

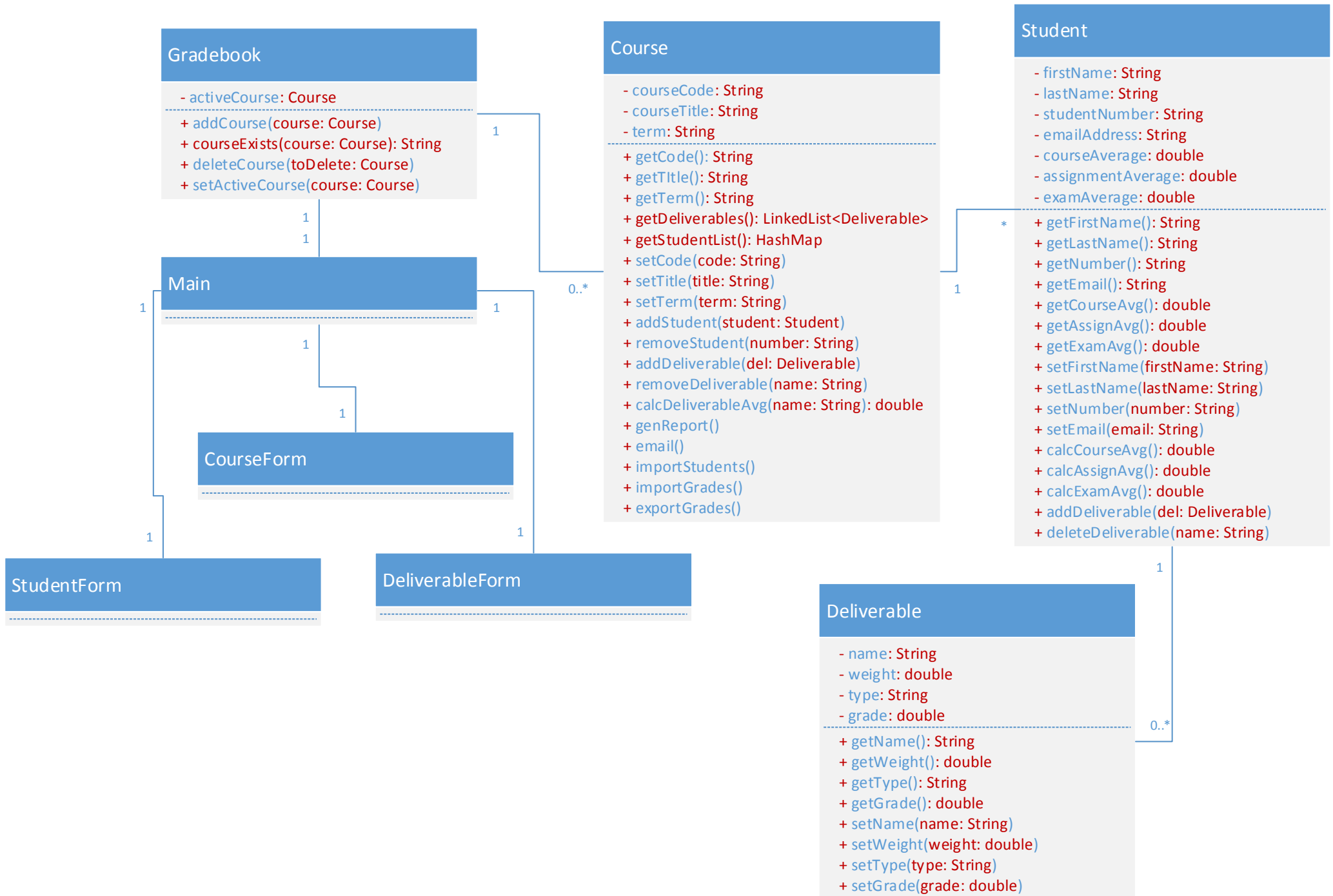
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**Computer Science 2212**  
**Assignment #2**  
**Due: February 28, 2014**

