

# SDF II(15B11CI211)

EVEN Semester 2021



2<sup>nd</sup> Semester , First Year

Jaypee Institute Of Information Technology (JIIT), Noida

# Lecture 6 – Friend Function

# Friend Function

- When we want to access the private and protected member of a class then we declare a friend function.
- Friend function can access the private and protected members of another class.

# Example

```
#include <iostream>

using namespace std;

class Test {

private:

    int num=15;

    char ch='A';

public:

    friend void show(Test obj);

};
```

**//Global Function**

```
void show(Test obj){  
    cout<<obj.num<<endl;  
    cout<<obj.ch<<endl;  
}  
  
int main() {Test obj;  
    show(obj);  
    return 0;  
}
```

# Friend Class

- A **friend class** is a class that can access the private and protected members of a class in which it is declared as **friend**. This is needed when we want to allow a particular class to access the private and protected members of a class.



# Example

```
#include <iostream>

using namespace std;

class Test {
private:
    int num = 15;
    char ch='A';
    public:
        /* This statement would make class Testfrd
        * a friend class of Test, this means that
        * Testfrd can access the private and protected
        * members of Test class. */

        friend class Testfrd;
};
```

```
class Testfrd {
public:
    void show(Test obj){
        cout<<obj.num<<endl;
        cout<<obj.ch<<endl;
    }
};

int main() {
    Testfrd obj;
    Test obj2;
    obj.show(obj2);
    return 0;
}
```

Output  
15  
A

# References

- Herbert Schildt, “C++: The complete reference”, Mc Graw Hill Osborne media, 4<sup>th</sup> edition, 2017
- Robert Lafore, “Object oriented programming in C++”, SAMS, 4<sup>th</sup> edition, 2002