

Fundamentals of Programming

Manual 03 Home Tasks

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Section-C

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TASK 01

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

```
3 int main()
4 {
5     char Province;
6     int Population; //declaring variables
7     cout << "Enter the name of province (p, s, b, k): "; //getting input from user
8     cin >> Province;
9     switch (Province){
10         case 'p':
11             Population = 120000000;
12             break;
13         case 's':
14             Population = 47000000;
15             break;
16         case 'b':
17             Population = 13000000;
18             break;
19         case 'k':
20             Population = 35000000;
21             break;
22         //replacing case with population of the selected province
23         default:
24             cout << "Invalid Province Name"; //displaying error if wrong keys are pressed/entered
25             return 1;
26     }
27     cout << "The population of this province is: " << Population; //printing the results
28     return 0;
```

C:\Users\pc planet\Desktop>manual03.exe

```
Enter the name of province (p, s, b, k): k
The population of this province is: 35000000
-----
Process exited after 2 seconds with return value 0
Press any key to continue . . .
```

TASK 02

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

```
5 char ch;
6 //declaring variable
7 cout << "Enter the alphabet: "; //getting input from user
8 cin >> ch;
9 switch (ch){
10 //determining the cases
11     case 'a':
12
13     case 'e':
14
15     case 'i':
16
17     case 'o':
18
19     case 'u':
20         cout << ch << " is vowel";
21         //printing the above statement if any of the scase is satisfied
22         break;
23
24     default:
25         cout << "The alphabet is a consonant";
26         //printing "consonant" if none of the cases is satisfied
27 }
28
29 return 0;
30 }
```

C:\Users\pc planet\Desktop\manual03.exe

Enter the alphabet: f
The alphabet is a consonant

Process exited after 7.373 seconds with return value 0
Press any key to continue . . .

TASK 03

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

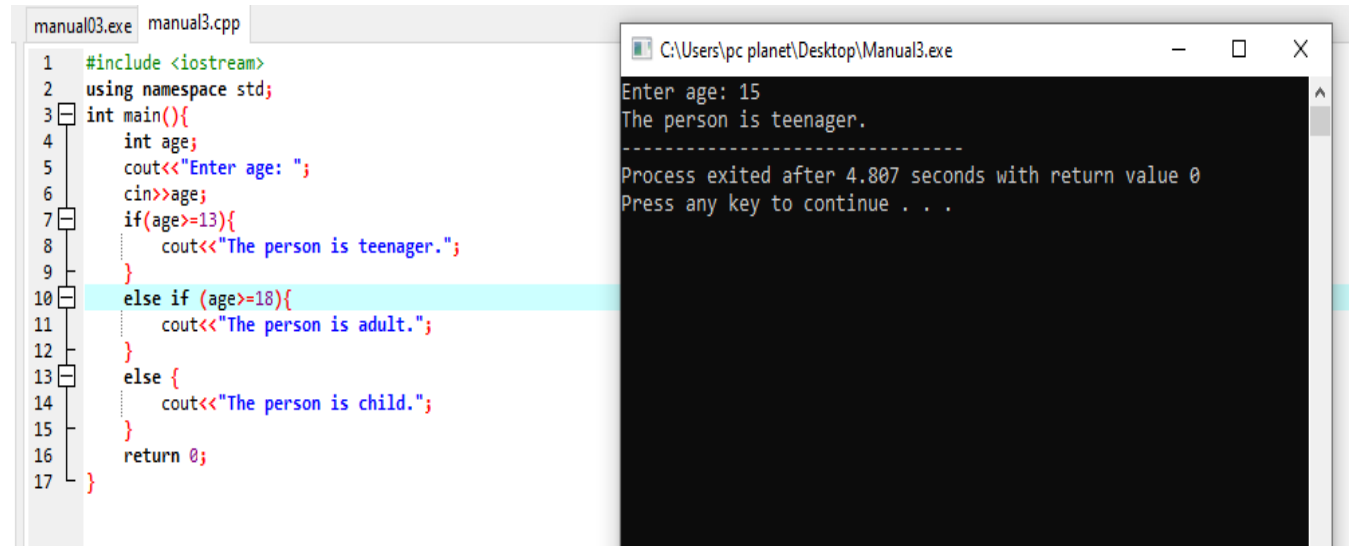
```
1 #include <iostream>
2 using namespace std;
3
4 int main() {
5     int num; //declaring the variable
6     cout << "Enter a number: "; //getting input
7     cin >> num;
8     //creating switches
9     switch (num > 0) {
10         cout << "The number is positive.";
11         break;
12     }
13     switch (num < 0) {
14         cout << "The number is negative.";
15         break;
16     }
17     default:
18         cout << "The number is zero.";
19         //printing this if the integer is neither positive nor negative
20     }
21     return 0;
22 }
```

Enter a number: 3
The number is positive.

Process exited after 2.511 seconds with return value 0
Press any key to continue . . .

TASK 04

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



```
1  #include <iostream>
2  using namespace std;
3  int main(){
4      int age;
5      cout<<"Enter age: ";
6      cin>>age;
7      if(age>=13){
8          cout<<"The person is teenager.";
9      }
10     else if (age>=18){
11         cout<<"The person is adult.";
12     }
13     else {
14         cout<<"The person is child.";
15     }
16     return 0;
17 }
```

Enter age: 15
The person is teenager.

Process exited after 4.807 seconds with return value 0
Press any key to continue . . .

COMMENTS:

- 4: Declaring the variable.
- 5: Getting user input.
- 7: Specifying the conditions.
- 14: Printing "The person is a child" statement if no condition is satisfied.

TASK 05

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.

```
1  #include <iostream>
2  using namespace std;
3  int main(){
4      int x, y, z; //declaring variables
5      //getting input from the user
6      cout<<"Enter first number: ";
7      cin>>x;
8      cout<<"Enter second number: ";
9      cin>>y;
10     cout<<"Enter third number: ";
11     cin>>z;
12     //specifying the conditions
13     if(x>=y && x>=z){
14         cout<< x <<" is the greatest number.";
15     }
16     else if (y>=x && y>=z){
17         cout<< y <<" is greatest number.";
18     }
19     else {
20         cout<< z <<" is the greatest number";
21         //printing the above statement if no condition is satisfied
22     }
23     return 0;
24 }
```

C:\Users\pc planet\Desktop\Manual3.exe

```
Enter first number: 7
Enter second number: 6
Enter third number: 9
9 is the greatest number
-----
Process exited after 6.743 seconds with return value 0
Press any key to continue . . .
```

TASK 06

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

```
1  #include <iostream>
2  using namespace std;
3  int main() {
4      char alphabet;
5      //declaring the variable
6      cout << "Enter an alphabet: ";
7      cin >> alphabet;
8      //getting input from user
9      if (alphabet == 'a') {
10         cout << "The alphabet is a vowel.";
11     } else if (alphabet == 'e') {
12         cout << "The alphabet is a vowel.";
13     } else if (alphabet == 'i') {
14         cout << "The alphabet is a vowel.";
15     } else if (alphabet == 'o') {
16         cout << "The alphabet is a vowel.";
17     } else if (alphabet == 'u') {
18         cout << "The alphabet is a vowel.";
19         //using if and else if statements for vowels
20     } else {
21         cout << "The alphabet is a consonant.";
22     }
23     //printing this statement if the alphabet is not vowel
24     return 0;
25 }
```

C:\Users\pc planet\Desktop\Manual3.exe

Enter an alphabet: u
The alphabet is a vowel.

Process exited after 1.872 seconds with return value 0
Press any key to continue . . .