<"The letter is a vowel";
        }
    }else{
        cout<<"The letter is a vowel";
    }
    return 0;
}
```

Q 6 (result):

```
18              }
19              }else{
20                  cout<<"The letter is a vowel";
21              }
22          }else{
```

main

main.cpp ×

```
C:\papers\main.exe
Enter the letter:s
 The letter is a consonant!
Process finished with exit code 0
```