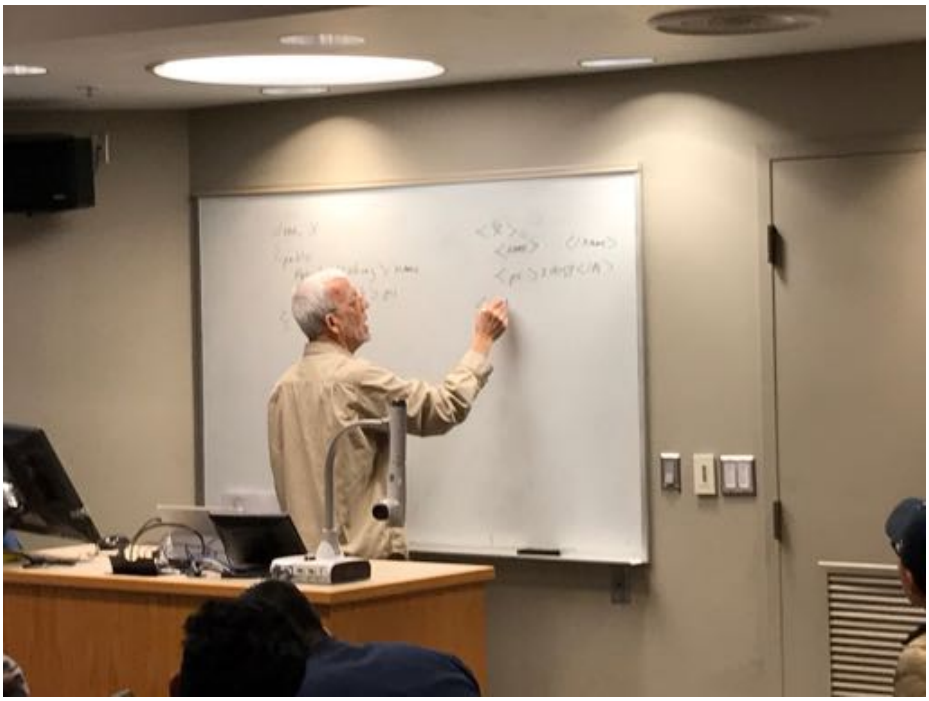
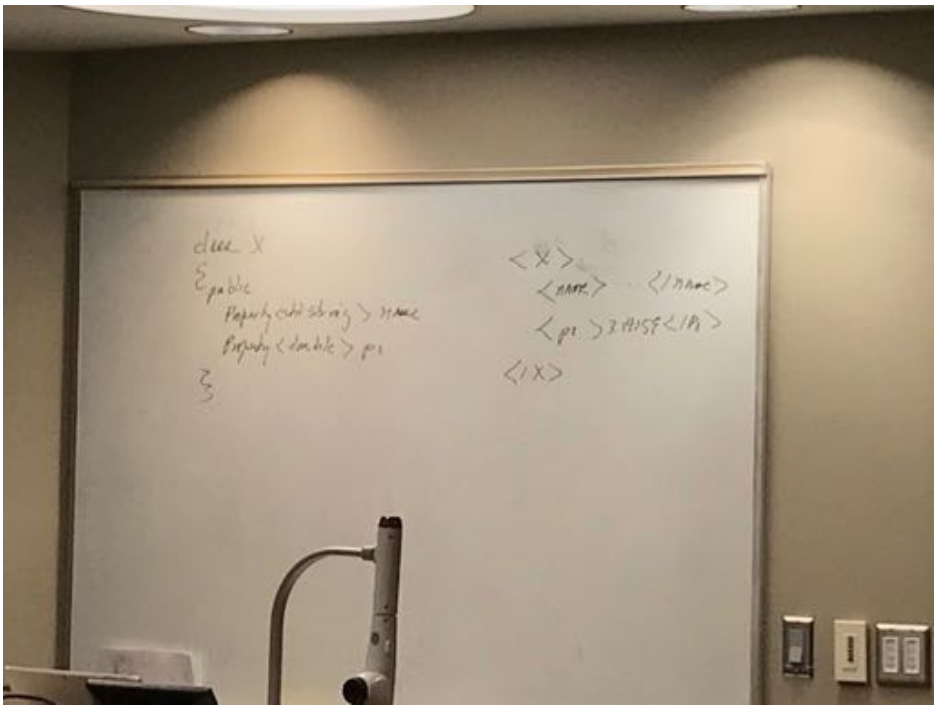
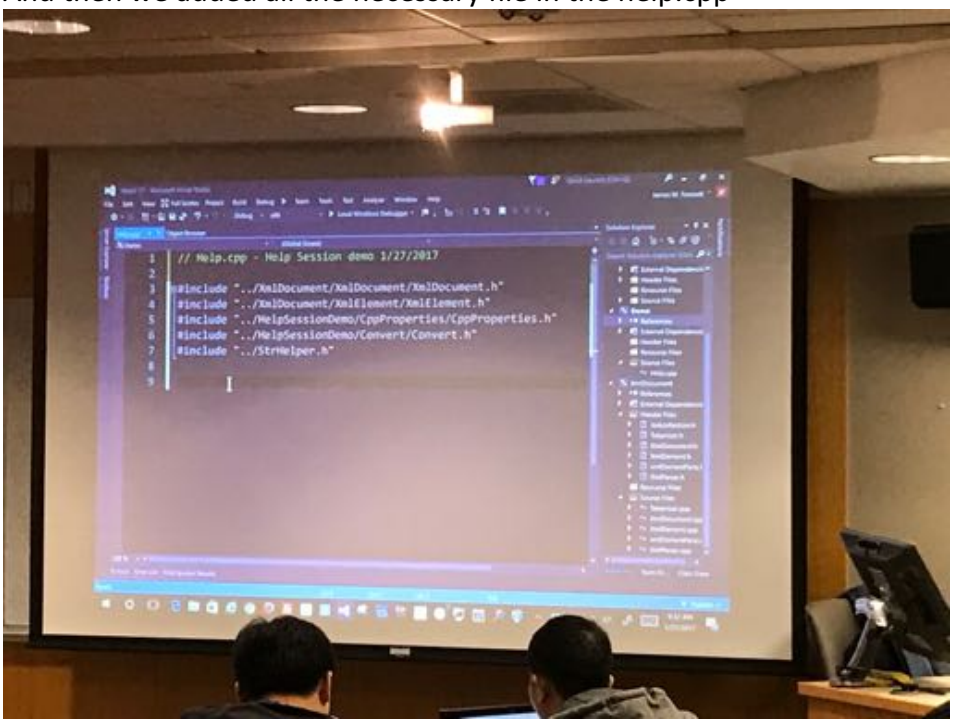