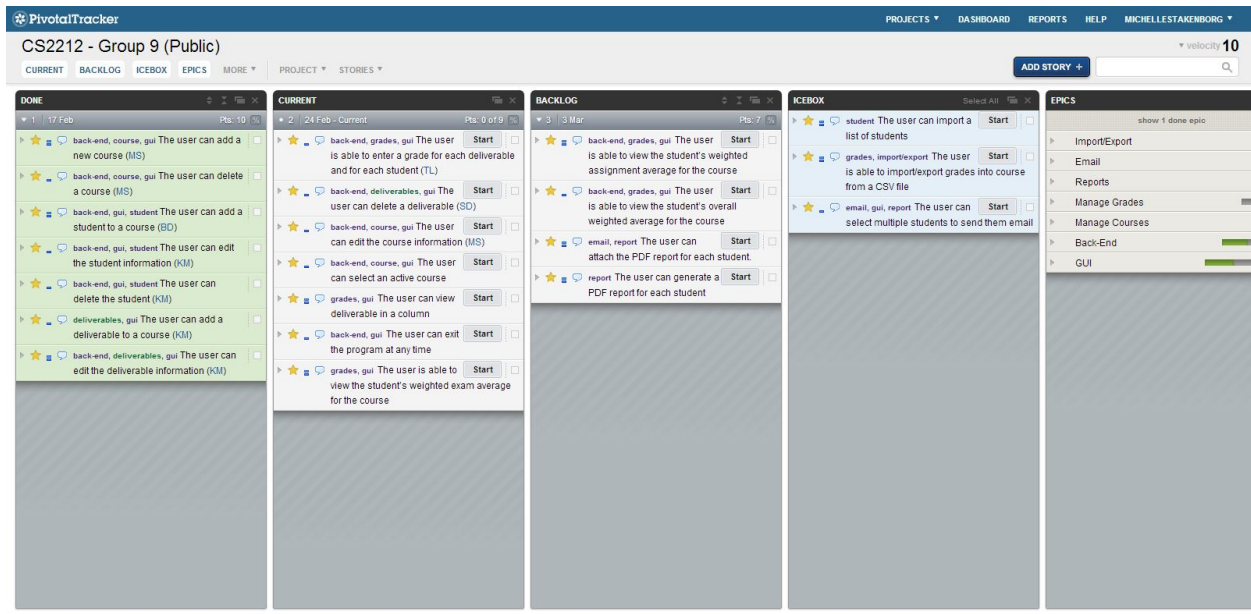
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**Team 9**

Sohrab Dolatabadi  
Bruno Felipe da Silva Correa  
Tyler Laporte  
Killian McGuinness  
Michelle Stakenborg



## Section 2: Revised User Stories



Link To Pivotal Tracker: <https://www.pivotaltracker.com/s/projects/1002276#>

### Completed User Stories:

- User can add a new course
- User can select an active course
- User can add a student to a course
- User can edit course information
- User can add a deliverable
- User can exit the program at any time

### Instructions To test:

1. **Compile:** mvn package
2. **Run program:** java -jar target/team9-project-1.0-SNAPSHOT.jar
3. **Test "User can add a new course" user story:**
  - Courses --> Create Course --> Enter Information --> Save
4. **Test "User can select an active course" user story:**
  - Courses Select Active Course --> Choose a course in combo box --> Select
5. **Test "User can add a student to a course" user story:**
  - Students --> Create Student --> Enter Information --> Save
6. **Test "User can edit course information" user story:**
  - Active Course --> Edit Course --> Enter Information --> Save
7. **Test "User can add a deliverable" user story:**
  - Deliverables --> Create Deliverable --> Enter Information --> Save
8. **Test "User can exit the program " user story:**
  - Close program (Top right corner)
9. **Test data persistence: File --> Save and Load**

javadoc

# Class Gradebook

java.lang.Object  
javadoc.Gradebook

```
public abstract class Gradebook
extends java.lang.Object
```

