

Computer Systems & Programming

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Home Tasks of Lab Manual 3

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

```
Start here X *Home Task #5(Manual 4).cpp X Home Task #3(Manual 4).cpp X Home Task #2 (Manual 4).cpp X *Home Tasl
1 // Library
2 #include <iostream>
3 using namespace std;
4 int main()
5 //Declaring the variables
6 {
7     char province;
8     cout<<"Enter p for Punjab, s for Sindh, k for KPK, and b for Balochistan/n";
9     cin>> province;
10    switch(province)
11    {
12        case 'p':
13            cout<<"The Population of this Province is 110 million";
14            break;
15        case 's':
16            cout<<"The Population of this Province is 48 million";
17            break;
18        case 'k':
19            cout<<"The Population of this Province is 36 million";
20            break;
21        case 'b':
22            cout<<"The Population of this Province is 13 million";
23            break;
24        default:
25            break;
26    }
27 }
28
```

```
C:\ "C:\Users\syedf\OneDrive\Do X + v
Enter p for Punjab, s for Sindh, k for KPK, and b for Balochistan/nb
The Population of this Province is 13 million
Process returned 0 (0x0) execution time : 6.093 s
Press any key to continue.
|
```

Home Task# 2: Write a C++ program to check whether an alphabet is a vowel or consonant using a switch case.

```
Start here X Home Task #5(Manual 4)
1 //Library
2 #include <iostream>
3 using namespace std;
4 int main() {
5 //Declaration of variables
6 char ch;
7 //User will enter a character
8 cout<<"Enter any letter: ";
9 cin >>ch;
10 switch (ch) {
11 case 'a':
12 cout<<ch<<" is vowel"<<endl;
13 break;
14 case 'e':
15 cout<<ch<<" is vowel"<<endl;
16 break;
17 case 'i':
18 cout<<ch<<" is vowel"<<endl;
19 break;
20 case 'o':
21 cout<<ch<<" is vowel"<<endl;
22 break;
23 case 'u':
24 cout<<ch<<" is vowel"<<endl;
25 break;
26 case 'A':
27 cout<<ch<<" is vowel"<<endl;
28 break;
29 case 'E':
30 cout<<ch<<" is vowel"<<endl;
31 break;
32 case 'I':
33 cout<<ch<<" is vowel"<<endl;
34 break;
35 case 'O':
36 //Character is a vowel
37 cout<<ch<<" is vowel"<<endl;
38 break;
39 case 'U':
40 cout<<ch<<" is vowel"<<endl;
41 break;
42 default:
43 //Character is a constant
44 cout<<ch<<" is consonant"<< endl;
45 }
46 return 0;
47 }
48
```

```
C:\Users\syedf\OneDrive\Do X + v
Enter any letter: f
f is consonant

Process returned 0 (0x0) execution time : 7.324 s
Press any key to continue.
|
```

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

```
Start here X Home Task #5(Manual 4).cpp X Home Task #
1 //Library
2 #include<iostream>
3 using namespace std;
4 int main()
5 {
6 // Declaration of Variables
7 double number;
8 cout << "Enter a Number : ";
9 cin >> number;
10 // check
11 switch(number > 0)
12 {
13 // positive number
14 case 1 :
15 cout << "Positive" << endl;
16 break;
17 // number is zero or negative
18 case 0 :
19 switch(number < 0)
20 {
21 // number is negative
22 case 1 :
23 cout << "Negative" << endl;
24 break;
25 // number is zero
26 case 0 :
27 cout << "Zero" << endl;
28 break;
29 }
30 break;
31 }
32 return 0;
33 }
34
```

"C:\Users\syedf\OneDrive\Do X + v

Enter a Number : -56
Negative

Process returned 0 (0x0) execution time : 4.820 s
Press any key to continue.

Home Task# 4: Write a C++ to find out whether a person is an adult, teenager, or child using nested if-else.

```
Start here X Home Task #5(Manual 4).cpp X Home Task #3(Manual 4).cpp X
1 //Library
2 #include <iostream>
3 using namespace std;
4 int main() {
5 //Declaration of variables
6 int age;
7 cout << "Enter the age of the person: ";
8 cin >> age;
9 if (age <= 12)
10 {
11 cout << "The person is a child." << endl;
12 }
13 else if (age <= 18)
14 {
15 cout << "The person is a teenager." << endl;
16 }
17 else
18 {
19 cout << "The person is an adult." << endl;
20 }
21 return 0;
22 }
23
```

```
"C:\Users\syedf\OneDrive\Do X + v
Enter the age of the person: 17
The person is a teenager.

Process returned 0 (0x0) execution time : 7.271 s
Press any key to continue.
|
```

Home Task# 5: Write a C++ program that takes three number from the user and find the greatest number out of the three numbers using nested statements.

```
*Home Task #5(Manual 4).cpp  Home Task #3(Manual 4).cpp  Home Task #2 (Manu
1  //Library
2  #include <iostream>
3  using namespace std;
4  int main() {
5  //Declaration of Variables
6  float num1, num2, num3;
7  //User will enter 3 numbers
8  cout << "Enter 1st number : ";
9  cin >> num1;
10 cout << endl << "Enter 2nd number : ";
11 cin >> num2;
12 cout << endl << "Enter 3rd number : ";
13 cin >> num3;
14 if(num1 >= num2)//Conditions
15 {
16     if(num1 >= num3)
17     {
18         cout << endl << num1 << " is largest number";
19     }
20     else
21     {
22         cout << endl << num3 << " is largest number";
23     }
24 }
25 else
26 {
27     if(num2 >= num3)
28     {
29         cout << endl << num2 << " is largest number";
30     }
31     else
32     {
33         cout << endl << num3 << " is largest number";
34     }
35 }
36 return 0;
```

```
"C:\Users\syedf\OneDrive\Do  +  v
Enter 1st number : 5
Enter 2nd number : 12
Enter 3rd number : 14

14 is largest number
Process returned 0 (0x0)   execution time : 8.726 s
Press any key to continue.
```

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

```
Start here x *Home Task #5(Manual 4).cpp x Home Task #3(Manual 4).cpp x Home Task #2 (Manual 4).cpp x *Home Task #6 (Manual 4).cpp x Untitled7.c
1 //Library
2 #include <iostream>
3 using namespace std;
4 int main() {
5     //Declaration of Variables
6     char alphabet;
7     cout << "Enter an alphabet: ";
8     cin >> alphabet;
9     if (alphabet == 'a' || alphabet == 'e' || alphabet == 'i' || alphabet == 'o' || alphabet == 'u') {
10        cout << alphabet << " is a vowel." << endl;
11    } else {
12        cout << alphabet << " is a consonant." << endl;
13    }
14    else
15    {
16        cout << alphabet << " is not an alphabet." << endl;
17    }
18    return 0;
19 }
20
```

```
C++ "C:\Users\syedf\OneDrive\Do x + v
Enter an alphabet: e
e is a vowel.

Process returned 0 (0x0)    execution time : 5.620 s
Press any key to continue.
```