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Q:1:Write a C++ program to print the total number of populations in Punjab,Sindh, KPK, and Balochistan using a switch case.

```
#include <iostream>
```

```
int main() {
```

```
    char choice;
```

```
    int population;
```

```
    std::cout << "Select a province: \n";
```

```
    std::cout << "P: Punjab\n";
```

```
    std::cout << "S: Sindh\n";
```

```
    std::cout << "K: KPK\n";
```

```
    std::cout << "B: Balochistan\n";
```

```
    std::cin >> choice;
```

```
    switch(tolower(choice)) {
```

```
        case 'p':
```

```
            population = 110012442; // Punjab population
```

```
            break;
```

```
        case 's':
```

```
            population = 47173308; // Sindh population
```

```
            break;
```

```
        case 'k':
```

```
            population = 30963276; // KPK population
```

```
            break;
```

```
        case 'b':
```

```
            population = 12877610; // Balochistan population
```



```

        break;
    default:
        std::cout << "Invalid choice\n";
        return 1;
    }

    std::cout << "Total population: " << population << std::endl;
    return 0;
}

```

**Q:2:Write a C++ program to check whether an alphabet is a vowel or consonant using a switch case**

```
#include <iostream>
```

```

int main() {
    char ch;

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

    switch(tolower(ch)) {
        case 'a':
        case 'e':
        case 'i':
        case 'o':
        case 'u':
            std::cout << ch << " is a vowel.\n";
            break;
        default:

```

```
        std::cout << ch << " is a consonant.\n";
        break;
    }

    return 0;
}
```

Q:3: Write a C++ program to check whether a number is positive, negative, or zero using a switch case

```
#include <iostream>

int main() {
    int number;

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

    switch (number > 0 ? 1 : (number < 0 ? -1 : 0)) {
        case 1:
            std::cout << "The number is positive.\n";
            break;
        case -1:
            std::cout << "The number is negative.\n";
            break;
        case 0:
            std::cout << "The number is zero.\n";
            break;
    }
```

```
}  
  
return 0;  
}
```

Q:4Write a C++ to find out whether a person is an adult, teenager, or child Using nested if-else

```
#include <iostream>  
  
Int main() {  
    Int age;  
  
    Std::cout << "Enter your age: ";  
    Std::cin >> age;  
  
    If (age >= 18) {  
        Std::cout << "You are an adult.\n";  
    } else {  
        If (age >= 13) {  
            Std::cout << "You are a teenager.\n";  
        } else {  
            Std::cout << "You are a child.\n";  
        }  
    }  
  
    Return 0;  
}
```



Q:5:Write a C++ program that takes three number from the user and find the greatest Number out of the three numbers using nested if-else statements.

```
#include <iostream>

Int main() {
    Int num1, num2, num3;

    Std::cout << "Enter three numbers: ";
    Std::cin >> num1 >> num2 >> num3;

    If (num1 >= num2) {
        If (num1 >= num3) {
            Std::cout << "The greatest number is: " << num1 << std::endl;
        } else {
            Std::cout << "The greatest number is: " << num3 << std::endl;
        }
    } else {
        If (num2 >= num3) {
            Std::cout << "The greatest number is: " << num2 << std::endl;
        } else {
            Std::cout << "The greatest number is: " << num3 << std::endl;
        }
    }

    Return 0;
}
```



Q:6:Write a C++ program to check whether the alphabet entered by the user is Vowel or Consonant using nested if-else

```
#include <iostream>
```

```
Int main() {
```

```
    Char ch;
```

```
    Std::cout << "Enter an alphabet: ";
```

```
    Std::cin >> ch;
```

```
    // Convert the character to lowercase for case-insensitive comparison
```

```
    Ch = tolower(ch);
```

```
    If ((ch >= 'a' && ch <= 'z')) {
```

```
        If (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u') {
```

```
            Std::cout << ch << " is a vowel.\n";
```

```
        } else {
```

```
            Std::cout << ch << " is a consonant.\n";
```

```
        }
```

```
    } else {
```

```
        Std::cout << "Invalid input. Please enter a valid alphabet.\n";
```

```
    }
```



```
Return 0;  
}
```