Gradebook class provides methods to create the initial gradebook to store courses User interface will use gradebook to set the active course and add/delete courses

Author:

group9

## Constructor Summary

Constructors

Constructor and Description
<a href="#">Gradebook</a> (java.lang.String gbName) Constructor

## Method Summary

Methods

Modifier and Type	Method and Description
void	<a href="#">addCourse</a> ( <a href="#">Course</a> newCourse) addCourse method allows user to add a new course to the gradebook
java.lang.String	<a href="#">courseExists</a> ( <a href="#">Course</a> course) courseExists checks to see if given course is a valid course in the course list
void	<a href="#">delCourse</a> ( <a href="#">Course</a> toDelete) delCourse allows user to delete a course currently in the course list
void	<a href="#">setActiveCourse</a> ( <a href="#">Course</a> course) setActiveCourse sets the course the user wants to work with

### Methods inherited from class java.lang.Object

equals, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait
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## Constructor Detail

### Gradebook

```
public Gradebook(java.lang.String gbName)
```

Constructor

#### Parameters:

gbName -

#### Throws:

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

## Method Detail

### setActiveCourse

```
public void setActiveCourse(Course course)
                           throws main.java.ca.uwo.csd.cs2212.team9.ElementNotFoundException
```

setActiveCourse sets the course the user wants to work with

#### Parameters:

ActiveCourse - the active course to set

#### Throws:

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

main.java.ca.uwo.csd.cs2212.team9.ElementNotFoundException

### addCourse

```
public void addCourse(Course newCourse)
                   throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

addCourse method allows user to add a new course to the gradebook

#### Parameters:

addCourse -

#### Throws:

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

### courseExists

```
public java.lang.String courseExists(Course course)
```

courseExists checks to see if given course is a valid course in the course list

**Parameters:**

course - course to look for in list

**delCourse**

```
public void delCourse(Course toDelete)
    throws main.java.ca.uwo.csd.cs2212.team9.ElementNotFoundException
```

delCourse allows user to delete a course currently in the course list

**Parameters:**

toDelete - course to delete from list

**Throws:**

main.java.ca.uwo.csd.cs2212.team9.ElementNotFoundException

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javadoc

**Class Course<BinaryTree>**

java.lang.Object

javadoc.Course<BinaryTree>

Type Parameters:

BinaryTree -

public abstract class **Course<BinaryTree>**

extends java.lang.Object

Course is a class that will be used to create a new Course within the Gradebook program

Author:

group 9

Constructor Summary

Constructors

Constructor and Description
<b>Course</b> (java.lang.String code, java.lang.String title, java.lang.String term) Constructor

Method Summary

Methods

Modifier and Type	Method and Description
void	<b>addDeliverable</b> (main.java.ca.uwo.csd.cs2212.team9.Deliverable del) Adds a deliverable to the course, requiring a unique deliverable name.
void	<b>addStudent</b> (main.java.ca.uwo.csd.cs2212.team9.Student student) Adds give student to the class list, requiring a unique student number and email address.
double	<b>calcDeliverableAvg</b> (java.lang.String name) Calculates the average for given deliverable
void	<b>email</b> () Email Student allows user to email a student with generated report attached
void	<b>exportGrades</b> ()  Export Grades allows user to export a list of the grades for current course
void	<b>genReport</b> (main.java.ca.uwo.csd.cs2212.team9.Student student) Generates a Report for a student with grade average information
java.lang.String	<b>getCode</b> () Gets the course code for specified course
java.util.LinkedList<main.java.ca.uwo.csd.cs2212.team9.Deliverable>	<b>getDeliverables</b> () Returns a list of the deliverables currently assigned to the student
<b>BinaryTree</b>	<b>getStudentList</b> () Gets the list of students currently in active course
java.lang.String	<b>getTerm</b> () Gets the term for specified course
java.lang.String	<b>getTitle</b> () Gets the course title for specified course
void	<b>importGrades</b> () Import Grades allows user to import a list of grades for a current course
void	<b>importStudents</b> () Imports class list from a CSV file
void	<b>removeDeliverable</b> (java.lang.String name) Removes the deliverable specified by name from the course.

void	<b>removeStudent</b> (java.lang.String studentNumber) Removes the specified student from the class list
void	<b>setCode</b> (java.lang.String code) Changes course code for specific course to given string
void	<b>setTerm</b> (java.lang.String term) Changes the term the course is in
void	<b>setTitle</b> (java.lang.String title) Changes the title for particular course

### Methods inherited from class java.lang.Object

equals, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

## Constructor Detail

### Course

