CS-114 - Fundamental of Programing

Assignment # 3

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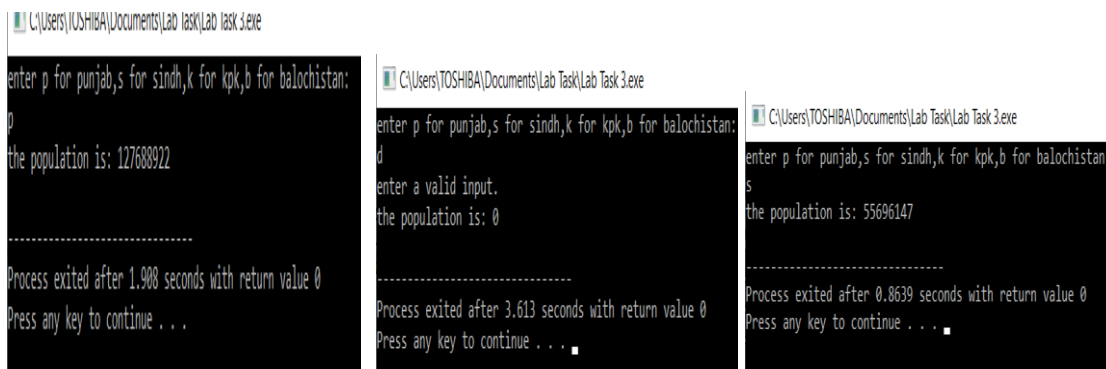**CMS ID:**   454752

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

Answer :

```cpp
#include<iostream>
using namespace std ;

int main(){
        char pop;  //program which takes province name from user and output the polpulation
        int population;
        cout<<"enter p for punjab,s for sindh,k for kpk,b for balochistan:"<<endl;
        cin>>pop;
switch(pop){ //using switch statement so tthat there can be any number of cases
        case 'p': //this information is of 2023
        population = 127688922;
        break;
        case's':
        population=55696147;
        break;
        case'k':
        population=40856097;
        case'b':
        population=14894402;
 default:
                cout<<"enter a valid input."<<endl;}
                cout<<"the population is: "<<population<<endl;
                    return 0;          }
```

Result:

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

Answer:

```cpp
#include<iostream>
using namespace std;
int main(){
char alphabet;
        cout<<"enter an alphabet:"<<endl;
        cin>>alphabet;
```
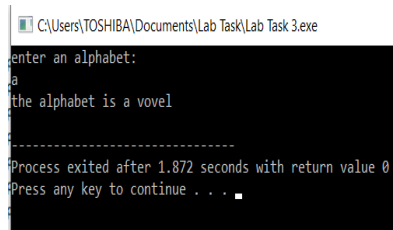
```
switch(alphabet){
            case'a':case'e':case'i':case'o':case'u':case'A':case'O':case'E':case'I':case'U':
            cout<<"the alphabet is a vovel"<<endl;
            break;
            default:
                    cout<<"the alphabet is a consonant"<<endl;
            break;   }
return 0; }
```
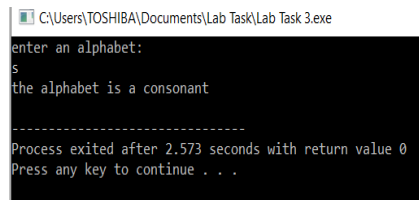
Result:

