

```

#include <iostream>
using namespace std;
int main() {
    char c ;
    cout << "Enter a Character";
    cin >> c;
    // Now use if nested else to separate constants and vowels from a set of alphabet
    if(c == 'a' || c == 'e' || c == 'i' || c == 'o' || c == 'u' || c == 'A'
    || c == 'E' || c == 'I' || c == 'O' || c == 'U'){
        cout << c << " is VOWEL"<<endl;
    }
    // if c does not satisfy the above condition then
    else{
        cout << c << " is CONSONANT"<<endl;
    }
    return 0;
}

```

```

#include <iostream>
using namespace std;
int main() {
    int totalPopulation = 0;
    int punjab = 73621290;
    int sindh = 30439893;
    int kpk= 40856100;
    int balochistan= 6565855;
    int province;

    cout << "Select a province to get the population:" << std::endl;
    cout << "1.Punjab" <<endl;
    cout << "2.Sindh" <<endl;
    cout << "3.KPK" <<endl;
    cout << "4.Balochistan" <<endl;
    cout << "Enter your province (1-4): ";
    cin >> province;

    switch (province) {
        //punjab case
        case 1:
            totalPopulation = punjab;
            cout << "Population of Punjab is: " << totalPopulation <<endl;
            break;
        //sidh case
        case 2:
            totalPopulation = sindh;
            cout << "Population of Sindh is: " << totalPopulation <<endl;
            break;
        //kpk case
        case 3:
            totalPopulation = kpk;
            cout << "Population of KPK is: " << totalPopulation <<endl;
            break;
        //balochistan case
        case 4:
            totalPopulation = balochistan;
            cout << "Population of Balochistan is: " << totalPopulation <<endl;
            break;
        //in case of wrong province
        default:
            cout << "Error. Please choose again " <<endl;
    }
    return 0;
}

```

```
#include <iostream>
using namespace std;
int main() {
    char alphabet;
    cout << "Enter an alphabet: ";
    cin >> alphabet;
    switch (alphabet) {
        case 'a':
        case 'A':
        case 'e':
        case 'E':
        case 'i':
        case 'I':
        case 'o':
        case 'O':
        case 'u':
        case 'U':
            cout << alphabet << " is a vowel." << endl;
            break;
        // using default for all alphabets other than a, e, i, o, u .
        default:
            cout << alphabet << " is a consonant." << endl;
            break;
    }

    return 0;
}
```

```

#include <iostream>
using namespace std;
int main()
{
    int num;
    cout<<"Enter any number: ";
    cin>>num;
    //for number is positive
    switch (num>0){
    case 1:
    cout<<num<<" is positive."<<endl;
    break;
    }
    //for number is negative
    switch (num<0){
    case 1:
    cout<<num<<" is negative."<<endl;
    break;
    }
    // for number is zero
    switch (num==0){
    case 1:
    cout <<num<<" is zero. "<<endl;
    break;
    }
    return 0;
}

```

```
#include <iostream>
using namespace std;
int main() {
    int age;
    cout << "Please enter age:";
    cin >> age;
    if (age >= 3 && age <= 12) {
        cout << "Child"<<endl;
    }
    else if (age >= 13 && age <= 17 ){
        cout << "Teenager"<<endl;
    }
    else if (age >= 18 && age <= 23 ){
        cout << "Adults"<<endl;
    }
    // However if age is not between 3 and 23 then the program shows no result
    return 0;
}
```

```
#include <iostream>
using namespace std;
int main()
{
    int num1, num2, num3;
    cout << "Enter three numbers: ";
    cin >> num1 >> num2 >> num3;
    //using nested if to find the largest number
    if(num1 >= num2 && num1 >= num3){
        cout << "Largest number: " << num1<<endl;
    }
    else if(num2 >= num1 && num2 >= num3){
        cout << "Largest number: " << num2<<endl;
    }
    // if both cases are not correct then num3 is highest
    else{
        cout << "Largest number: " << num3<<endl;
    }
    return 0;
}
```