```
public Course(java.lang.String code,
              java.lang.String title,
              java.lang.String term)
    throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

Constructor

#### Parameters:

code -

title -

term -

#### Throws:

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

## Method Detail

### getCode

```
public java.lang.String getCode()
```

Gets the course code for specified course

#### Returns:

the course code

### getDeliverables

```
public java.util.LinkedList<main.java.ca.uwo.csd.cs2212.team9.Deliverable> getDeliverables()
```

Returns a list of the deliverables currently assigned to the student

#### Returns:

the deliverables

### getTerm

```
public java.lang.String getTerm()
```

Gets the term for specified course

#### Returns:

the course term



## getTitle

```
public java.lang.String getTitle()
```

Gets the course title for specified course

### Returns:

the course title

## getStudentList

```
public BinaryTree getStudentList()
```

Gets the list of students currently in active course

### Returns:

the class list

## setCode

```
public void setCode(java.lang.String code)
    throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

Changes course code for specific course to given string

### Parameters:

code -

InvalidInfoException -

### Throws:

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

## setTerm

```
public void setTerm(java.lang.String term)
    throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

Changes the term the course is in

### Parameters:

term -

### Throws:

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

## setTitle

```
public void setTitle(java.lang.String title)
    throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

Changes the title for particular course

### Parameters:

title -

### Throws:

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

## addDeliverable

```
public void addDeliverable(main.java.ca.uwo.csd.cs2212.team9.Deliverable del)
    throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

Adds a deliverable to the course, requiring a unique deliverable name.

### Parameters:

del - the deliverable to add

**Throws:**

`main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException`

**addStudent**

```
public void addStudent(main.java.ca.uwo.csd.cs2212.team9.Student student)
    throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

Adds give student to the class list, requiring a unique student number and email address.

**Parameters:**

`student` - the student to add to the list

**Throws:**

`main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException`

**email**

```
public void email()
```

Email Student allows user to email a student with generated report attached

**exportGrades**

```
public void exportGrades()
```

Export Grades allows user to export a list of the grades for current course

**genReport**

```
public void genReport(main.java.ca.uwo.csd.cs2212.team9.Student student)
```

Generates a Report for a student with grade average information

**Parameters:**

`student` - Given student to generate report for

**importGrades**

```
public void importGrades()
```

Import Grades allows user to import a list of grades for a current course

**importStudents**

```
public void importStudents()
```

Imports class list from a CSV file

**removeDeliverable**

```
public void removeDeliverable(java.lang.String name)
    throws main.java.ca.uwo.csd.cs2212.team9.ElementNotFoundException
```

Removes the deliverable specified by name from the course.

**Parameters:**

`name` - the name of the deliverable to remove.

**Throws:**

`main.java.ca.uwo.csd.cs2212.team9.ElementNotFoundException`

**removeStudent**

```
public void removeStudent(java.lang.String studentNumber)
```

Removes the specified student from the class list

**Parameters:**

number - the student number of the student to remove

**calcDeliverableAvg**

```
public double calcDeliverableAvg(java.lang.String name)
```

Calculates the average for given deliverable

**Parameters:**

name - the name of the deliverable to calculate average for

javadoc

# Class Deliverable

java.lang.Object  
javadoc.Deliverable

