National University of Sciences and Technology (NUST)

Department of Mechanical Engineering (SMME)

Fundamentals of Programming (FOP)

Home Tasks

Lab Manual 3

By

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Home Task-1

```
#include <iostream>
using namespace std;
int main() {
int p;
cout<<"Enter Province name: 1 for Punjab, 2 for Sindh, 3 for KPK and 4 for Balochistan"<<endl;
cin>>p;
switch(p){
	case 1:
		cout<<"Population of Punjab is 127,474,000";
		break;
	case 2:
		cout<<"Population of Sindh is 54,858,515";
		break;
	case 3:
		cout<<"Population of KPK is 39,372,462";
		break;
	case 4:
		cout<<"Population of Balochistan is 20,094,659";
		break;
	default:
		cout<<"INVALID";
}
Return 0;
}
```

Home Task-2

```
#include <iostream>
using namespace std;
int main() {
char x;
cout<<"Enter an Alphabet:"<<endl;
cin>>x;
switch(x){
	case 'a':
		cout<<"This is a vowel";
		break;
	case 'e':
		cout<<"This is a vowel";
		break;
	case 'i':
		cout<<"This is a vowel";
		break;
	case 'o':
		cout<<"This is a vowel";
		break;
	case 'u':
		cout<<"This is a vowel";
		break;
	default:
		cout<<"This is a consonant";

}
Return 0;
}
```

Home Task-3

```
#include <iostream>
using namespace std;
int main() {
int num,x;
cout<<"Enter a Number"<<endl;
cin>>num;
if(num<0){
        x=1;
        }
        else if(num>0){
                x=2;
        }
        else{
                x=3;
        }
        switch(x){
        case 2:
                cout<<"Positive";
                break;
        case 1:
                cout<<"Negative";
                break;
        case 3:
                cout<<"This is equal to zero";
           break;
         }
Return 0;
}
```

Home Task-4

```
#include <iostream>
using namespace std;
int main() {
int age;
cout<<"Enter Age"<<endl;
cin>>age;
if(age<=12&&age>0){
        cout<<"This is a Child";
}
else
{
        if(age>12&&age<=19){
                cout<<"This is a Teenager";
        }
        else
        {
        if(age>19&&age<=100){
                cout<<"This is an adult";
        }
           else {
                cout<<"You should not exist";
        }
}
}
Return 0;
}
```

Home Task-5

```
#include <iostream>
using namespace std;
int main() {
int x,y,z;
cout<<"Enter x"<<endl;
cin>>x;
cout<<"Enter y"<<endl;
cin>>y;
cout<<"Enter z"<<endl;
cin>>z;
if(x>y&&x>z){
        cout<<x<<" is the greatest";
}
else
{
        if(y>x&&y>z){
                cout<<y<<" is the greatest";
        }
        else{
                if(z>x&&z>y){
                        cout<<z<<" is the greatest";
                }
        else{
                cout<<"INVALIID";
        }
}
}
Return 0; }
```

Home Task-6

```
#include <iostream>
using namespace std;
int main() {
char x;
cout<<"Enter an Alphabet:"<<endl;
cin>>x;
if(x=='a'){
	cout<<"This is a vowel";
}
else
{
	if(x=='e'){
		cout<<"This is a vowel";
	}
	else{
		if(x=='i'){
			cout<<"This is a vowel";
		}
		else{
			if(x=='o'){
				cout<<"This is a vowel";
			}
			else{
				if(x=='u'){
					cout<<"This is a vowel";
				}
				else{
					cout<<"This is a consonant";
```

```
                                        }


                                }
                        }
                }

}



        return 0;
}
```