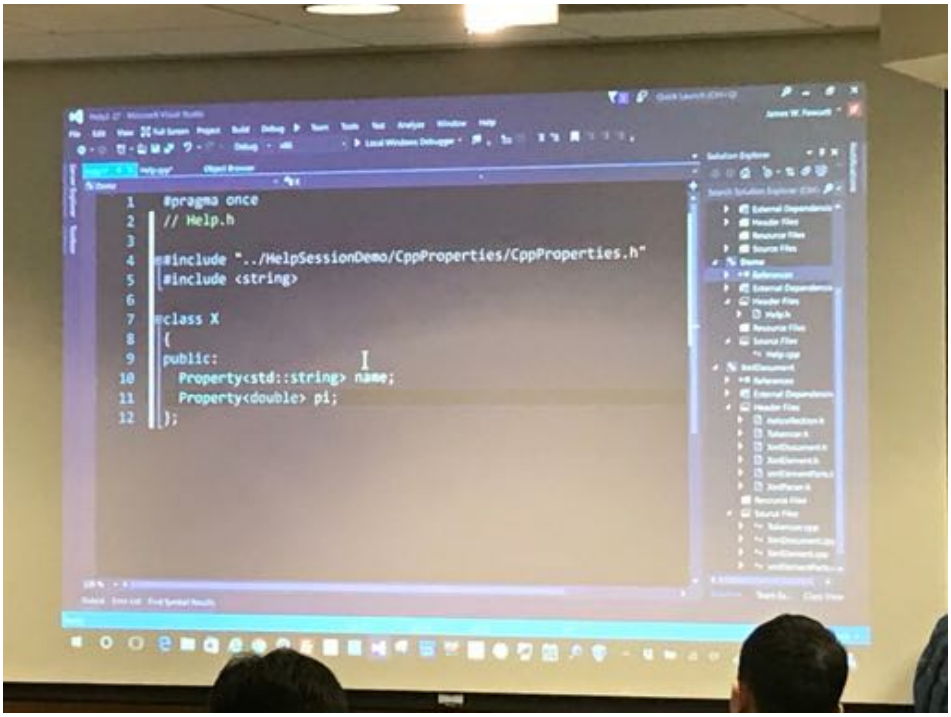
FRIDAY HELP SESSION SUMMARY (January 22nd, 2017)

