

## ITEC243 – Lecture Session – 15-April-2020

**Friend functions:** You may see different solutions for the same “class – friend function” example.

“Cube” class is friends with “findcube” function.

### **Solution 1: (Reference object is used as parameter)**

```
//cube.h
class cube{
private:
    int num;
public:
    cube()
    {
        cout << "Enter an integer value:";
        cin >> this->num;
    }
    friend void findcube(cube&); //prototype of the function
};
void findcube(cube &obj)
{
    obj.num = obj.num*obj.num*obj.num;
    cout << obj.num << endl;
}

//cube.cpp
#include<iostream>
using namespace std;
#include"cube.h"
void main()
{
    cube cobj;
    findcube(cobj);
    system("pause");
}
```

## Solution 2: (Non-reference object is used as parameter)

```
//cube1.h
class cube{
private:
    int num;
public:
    cube()
    {
        cout << "Enter an integer value:";
        cin >> this->num;
    }
    friend int findcube(cube); //prototype of the function
};
int findcube(cube obj)
{
    return obj.num = obj.num*obj.num*obj.num;
}
//cube1.cpp
#include<iostream>
using namespace std;
#include"cube1.h"
void main()
{
    cube cobj;
    cout<<"The cube is:"<<findcube(cobj)<<endl;
    system("pause");
}
```

### Solution 3:

```
//cube2.h
class cube{
private:
    int num;
public:
    cube()
    {
        cout << "Enter an integer value:";
        cin >> this->num;
    }
    int getnum()
    {
        return this->num;
    }
    friend void findcube(cube); //prototype of the function
};
void findcube(cube obj)
{
    obj.num = obj.num*obj.num*obj.num;
    cout << obj.num << endl;
}

//cube2.cpp
#include<iostream>
using namespace std;
#include"cube2.h"
void main()
{
    cube cobj;
    cout <<"The value you have entered is:"<< cobj.getnum()<<endl;
    cout << "The cube of the value is:";
    findcube(cobj);
    cout << "The current value is:" << cobj.getnum() << endl;
    system("pause");
}
```