

Graded ICA005 – Simple Person

CS 244

Graded Class Activity – class SimplePerson

- The next 2 slides illustrate how to implement a SimplePerson class based on a UML diagram.
- Use them to create a program to implement and test a SimplePerson class
 - For the class you will need 2 files
 - An interface header file: SimplePerson.h
 - An implementation file: SimplePerson.cpp
 - You will also need a file for your main function
 - SPtester.cpp
 - #include “SimplePerson.h” (and probably iostream)
 - Declare a variable of type SimplePerson
 - Call some of the member functions
 - There is likely starter code on D2L – go look

SimplePerson C++ Interface

This looks important
You should ask about it

- Example: C++ Header File SimplePerson.h

```
#pragma once
```

```
#include <iostream>  
#include <string>
```

```
using namespace std;
```

```
class SimplePerson  
{
```

```
public:
```

```
    SimplePerson(const string& nameStr, const string& idStr);
```

```
    ~SimplePerson();
```

```
    void print();
```

```
    string getName();
```

```
    friend bool operator==(const SimplePerson& lhs, const SimplePerson& rhs);
```

```
private:
```

```
    string m_nameStr;
```

```
    string m_idStr;
```

```
};
```

SimplePerson

- m_nameStr: string

- m_idStr: string

+ SimplePerson(const string& nameStr, const string& idStr);

+ ~SimplePerson()

+ print() : void

+ getName() : string

Friend functions

+ bool operator==(const SimplePerson& lhs, const SimplePerson& rhs)

SimplePerson Implementation

- Example: C++ Implementation File – SimplePerson.cpp

```
#include "SimplePerson.h"
using namespace std;

SimplePerson::SimplePerson(const string& nameStr, const string& idStr)
{
    m_nameStr = nameStr;
    m_idStr   = idStr;
}

SimplePerson::~SimplePerson()
{
    cout<< "SimplePerson destructor is called" <<endl;
}

void SimplePerson::print()
{
    cout << "Name: " << m_nameStr
    cout << ", id: " << m_idStr << endl;
}

string SimplePerson::getName()
{
    return m_nameStr;
}

bool operator==(const SimplePerson& lhs,
                const SimplePerson& rhs)
{
    bool retVal = false;
    if ((lhs.m_nameStr == rhs.m_nameStr)
        && (lhs.m_idStr == rhs.m_idStr))
    {
        retVal = true;
    }
    return retVal;
}
```