
TASK 3 - Learn how to use TinyXML

student.xml

```
<file>
  <Students>
    <Student>
      <RollNo>50</RollNo>
      <Name>Amey Thakur</Name>
      <IDNumber>TU3F1819127</IDNumber>
      <DOB>20/07/2000</DOB>
    </Student>
    <Student>
      <RollNo>51</RollNo>
      <Name>Hasan Rizvi</Name>
      <IDNumber>TU3F1819130</IDNumber>
      <DOB>17/07/1999</DOB>
    </Student>
  </Students>
</file>
```

main.cpp

```
#include <iostream>
#include <cstdlib>
#include "tinyxml2.h"

using namespace std;
using namespace tinyxml2;

void get_Data() {
    //load doc file
    XMLDocument doc;
    const char* file = "student.xml";
```

```

if (!doc.LoadFile(file)) {
    //get root element
    XElement* root_element = doc.RootElement();
    //check if root element is null or not
    if (root_element != NULL)
    {
        XElement* eStudents =
root_element->FirstChildElement("Students"); //Students element
        //check if Students element is null or not
        if (eStudents != NULL) {
            XElement* student =
eStudents->FirstChildElement("Student"); //Student element
            //check if Student element is null or not
            if (student != NULL) {
                //loop through every element in student
                for (; student != NULL; student =
student->NextSiblingElement())
                {
                    cout << "Roll No: " <<
student->FirstChildElement("RollNo")->GetText() << endl;
                    cout << "Name: " <<
student->FirstChildElement("Name")->GetText() << endl;
                    cout << "ID Number: " <<
student->FirstChildElement("IDNumber")->GetText() << endl;
                    cout << "Date of Birth: " <<
student->FirstChildElement("DOB")->GetText() << endl;
                }
            }
        }
        else
        {
            cout << "NULL VALUE" << endl;
        }
    }
    else
    {
        cout << "NULL VALUE" << endl;
    }
}
else
{
    cout << "EMPTY FILE" << endl;
}
}

```

```

else
{
    cout << "Could not parse file" << endl;
}
}

void update_file() {
    XMLDocument doc;
    const char* file = "student.xml";

    // Load the XML file into the Doc instance
    doc.LoadFile("student.xml");
    //Get root Element
    XMLElement* root_element = doc.RootElement();
    // Get 'file' Child
    XMLElement* eStudents = root_element->FirstChildElement("Students");
    //Create new Element
    XMLNode* student = doc.NewElement("Student");
    //Insert new Element
    eStudents->InsertEndChild(student);
    //Create new Element
    XMLElement* pElement = doc.NewElement("RollNo");
    // Set new Element Text
    pElement->SetText("58"); // RollNo
    // Insert new Element
    student->InsertEndChild(pElement);
    //Create new Element
    pElement = doc.NewElement("Name");
    // Set new Element Text
    pElement->SetText("Mega Modha"); // Name
    // Insert new Element
    student->InsertEndChild(pElement);
    // Create new Element
    pElement = doc.NewElement("IDNumber");
    // Set new element Text
    pElement->SetText("TU3F1819139"); // IDNumber
    // Insert new Element
    student->InsertEndChild(pElement);
    // Create new Element
    pElement = doc.NewElement("DOB");
    // Set new Element Text
    pElement->SetText("12/08/1999"); // DOB
    // Insert new Element
    student->InsertEndChild(pElement);
}