Objective: Build persistence demo using XmlDocument package.

- Talked about the format of the XML and class
- 
- 

- Stared with downloading XmlDocument.zip, StrHelper.h, and HelpSessionDemo.zip to get CppProperties and Convert projects.
- Created a blank solution in VS15 by clicking New Project -> Other Project Type-> Blank Solution
- Added existing projects: Convert, CppProperties and XmlDocuments to this blank solution.
- After this created another project named Demo, by adding new project to the solution, and chose C++ Win 32 Application as a type of this demo project, and made this Empty Project by choosing Additional Option from the wizard.
- Now we added blank help.cpp to the Demo project.
- Then we made XmlDocument project Static Library by right clicking on the XmlDocument project > choose Properties > Configuration Type > Static Library
- Also we removed or renamed TEST_XMLDOCUMENT from preprocessor by going to, C/C++ Preprocessor > removed(renamed) TEST_XMLDOCUMENT
  This will suggest compiler no to run main file from the XmlDocument project and avoid conflicts with help.cpp's main function
- Then we built the XmlDocument just to make sure that it still built correctly.
- Then we added reference to XmlDocument in our Demo project.
- And then we added all the necessary file in the help.cpp
- 

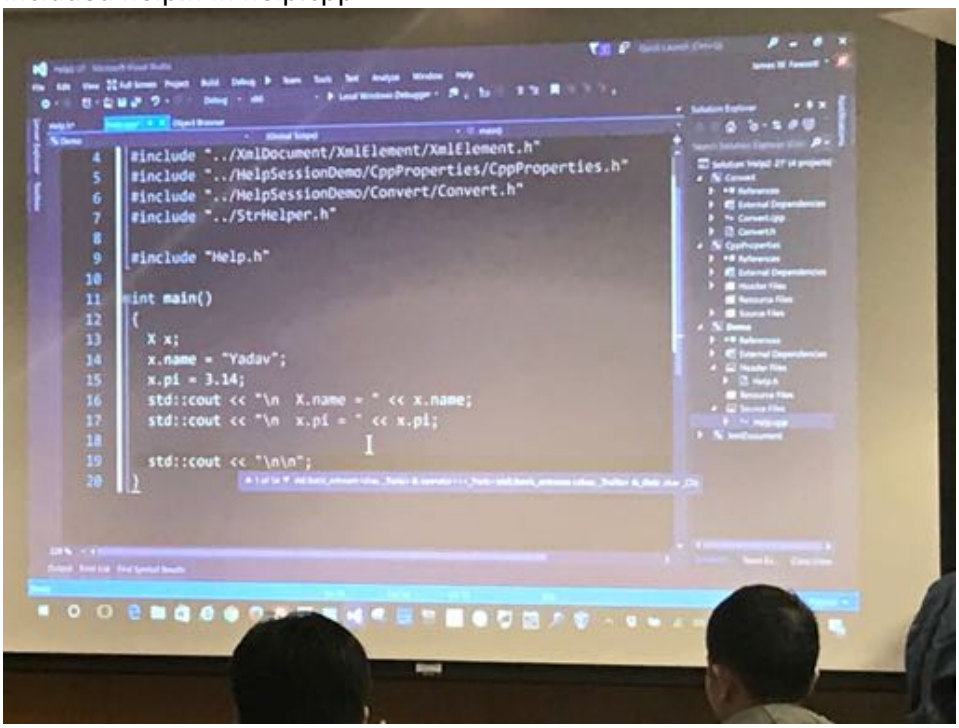
- Added help.h in Demo project.
- Note: Dr. Fawcett uses ifndef instead of pragma once as almost all the compilers would understand ifndef unlike pragma once.
- Declared class X in help.h

- 
```
#pragma once
// Help.h

#include "../HelpSessionDemo/CppProperties/CppProperties.h"
#include <string>

class X
{
public:
  Property<std::string> name;
  Property<double> pi;
};
```

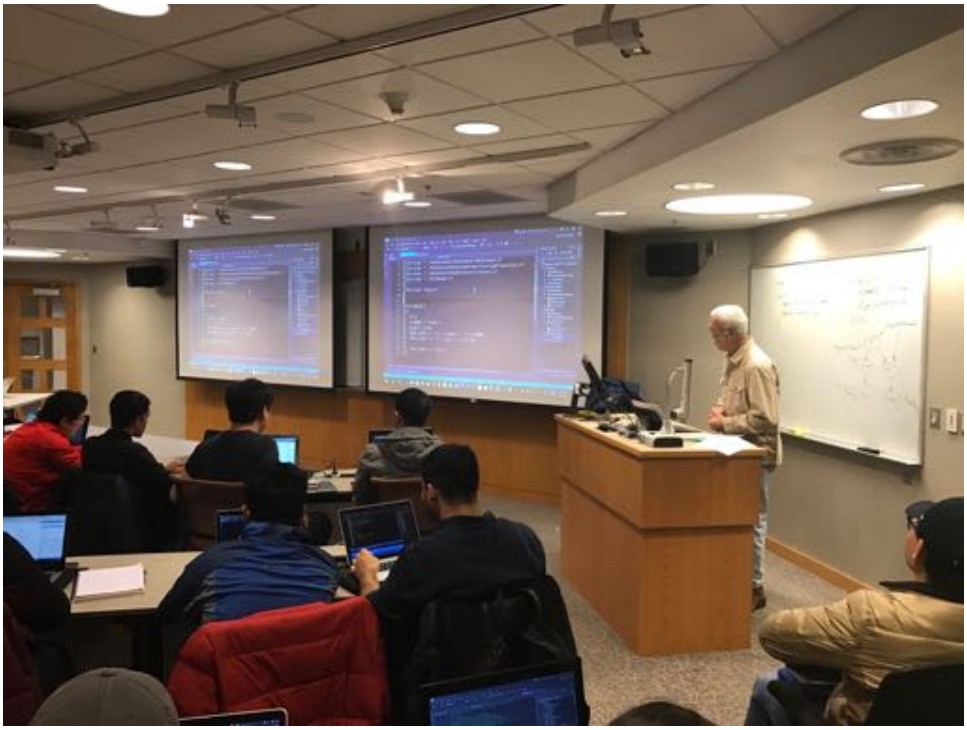
- included help.h in help.cpp

- 
```
#include "../XmlDocument/XmlElement/XmlElement.h"
#include "../HelpSessionDemo/CppProperties/CppProperties.h"
#include "../HelpSessionDemo/Convert/Convert.h"
#include "../StrHelper.h"

#include "Help.h"

int main()
{
  X x;
  x.name = "Yadav";
  x.pi = 3.14;
  std::cout << "\n  X.name = " << x.name;
  std::cout << "\n  x.pi = " << x.pi;

  std::cout << "\n\n";
}
```