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

```cpp
#include <iostream>
using namespace std;
int main(){
    int num  ;

    cout<<"enter a number"<<endl;
    cin>>num;
    switch(num){
            case 0:
                    cout<<"the number is zero "<<endl;
    break;
    default :

    if(num>0){
            cout<<"the number is positive"<<endl;

    }else if (num<0){

            cout<<"the number is negative"<<endl;
    }}
    return 0;
}
```
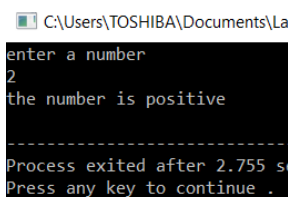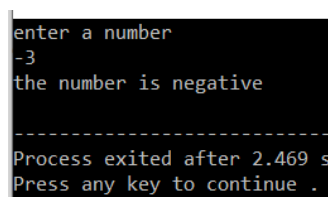**Result**:
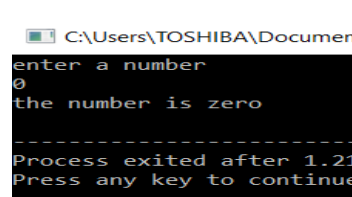
4. Write a C++ to find out whether a person is an adult, teenager, or child using nested if-else.

Answer:

```cpp
#include<iostream>
using namespace std;
int main(){
  int age;
    cout<<"Enter the age of person:"<<endl;
    cin>>age;
    if(age>=1&&age<=12){//using AND operation in if so that both conditions fulfill
        cout<<"The person is child"<<endl;}
        else{

        if (age>12&&age<18){
                cout<<"The person is teenager"<<endl;
                }
                else{

                        cout<<"The person is adult"<<endl;
                }}
        return 0;  }
```
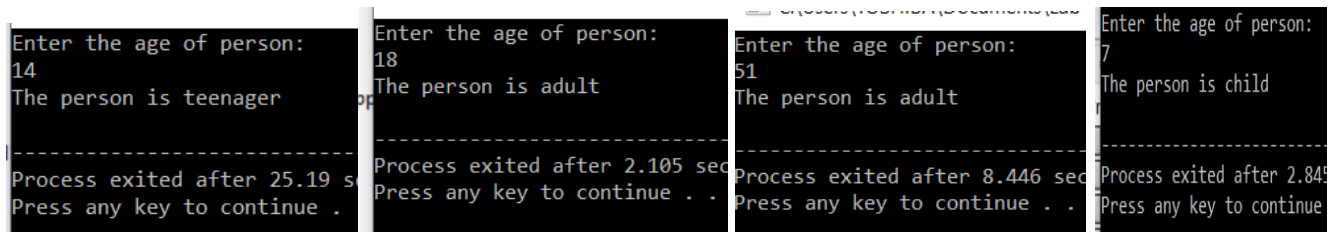
Result:

```
Enter the age of person:
14
The person is teenager

--------------------------------
Process exited after 25.19 s
Press any key to continue .
```

```
Enter the age of person:
18
The person is adult

--------------------------------
Process exited after 2.105 sec
Press any key to continue . .
```

```
Enter the age of person:
51
The person is adult

--------------------------------
Process exited after 8.446 sec
Press any key to continue . .
```

```
Enter the age of person:
7
The person is child

--------------------------------
Process exited after 2.845
Press any key to continue
```

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.

Answer:

```cpp
#include<iostream>
using namespace std;
int main(){//program for checking which number is greater
int x,y,z;
  cout<<"enter three numbers:"<<endl;
  cin>>x;
  cin>>y;
  cin>>z;
if(x>y&&x>z){ //using AND operation in if so that both conditions fulfill
        cout<<"First number is greater"<<endl;}
        else{
                if(y>x&&y>z){
                        cout<<"Second number is greater"<<endl;
                }
                else{
                        cout<<"Third number is greater"<<endl;
```

```
            }}
return 0; }
```

Result:

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

```
#include<iostream>
using namespace std;
int main(){// program for checking whether a alphabet is a vowel or consonant
        char x;
        cout<<"Enter an alphabet"<<endl;
        cin>>x;
        if(x!='z'||x!='Z'){// using OR in if so that  at least one condition fulfill
        if(x=='a'||x=='A'||x=='E'||x=='e'||x=='I'||x=='i'||x=='O'||x=='o'||x=='U'||x=='u'){
                cout<<"the alphabet is vovel"<<endl;}
                else{
                        cout<<"the alpahbet is consonant"<<endl;
                }}
    return 0;        }
```

Result: