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# LAB MANUAL

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C++ PROGRAMMING



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SECTION A

HOME TASK:

PROGRAM WRITING

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## TASK:01

Write program to show total number of population in Punjab, Sindh, KPK and Balochistan using switch statement.

```
/*-----  
*program that display population of provinces of palistan  
*/  
#include<iostream>  
using namespace std;  
int main()  
{  
    char province;  
    //name of province is required as input  
    cout<<"enter province name p for punjab,s for sindh,k for kpk,b for balochistan"<<endl;  
    cin>>province;  
  
    int population;  
    //using switch case  
    switch (province){  
  
        case 'p':  
        case 'P':  
            //declare population  
            {population=109989655;  
  
            cout<<"population of punjab is " <<population<<endl;}  
            break;  
  
        case 's':  
        case 'S':  
            //declare population  
            {population=47854510;  
  
            cout<<"population of sindh is " <<population<<endl;}  
            break;  
  
        case 'k':  
        case 'K':  
            //declare population  
            {population=30508920;  
  
            cout<<"population of kpk is " <<population<<endl;}  
            break;  
  
        case 'b':  
        case 'B':  
            //declare population  
            {population=12335129;  
            cout<<"population of balochistan is " <<population<<endl;}  
            break;  
  
        default:  
        {  
            cout<<"invalid province?"<<endl;    }  
            //print output  
        }  
    }  
}
```

```
G:\programs\assignment\New folder\lab 3,1.exe
enter province name p for punjab,s for sindh,k for kpk,b for balochistan
b
population of balochistan is 12335129

-----
Process exited after 7.001 seconds with return value 0
Press any key to continue . . .
```

## TASK:02

Write C++ program to show whether alphabet is vowel or consonant using switch case?

```
/*-----
*identify the vowels and consonant using switch case
*/
#include<iostream>
using namespace std;
int main()
{
    char alphabet;
    //enter any alphabet as input
    cout<<"enter any aplhabet"<<endl;
    cin>>alphabet;
    //using switch case
    switch(tolower(alphabet))
    {
        //declare cases
        case 'a':
        case 'e':
        case 'i':
        case 'o':
        case 'u':
        {cout<<"aplhabet is vowel"<<endl;}
        break;
        //using default to display consonant
        default:
        {cout<<"alphabet is consonant"<<endl;}
        //display result
        //exit program
    }
}
//-----|
```

```
G:\programs\assignment\New folder\lab3\2.exe
enter any aplhabet
i
aplhabet is vowel
-----
Process exited after 15.38 seconds with return value 0
Press any key to continue . . .
```

### TASK:03

Write program to check whether given number is positive, negative or zero using switch case?

```
/*-----
 *using switch case to identify either number is positive negative or zero
 */
#include<iostream>
using namespace std;
int main()
{
    //using int function
    int num;
    //enter any number
    cout<<"enter any number"<<endl;
    cin>>num;

    //using switch case
    switch(num>0?1:(num<0?-1:0)){
        case 1:
        {
            num>0;
            // case if number is positive
            cout<<"number is positive " <<endl;
            break;
        }
        case 0:
        {
            num==0;
            //if number is zero
            cout<<"number is zero " <<endl;
            break;
        }
        case -1:
        {
            num<0;
            //if number is negative
            cout<<"number is negative " <<endl;
        }
        // print result
        //exit function
    }
}
//-----
```

```
G:\programs\assignment\New folder\lab3,3.exe
enter any number
-45
number is negative

-----
Process exited after 9.123 seconds with return value 0
Press any key to continue . . .
```

## TASK:04

Write program to show whether a person is adult, teenager or child using nested if else?

```
/*-----
 * program used to find whether person is adult teenager or child using nested if
 */

#include<iostream>
using namespace std;
int main()
{
    //using int function
    int age;
    //enter age of person
    cout<<"enter age"<<endl;
    cin>>age;
    //using nested if else
    if(age<=12)
    //condition for child age
    {
        cout<<"person is child"<<endl;
    }
    else{
        //using logical operator to define teenager age
        if(age<=19&&age>=13){
            cout<<"person is teenager"<<endl;
        }
        else{
            (age>=20);
            // adult age condition
            cout<<"person is adult"<<endl;
            // printing result on screen
            //exit program
        }
    }
}
```

```
G:\programs\assignment\New folder\lab3,4.exe
enter age
17
person is teenager

-----
Process exited after 5.396 seconds with return value 0
Press any key to continue . . .
```

## TASK:05

Write program that take three number from user and give greatest number out of three using nested if else?

```
/*-----
 * identifying which number is greater among the given three numbers
 */

//declare three numbers
int num1, num2, num3;
// enter three number as input by user
cout<<"enter first number:"<<endl;
cin>>num1;
cout<<"enter second number:"<<endl;
cin>>num2;
cout<<"enter third number:"<<endl;
cin>>num3;
//using nested if else
if(num1>num2&&num1>num3)
// first condition using logical operators
{
    cout<<" the greater number is"<<num1<<endl;
}
else if(num2>num1&&num2>num3)
// second condition using logical operators
{
    cout<<"the greater number is : "<<num2<<endl;
}
else {(num3>num1&&num3>num2);{
    cout<<"the greater number is"<<num3<<endl;
}
// run a program to get result
//exit program
}
}
```

```
G:\programs\assignment\New folder\lab3,4.exe
enter first number:
65
enter second number:
98
enter third number:
1
the greater number is :98

-----
Process exited after 15.55 seconds with return value 0
Press any key to continue . . .
```

## TASK:06

Write program to show whether number entered by user is vowel or consonant using nested if else?

```
/*-----  
* program to identify vowel and consonant using nested if else statement  
*/  
//using char function  
char alphabet;  
// enter alphabet  
cout<<"enter alphabet"<<endl;  
cin>>alphabet;  
//define if condition  
if((alphabet=='a' || alphabet=='e' || alphabet=='i' || alphabet=='o' || alphabet=='u') || (alphabet=='A' || alphabet=='E' || alphabet=='I' || alphabet=='O' || alphabet=='U'))  
{cout<<"alphabet is vowel"<<endl;  
}  
// define else conditon  
else{cout<<"alphabet is consonant"<<endl;  
}  
// run program  
// exit program
```

```
Select G:\programs\assignment\New folder\lab3,4.exe  
enter alphabet  
O  
alphabet is vowel  
  
-----  
Process exited after 3.365 seconds with return value 0  
Press any key to continue . . .
```