- 
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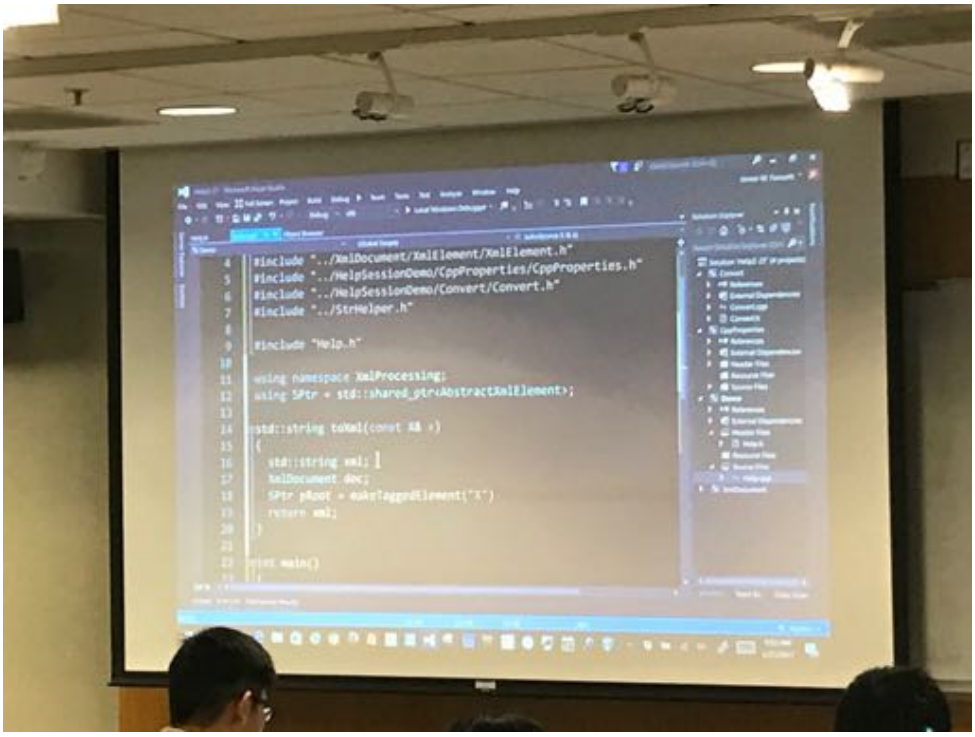
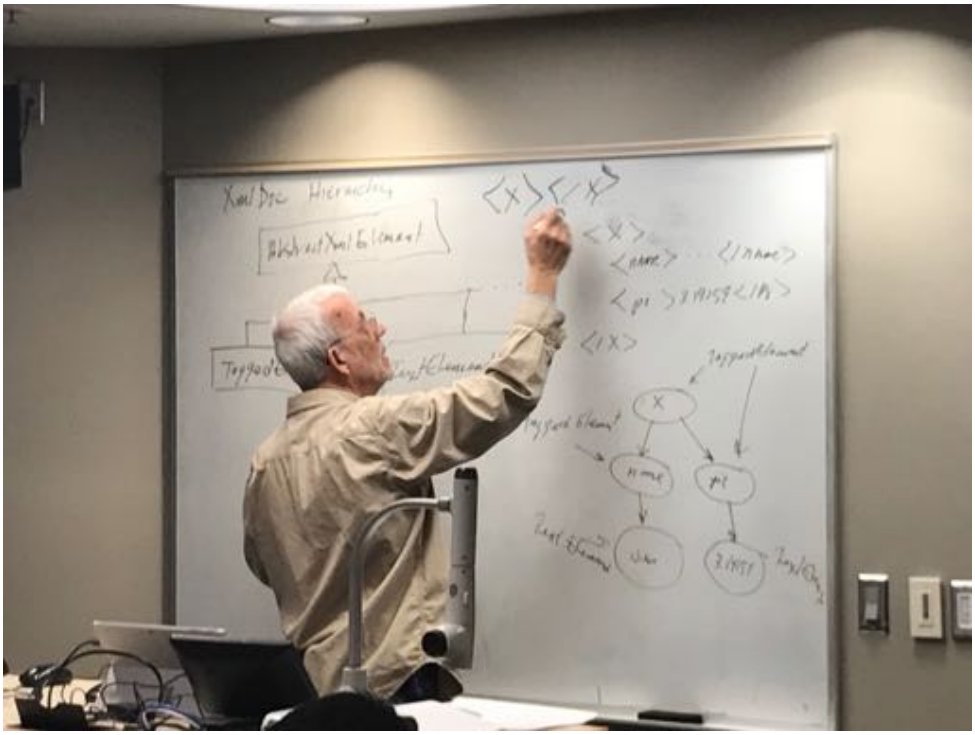
- Crated function toXml(const X& x)