```

```

        //Save the changes into the XML file
        doc.SaveFile("student.xml");
    }

int main(){

    get_Data();//get the date from xml file

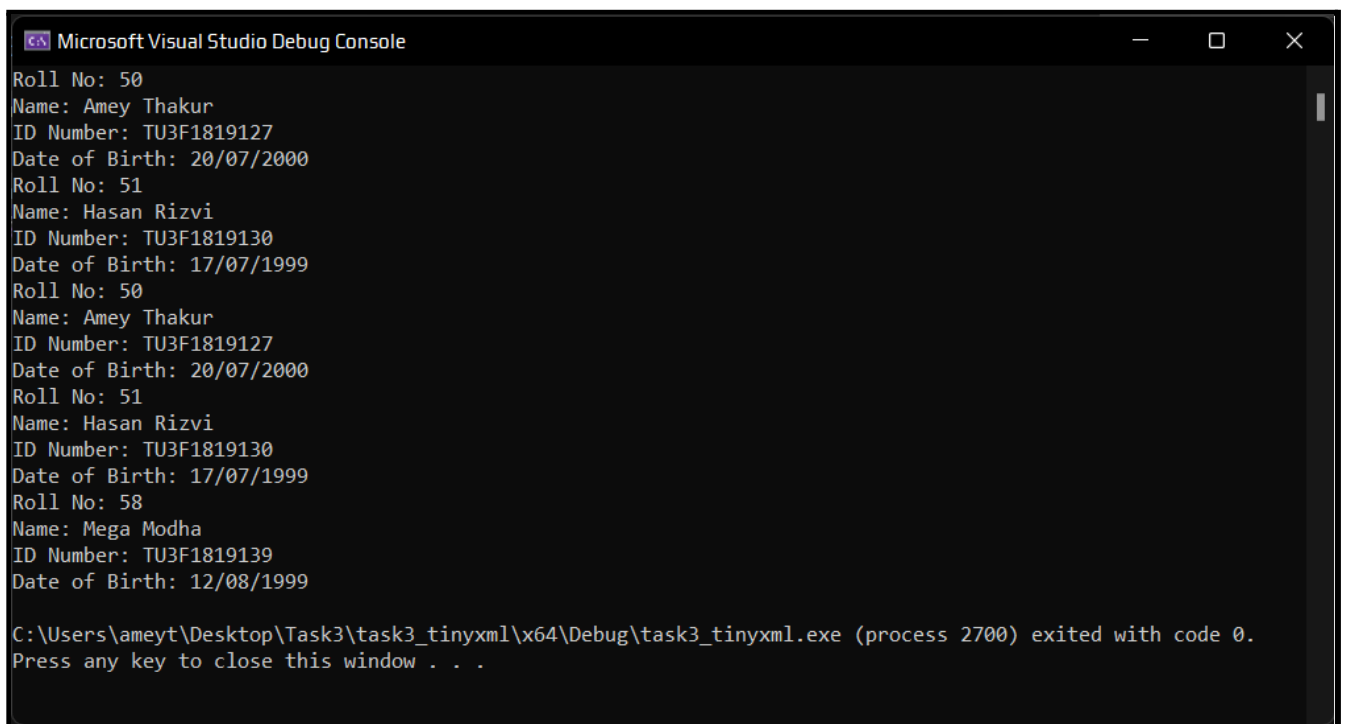
    update_file();//update xml file

    get_Data();//read updated file

    return 0;
}

```

Output:



The screenshot shows the Microsoft Visual Studio Debug Console window. The title bar reads "Microsoft Visual Studio Debug Console". The console output displays the following text:

```

Roll No: 50
Name: Amey Thakur
ID Number: TU3F1819127
Date of Birth: 20/07/2000
Roll No: 51
Name: Hasan Rizvi
ID Number: TU3F1819130
Date of Birth: 17/07/1999
Roll No: 50
Name: Amey Thakur
ID Number: TU3F1819127
Date of Birth: 20/07/2000
Roll No: 51
Name: Hasan Rizvi
ID Number: TU3F1819130
Date of Birth: 17/07/1999
Roll No: 58
Name: Mega Modha
ID Number: TU3F1819139
Date of Birth: 12/08/1999

C:\Users\ameyt\Desktop\Task3\task3_tinyxml\x64\Debug\task3_tinyxml.exe (process 2700) exited with code 0.
Press any key to close this window . . .

```