PROJECT 2

MAIN CLASS

```java
import java.util.List;

public class MainClass {
    public static void main(String args[]) {
        StudentParser read = new StudentParser();
        List<StudentModel> readConfig = read.readConfig("StudentsData.xml");
        System.out.println("The list of students : ");
        for (StudentModel studentModel : readConfig) {
            System.out.println(studentModel);
        }
    }
}
```

STUDENT MODEL.JAVA

```java
public class StudentModel {
    String id;
    String name;
    String age;
    String gender;
    String semester;

    @Override
    public String toString() {
        return "{" + " id='" + id + "'" + ", name='" + name + "'" + ", age='" +
age + "'" + ", gender='" + gender + "'"
                + ", semester='" + semester + "'" + "}";
    }

}
```

STUDENT PARSER.JAVA

import java.io.FileInputStream;

import java.io.FileNotFoundException;

import java.io.InputStream;

import java.util.ArrayList;

import java.util.Iterator;

```java
import java.util.List;

import javax.xml.stream.XMLEventReader;
import javax.xml.stream.XMLInputFactory;
import javax.xml.stream.XMLStreamException;
import javax.xml.stream.events.Attribute;
import javax.xml.stream.events.EndElement;
import javax.xml.stream.events.StartElement;
import javax.xml.stream.events.XMLEvent;

class StudentParser {
    static final String ID = "id";
    static final String STUDENT = "student";
    static final String NAME = "name";
    static final String AGE = "age";
    static final String GENDER = "gender";
    static final String SEMESTER = "semester";

    @SuppressWarnings({ "unchecked", "null" })
    public List<StudentModel> readConfig(String configFile) {
        List<StudentModel> studentModels = new ArrayList<StudentModel>();
        try {
            XMLInputFactory inputFactory = XMLInputFactory.newInstance();
            InputStream in = new FileInputStream(configFile);
            XMLEventReader eventReader = inputFactory.createXMLEventReader(in);
            StudentModel studentModel = null;

            while (eventReader.hasNext()) {
                XMLEvent event = eventReader.nextEvent();
                if (event.isStartElement()) {
                    StartElement startElement = event.asStartElement();
```

```java
if (startElement.getName().getLocalPart().equals(STUDENT)) {

  studentModel = new StudentModel();

  // We read the attributes from this tag and add the date

  // attribute to our object

  Iterator<Attribute> attributes = startElement.getAttributes();

  while (attributes.hasNext()) {

    Attribute attribute = attributes.next();

    if (attribute.getName().toString().equals(ID)) {

      studentModel.id = attribute.getValue();

    }


  }
}


if (event.isStartElement()) {

  if (event.asStartElement().getName().getLocalPart().equals(NAME)) {

    event = eventReader.nextEvent();

    studentModel.name = (event.asCharacters().getData());

    continue;

  }
}
if (event.asStartElement().getName().getLocalPart().equals(AGE)) {

  event = eventReader.nextEvent();

  studentModel.age = (event.asCharacters().getData());

  continue;

}


if (event.asStartElement().getName().getLocalPart().equals(GENDER)) {

  event = eventReader.nextEvent();

  studentModel.gender = (event.asCharacters().getData());

  continue;
```

```java
                }

                if (event.asStartElement().getName().getLocalPart().equals(SEMESTER)) {
                    event = eventReader.nextEvent();
                    studentModel.semester = (event.asCharacters().getData());
                    continue;
                }
            }
            if (event.isEndElement()) {
                EndElement endElement = event.asEndElement();
                if (endElement.getName().getLocalPart().equals(STUDENT)) {
                    studentModels.add(studentModel);
                }
            }

        }
    } catch (FileNotFoundException e) {
        e.printStackTrace();
    } catch (XMLStreamException e) {
        e.printStackTrace();
    }
    return studentModels;
    }
}
```

```
<terminated> MainClass [Java Application] C:\Program Files\Java\jre1.8.0_201\bin\javaw.exe (28-Mar-2019
The list of students :
{ id='A001', name='alpha', age='25', gender='male', semester='1'}
{ id='A002', name='bravo', age='30', gender='female', semester='5'}
{ id='A003', name='charlie', age='35', gender='male', semester='3'}
```

```xml
<?xml version="1.0" encoding="UTF-8"?>
- <students>
    - <student id="A001">
        <name>alpha</name>
        <age>25</age>
        <gender>male</gender>
        <semester>1</semester>
    </student>
    - <student id="A002">
        <name>bravo</name>
        <age>30</age>
        <gender>female</gender>
        <semester>5</semester>
    </student>
    - <student id="A003">
        <name>charlie</name>
        <age>35</age>
        <gender>male</gender>
        <semester>3</semester>
    </student>
  </students>
```