- 

- 

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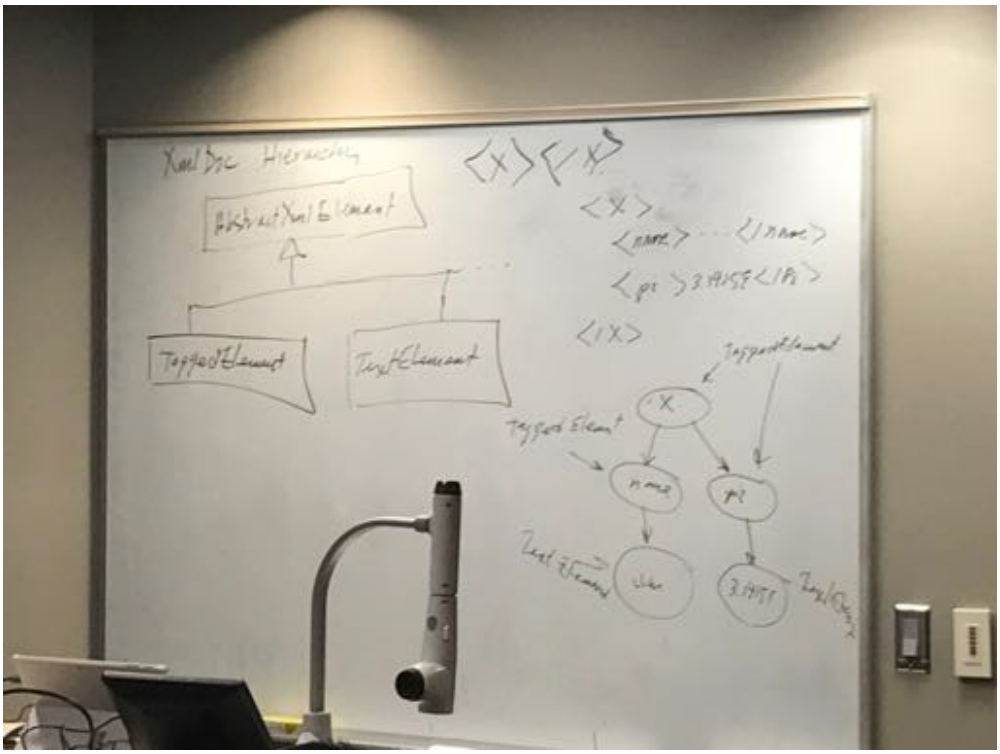
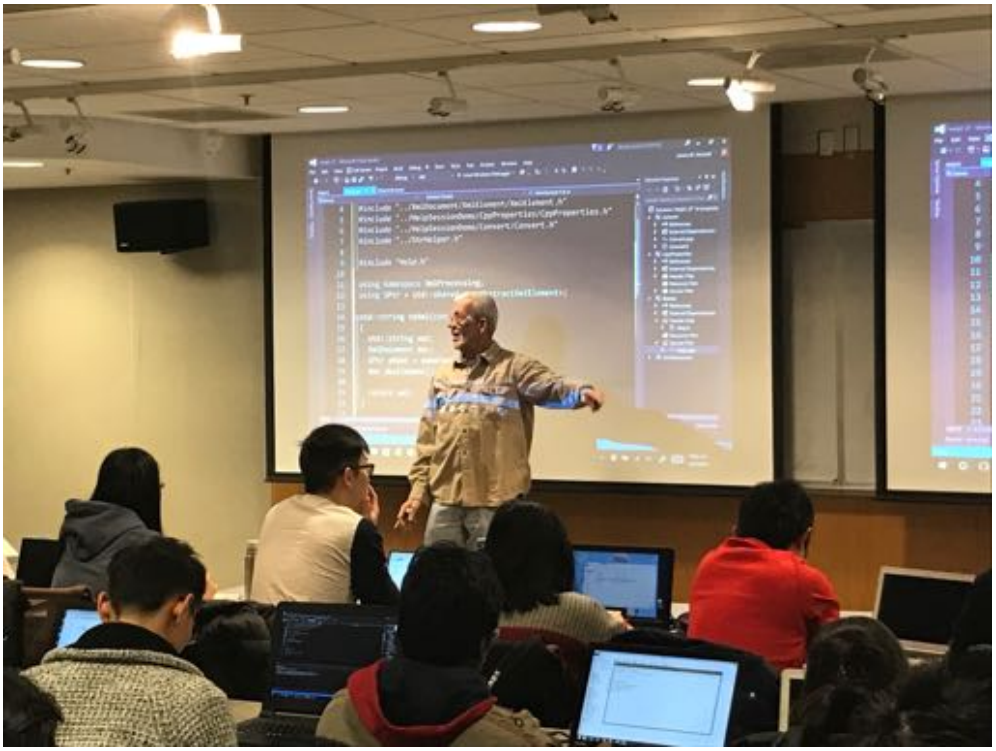
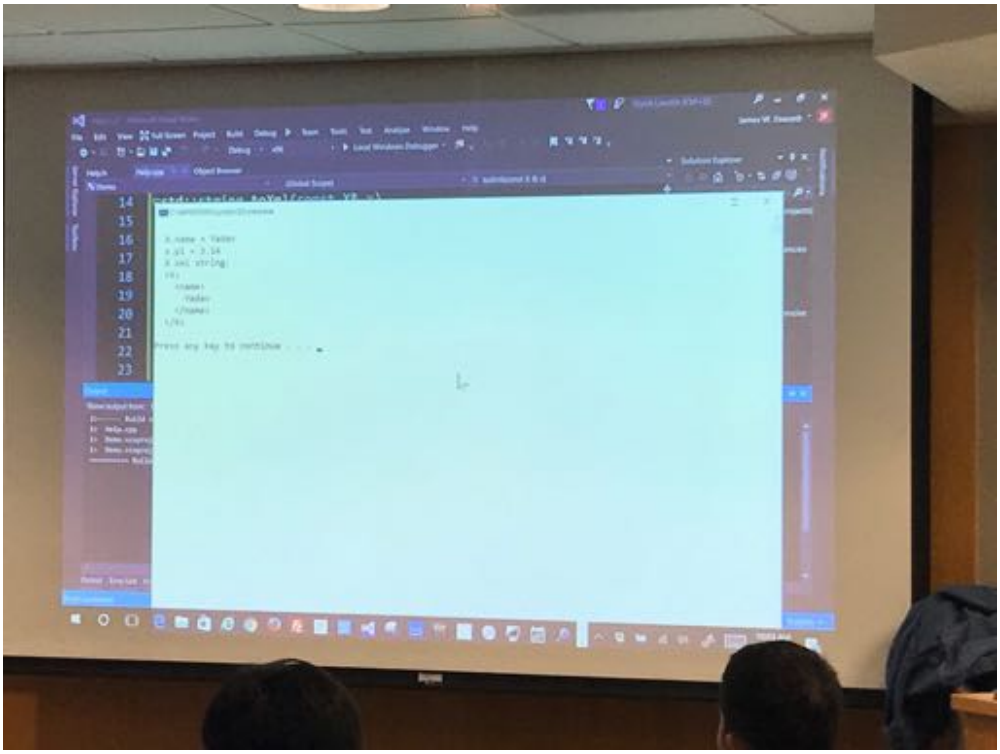