```
public abstract class Deliverable
extends java.lang.Object
```

Class Deliverable contains all the methods needed to generate a new deliverable for a student Allows user to edit, update, and access deliverable names, types and grade weight/grade

Author:

team9

## Constructor Summary

Constructors

Constructor and Description
<b>Deliverable</b> (java.lang.String name, java.lang.String type, double weight) Constructor

## Method Summary

Methods

Modifier and Type	Method and Description
double	<b>getGrade</b> () getGrade returns the grade stored for the current student/deliverable
java.lang.String	<b>getName</b> () getName returns the name of the current deliverable
java.lang.String	<b>getType</b> () getType returns the type of the current deliverable
double	<b>getWeight</b> () getWeight returns the percentage of final mark current deliverable is worth
void	<b>setGrade</b> (double grade) setGrade sets the grade for the student for current deliverable
void	<b>setName</b> (java.lang.String name) setName sets the name of the current deliverable to given name

void	<b>setType</b> (java.lang.String type) setType sets the type of the current deliverable to given type
void	<b>setWeight</b> (double weight) setWeight sets the weight of the current deliverable to given weight

## Methods inherited from class java.lang.Object

equals, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

## Constructor Detail

### Deliverable

```
public Deliverable(java.lang.String name,  
                  java.lang.String type,  
                  double weight)
```

#### Constructor

#### Parameters:

name - the deliverable name  
type - the type of the deliverable (Assignment, Exam)  
weight - the grade weight of the deliverable

#### Throws:

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

## Method Detail

### getGrade

```
public double getGrade()
```

getGrade returns the grade stored for the current student/deliverable

#### Parameters:

grade - return the grade

### getName

```
public java.lang.String getName()
```

getName returns the name of the current deliverable

**Returns:**

the name

**getType**

```
public java.lang.String getType()
```

getType returns the type of the current deliverable

**Returns:**

the type

**getWeight**

```
public double getWeight()
```

getWeight returns the percentage of final mark current deliverable is worth

**Returns:**

the weight

**setGrade**

```
public void setGrade(double grade)
```

setGrade sets the grade for the student for current deliverable

**Parameters:**

name - the grade to set

**setName**

```
public void setName(java.lang.String name)
                    throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

setName sets the name of the current deliverable to given name

**Parameters:**

name - the name to set

**Throws:**

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

**setType**

```
public void setType(java.lang.String type)
    throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

setType sets the type of the current deliverable to given type

**Parameters:**

type - the type to set

**Throws:**

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

## setWeight

```
public void setWeight(double weight)
    throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

setWeight sets the weight of the current deliverable to given weight

**Parameters:**

weight - the weight to set

**Throws:**

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

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javadoc

# Class Student

java.lang.Object  
javadoc.Student

```
public abstract class Student
extends java.lang.Object
```

Student class is used to create a new student with given student information Allows user to edit and retrieve student information Allows user to calculate course, assignment, and exam averages Allows user to add a new deliverable to the student's record

### Author:

team9

## Constructor Summary

### Constructors

Constructor and Description
<b>Student</b> (java.lang.String firstName, java.lang.String lastName, java.lang.String number, java.lang.String email) Constructor

## Method Summary

### Methods

Modifier and Type	Method and Description
void	<b>addDeliverable</b> () AddDeliverable adds a new deliverable to current student
double	<b>calcAssignAvg</b> () calcAssignAvg calculates the assignment average for current student uses grade information to calculate
double	<b>calcCourseAvg</b> () calcCourseAvg calculates the course average for current student uses grade information to calculate
double	<b>calcExamAvg</b> () calcExamAvg calculates the exam average for current student uses grade information to calculate



