NATIONAL UNIVERSITY OF SCIENCE & TECHNOLOGY

COURSE:

Fundamentals Of Programming

Assignment # 3

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Q1. Write a C++ program to print the total number of populations in Punjab, Sindh, KPK, and Balochistan using a switch case.

```cpp
#include <iostream>
using namespace std;
int main() {
    char province;
    int population;
    cout << "Enter the province (First Letter): "<<endl;
    cin >> province;

    switch (province) {
        case 'P':
        case 'p':
            population = 116827[illegible]125;
            cout << "Population of Punjab: " << population <<endl;
            break;

        case 'S':
        case 's':
            population = 54858515;
            cout << "Population of Sindh: " << population <<endl;
            break;

        case 'K':
        case 'k':
            population = 39372462;
            cout << "Population of KPK: " << population <<endl;
            break;

        case 'B':
        case 'b':
            population = 20094659;
            cout << "Population of Balochistan: " << population <<endl;
            break;

        default:
            cout << "Invalid, Enter as (P, S, K, or B)." <<endl;
            break;
    }

    return 0;
}
```

```
Enter the province (First Letter):
s
Population of Sindh: 54858515

--------------------------------
Process exited after 2.584 seconds with return value 0
Press any key to continue . . .
```

Q2. Write a C++ program to check whether an alphabet is a vowel or consonant using a switch case.

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

    cout << "Enter a character: " << endl;
    cin >> ch;
    switch (ch) {
        case 'a':
        case 'e':
        case 'i':
        case 'o':
        case 'u':
            cout << "Alphabet is a vowel."<< ch <<endl;
            break;
default:
         cout << "Alphabet is a consonant."<< endl;
            break;

    }

    return 0;
}
```

```
Enter a character:
s
Alphabet is a consonant.

--------------------------------
Process exited after 1.619 seconds with return value 0
Press any key to continue . . .
```

Q3. Write a C++ program to check whether a number is positive, negative, or zero using a switch case.

```cpp
#include <iostream>
using namespace std;
int main() {
    int number;
    int answer;
      cout << "Enter a number: "<< endl;
      cin >> number;
    if (number > 0) {
        answer = 1;
    } else if (number < 0) {
        answer = -1;
    } else {
        answer = 0; }
    switch (answer) {
        case 1:
            cout << "The number is positive." << endl;
            break;
        case -1:
            cout << "The number is negative." << endl;
            break;
        case 0:
            cout << "The number is zero." << endl;
            break;
    }
    return 0;
}
```

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

--------------------------------
Process exited after 1.304 seconds with return value 0
Press any key to continue . . .
```

Q4. Write a C++ to find out whether a person is an adult, teenager, or child using nested if-else.

```cpp
#include <iostream>
using namespace std;
int main() {
    int age;
    cout << "Enter age: " << endl;
    cin >> age;
    if (age >= 18) {
        cout << "The person is an adult." << endl;
    } else {
        if (age >= 13) {
            cout << "The person is a teenager." << endl;
        } else {
            cout << "The person is a child." << endl;
        }
    }
    return 0;
}
```

```
Enter age:
23
The person is an adult.

--------------------------------
Process exited after 2.129 seconds with return value 0
Press any key to continue . . .
```

Q5. Write a C++ program that takes three numbers from the user and find the greatest number out of the three numbers using nested if-else statements.

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

    return 0;
}
```

```
Enter three numbers: 2 4 5
The greatest number is: 5

--------------------------------
Process exited after 4.149 seconds with return value 0
Press any key to continue . . .
```

Q6. Write a C++ program to check whether the alphabet entered by the user is Vowel or Consonant using nested if-else.

```cpp
#include <iostream>
using namespace std;
int main() {
    char ch;
    cout << "Enter an alphabet: " << endl;
    cin >> ch;
    if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u') {
        cout << ch << " is a vowel." << endl;
    } else {
        cout << ch << " is a consonant." << endl;
    }
    return 0;
}
```

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

--------------------------------
Process exited after 2.241 seconds with return value 0
Press any key to continue . . .
```