Xml Doc Hierarchy
AbstractXmlElement
TaggedElement
TextElement

-



- 1st run of the demo



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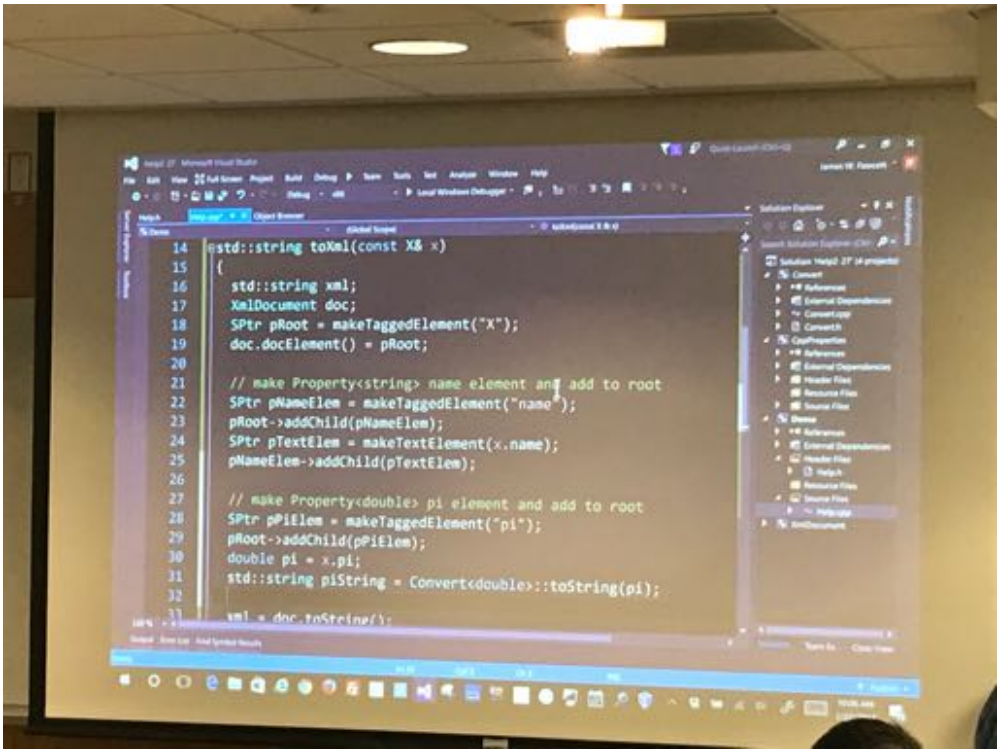

