SCHOOL OF MECHANICAL & MANUFACTURING ENGINERRING

NUST

Department of Mechanical Engineering

CS-114 – Fundamentals of Programming

LAB MANUAL #03

Course Instructor: Dr Khawaja Fahd Iqbal

Lab Instructor: Muhammad Affan

Student Name: Muhammad Usman Abdullah

Section: B

CMS ID: 461513

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LAB #03 (HOME TASK)

TASK 1:

```cpp
#include <iostream>
using namespace std;
//Program to print total number of population in Punjab, Sindh, KPK and Balochistan
int main(){
        char province;
        cout<<"Enter the initial letter of province,(e.g for Punjab enter p)"<<endl;
        cin>>province;
        switch(province){
                case'p':
                        cout<<"The population of Punjab is 127,474,000";
                        break;
                case's':
                    cout<<"The population of Sindh is 54,858,515";
                        break;
                case'k':
                    cout<<"The population of KPK is 39,372,462";
                        break;
                case'b':
                    cout<<"The population of Balochistan is 20,094,659";
                        break;
                default:
                    cout<<"Error: Wrong Province Selected";
                }
        return 0;
}
```

```
Enter the initial letter of province,(e.g for Punjab enter p)
k
The population of KPK is 39,372,462
-------------------------------
Process exited after 1.313 seconds with return value 0
Press any key to continue . . .
```

TASK 2:

#include <iostream>

using namespace std;

int main(){

       char letter;

       cout<<"Enter a letter"<<endl;

       cin>>letter;

       switch(letter){

              case'a':

                     cout<<"The letter "<<letter<<" is a vowel";

                     break;

              case'e':

                     cout<<"The letter "<<letter<<" is a vowel";

                     break;

              case'i':

                     cout<<"The letter "<<letter<<" is a vowel";

                     break;

              case'o':

                     cout<<"The letter "<<letter<<" is a vowel";

                     break;

              case'u':

                     cout<<"The letter "<<letter<<" is a vowel";

```
                              break;

                  default:

                              cout<<"The letter "<<letter<<" is a consonant";

            }

            return 0;

}
```
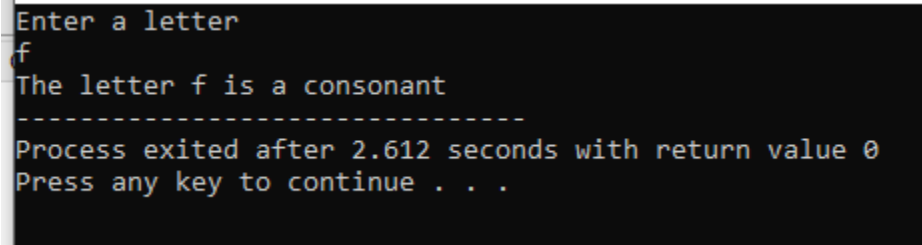
```
Enter a letter
f
The letter f is a consonant
-------------------------------
Process exited after 2.612 seconds with return value 0
Press any key to continue . . .
```

TASK 3:

```
#include <iostream>

using namespace std;


int main(){

        int n,m;

        cout<<"Enter a number"<<endl;

        cin>>n;

        if(n==0){

                m=1;

        }

        else{

                if(n>0){

                        m=2;

                }


        }

        switch(m){
```

```cpp
            case 1:

                    cout<<"The number is zero";

                    break;

            case 2:

                    cout<<"The number is positive";

                    break;

            default:

                    cout<<"The number is negative";

        }

        return 0;

}
```
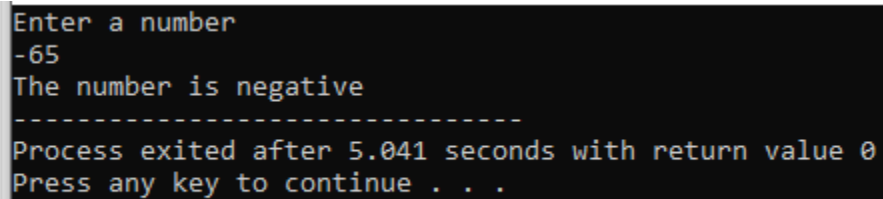
```
Enter a number
-65
The number is negative
-------------------------------
Process exited after 5.041 seconds with return value 0
Press any key to continue . . .
```

TASK 4:

```cpp
#include <iostream>

using namespace std;


int main(){

        int age;

        cout<<"Enter the person's age"<<endl;

        cin>>age;

        if(age<=12){

                cout<<"The person is a child";

        }

        else{

                if(age>12 && age<20){
```

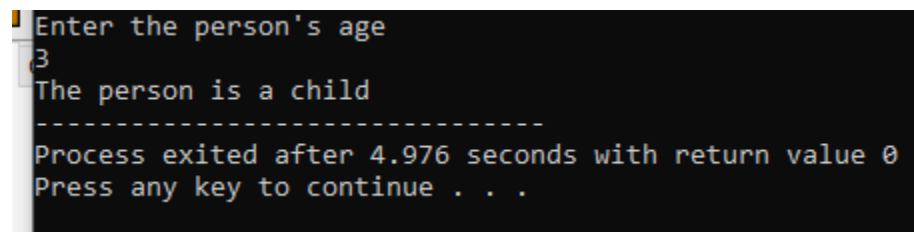```cpp
                        cout<<"The person is a teenager";

                }
                else{

                        cout<<"The person is an adult";

                }
        }
        return 0;

}
```

```
Enter the person's age
3
The person is a child
----------------------------------
Process exited after 4.976 seconds with return value 0
Press any key to continue . . .
```

TASK 5:

```cpp
#include <iostream>

using namespace std;

int main(){

        int a,b,c;

        cout<<"Enter the first number"<<endl;

        cin>>a;

        cout<<"Enter the second number"<<endl;

        cin>>b;

        cout<<"Enter the third number"<<endl;

        cin>>c;

        if(a>b && a>c){

                cout<<a<<" is greatest";

        }
        else{

                if(b>a && b>c){

                        cout<<b<<" is greatest";
```

```cpp
            }
            else{
                    cout<<c<<" is greatest";
            }
        }
        return 0;
}
```

```
Enter the first number
34
Enter the second number
98
Enter the third number
5
98 is greatest
-------------------------------
Process exited after 12.47 seconds with return value 0
Press any key to continue . . .
```

TASK 6:

```cpp
#include <iostream>

using namespace std;

int main(){
        char letter;
        cout<<"Enter a letter"<<endl;
        cin>>letter;
        if(letter=='a'){
                cout<<"The letter is a vowel";
        }
        else{
                if(letter=='e'){
                        cout<<"The letter is a vowel";
                }
                else{
                        if(letter=='i'){
```

```cpp
                    cout<<"The letter is a vowel";
            }
            else{
                if(letter=='o'){
                    cout<<"The letter is a vowel";
                }
                else{
                    if(letter=='u'){
                        cout<<"The letter is a vowel";
                    }
                    else{
                        cout<<"The letter is a consonant";
                    }
                }
            }
        }
    }
    return 0;
}
```

```
Enter a letter
u
The letter is a vowel
--------------------------------
Process exited after 3.634 seconds with return value 0
Press any key to continue . . .
```