void	<b>delDeliverable()</b> delDeliverable deletes a deliverable from current student
double	<b>getAssignAvg()</b> getAssignAvg returns the assignment average for current student
double	<b>getCourseAvg()</b> getCourseAvg returns the course average for current student
java.lang.String	<b>getEmail()</b> getEmail returns the email address for current student
double	<b>getExamAvg()</b> getExamAvg returns the exam average for current student
java.lang.String	<b>getFirstName()</b> getFirstName returns the current student's first name
java.lang.String	<b>getLastName()</b> getLastName returns the current student's last name
java.lang.String	<b>getNumber()</b> getNumber returns the current student's student number
void	<b>setEmail</b> (java.lang.String email) setEmail sets the email address of current student to given email checks validity of email address given
void	<b>setFirstName</b> (java.lang.String firstName) setFirst name sets the first name of the student to given name checks validity of given name
void	<b>setLastName</b> (java.lang.String lastName) setLastName sets the last name of student to given name checks validity of given name
void	<b>setNumber</b> (java.lang.String number) setNumber sets the student's student number to given number checks validity of given number

## Methods inherited from class java.lang.Object

equals, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

## Constructor Detail

### Student

```
public Student(java.lang.String firstName,
               java.lang.String lastName,
               java.lang.String number,
               java.lang.String email)
    throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

Constructor

#### Parameters:

firstName - the students first name

lastName - the students last name

number - the students unique student number

email - the students unique email address

**Throws:**

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

## Method Detail

### getAssignAvg

```
public double getAssignAvg()
```

getAssignAvg returns the assignment average for current student

**Returns:**

the students assignment average

### getCourseAvg

```
public double getCourseAvg()
```

getCourseAvg returns the course average for current student

**Returns:**

the students course average

### getEmail

```
public java.lang.String getEmail()
```

getEmail returns the email address for current student

**Returns:**

the students email address

### getExamAvg

```
public double getExamAvg()
```

getExamAvg returns the exam average for current student

**Returns:**

the students exam average

## getFirstName

```
public java.lang.String getFirstName()
```

getFirstName returns the current student's first name

### Returns:

the first name of the student

## getLastName

```
public java.lang.String getLastName()
```

getLastName returns the current student's last name

### Returns:

the last name of the student

## getNumber

```
public java.lang.String getNumber()
```

getNumber returns the current student's student number

### Returns:

the students student number

## setFirstName

```
public void setFirstName(java.lang.String firstName)
                        throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

setFirst name sets the first name of the student to given name checks validity of given name

### Parameters:

firstName - the firstName to set

### Throws:

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

## setLastName

```
public void setLastName(java.lang.String lastName)
                        throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

setLastName sets the last name of student to given name checks validity of given name

**Parameters:**

lastName - the lastName to set

**Throws:**

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

## setNumber

```
public void setNumber(java.lang.String number)
    throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

setNumber sets the student's student number to given number checks validity of given number

**Parameters:**

number - the number to set

**Throws:**

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

## setEmail

```
public void setEmail(java.lang.String email)
    throws main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException
```

setEmail sets the email address of current student to given email checks validity of email address given

**Parameters:**

email - the email to set

**Throws:**

main.java.ca.uwo.csd.cs2212.team9.InvalidInfoException

## calcCourseAvg

```
public double calcCourseAvg()
```

calcCourseAvg calculates the course average for current student uses grade information to calculate

**Parameters:**

courseAvg - calculates course average

## calcAssignAvg

```
public double calcAssignAvg()
```

calcAssignAvg calculates the assignment average for current student uses grade information to calculate

**Parameters:**

assignAvg - calculates the assignment average

**calcExamAvg**

```
public double calcExamAvg()
```

calcExamAvg calculates the exam average for current student uses grade information to calculate

**Parameters:**

examAvg - calculates the exam average

**addDeliverable**

```
public void addDeliverable()
```

AddDeliverable adds a new deliverable to current student

**delDeliverable**

```
public void delDeliverable()
```

delDeliverable deletes a deliverable from current student

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