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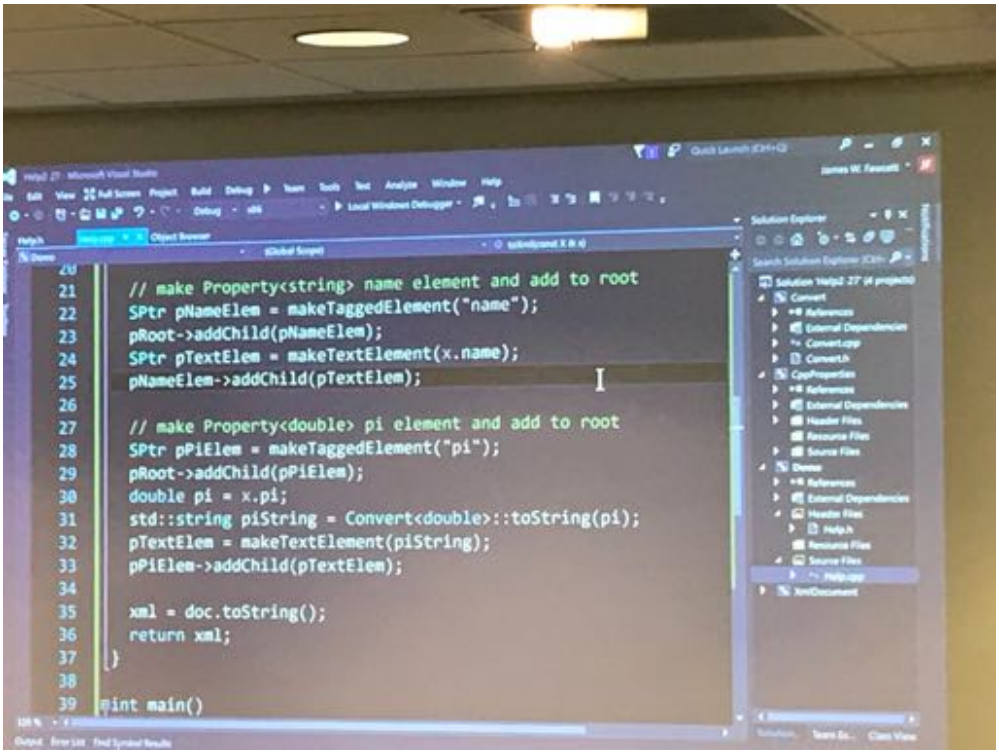
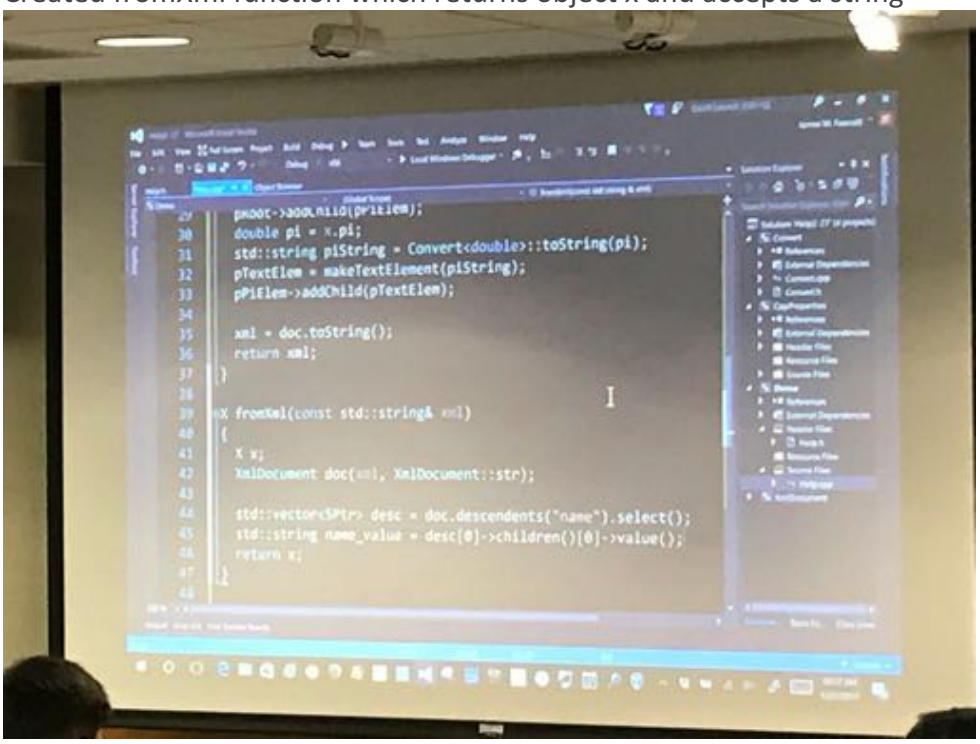


```
20
21    // make Property<string> name element and add to root
22    SPtr pNameElem = makeTaggedElement("name");
23    pRoot->addChild(pNameElem);
24    SPtr pTextElem = makeTextElement(x.name);
25    pNameElem->addChild(pTextElem);
26
27    // make Property<double> pi element and add to root
28    SPtr pPiElem = makeTaggedElement("pi");
29    pRoot->addChild(pPiElem);
30    double pi = x.pi;
31    std::string piString = Convert<double>::toString(pi);
32    pTextElem = makeTextElement(piString);
33    pPiElem->addChild(pTextElem);
34
35    xml = doc.toString();
36    return xml;
37  }
38
39  int main()
```

- Created fromXml function which returns object x and accepts a string
- 

- Trim function is provided in he the StrHelper.h doesn't works with Chinese chars and other special languages and hence added try catch block in the fromXml
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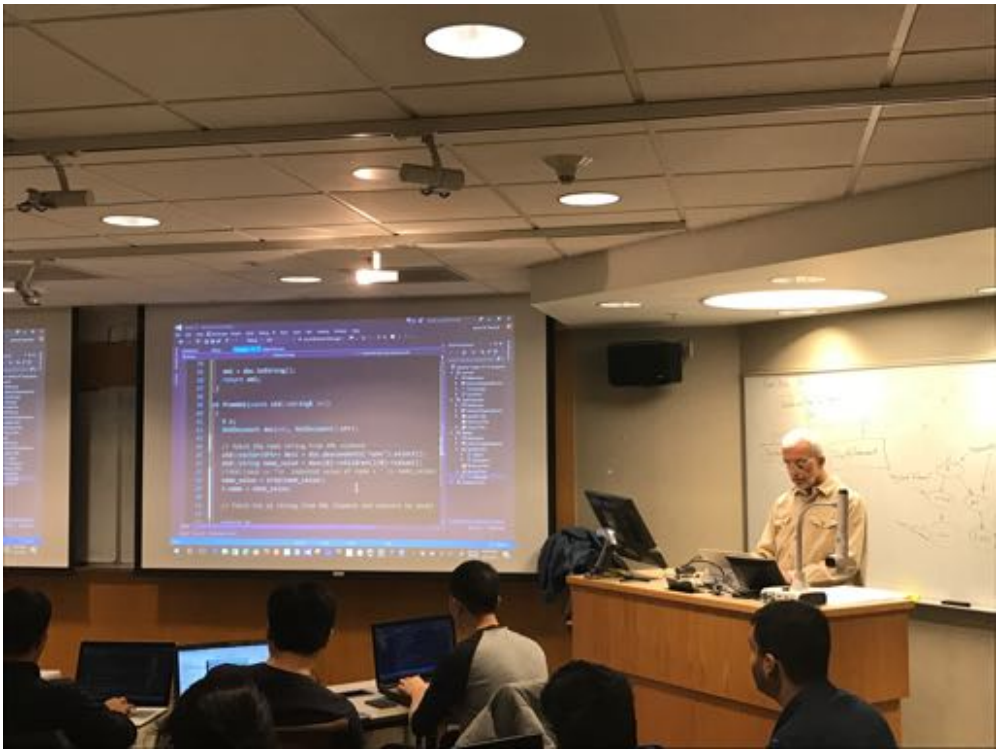
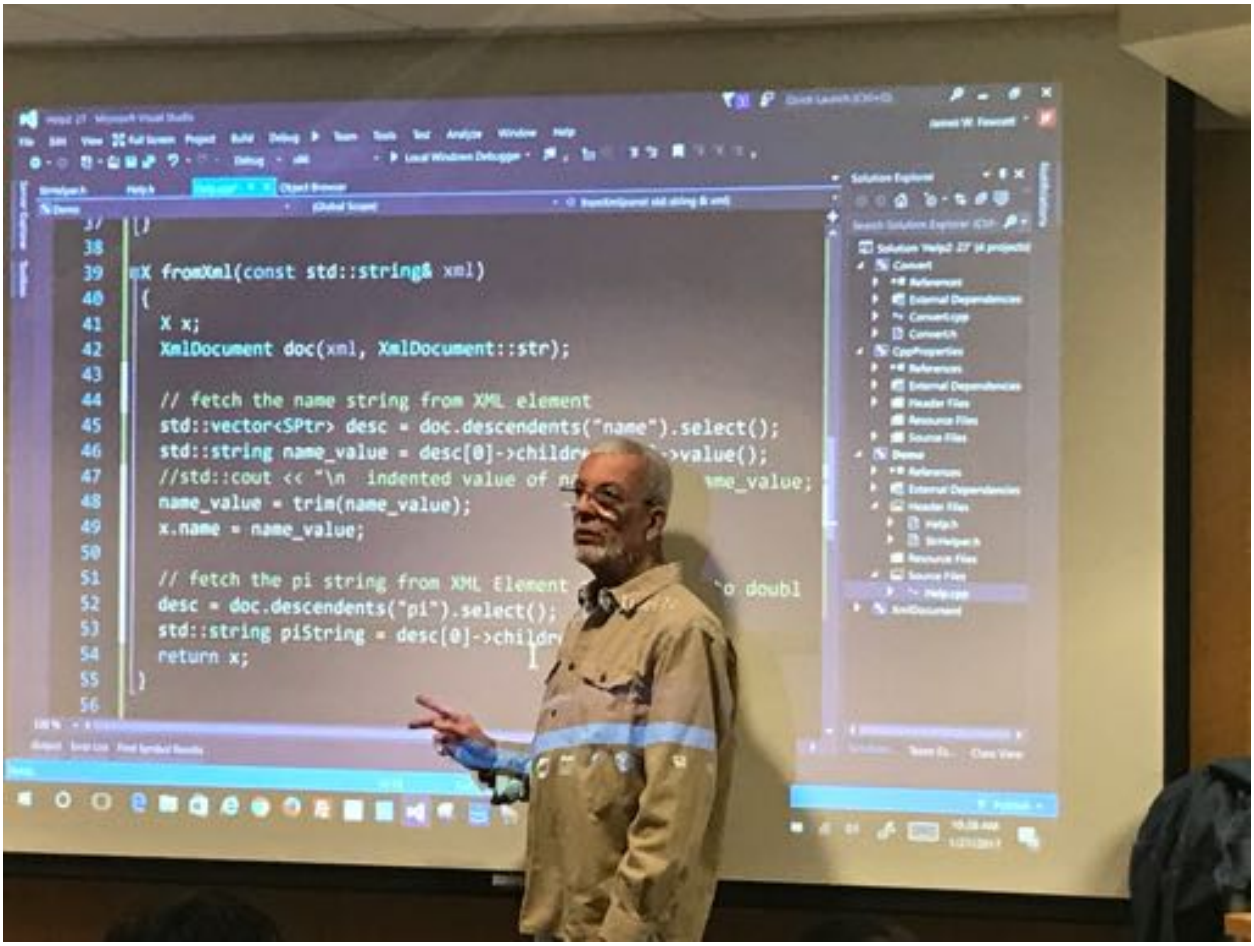
- 

- 

- Finally looked at XmlDocument project with test stub and prologue to understand the core functionalities of the same more in depth.
- Towards the end discussed about CallableObjectSimpleDemo and explained functors and lambda
- Before ending the session professor answered questions regarding project and also talked about HelpSessionExtended.zip from the college server.