
Data Structures and Algorithms

COMP 103

2018-19

Semester 2

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Computer Science

Victoria University of Wellington

Lecture 02a


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- Open the Assignments web page
https://ecs.wgtn.ac.nz/Courses/XMUT103_2020T1/Assignments

The screenshot shows the website for the School of Engineering and Computer Science at Victoria University of Wellington. The page is titled "XMUT 103, 2020 - Assignments". A left-hand navigation menu includes links for "XMUT103 home", "Course Outline", "Lecture Schedule", "Weekly Timetable", "Assignments" (which is highlighted), "Submission", "Your Marks", "People", "Java Resources", and "Java documentation". The main content area shows a breadcrumb trail: "School of Engineering and Computer Science > Courses/XMUT103_2020T1 > Assignments". Below the title, there is a link to "Submitting assignments". A table lists the assignments with their due dates and submission links.

Assignment	Out	Due	Submit	Marks and Feedback
Assig 1 Part A	30 March		submit	Marks
Assig 1 Part B	6 April	19 April	submit	Marks
Assig 2 Part A	20 April		submit	Marks

COMP 103 Assignment1 PartA web page

https://ecs.wgtn.ac.nz/Courses/XMUT103_2020T1/Assignments



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- ↑ XMUT103 home
- Course Outline
- Lecture Schedule
- Weekly Timetable
- Assignments**
- Submission
- Your Marks
- People
- Java Resources
- Java documentation
- Tutor Space
- Assignment Admin
- Plagiarism Log

↑ [School of Engineering and Computer Science](#) ▶ [Courses/XMUT103_2020T1](#) ▶ Assignments

XMUT 103, 2020 - Assignments

See more information about

- [Submitting assignments](#)

Assignment	Out	Due	Submit	Marks and Feedback
Assig 1 Part A	30 March		submit	Marks
Assig 1 Part B	6 April	19 April	submit	Marks
Assig 2 Part A	20 April		submit	Marks
Assig 2 Part B	27 April	3 May	submit	Marks
Assig 3 Part A	4 May		submit	Marks
Assig 3 Part B	11 May	24 May	submit	Marks
Break				
Assig 4	25 May	14 June	submit	Marks
Assig 5	15 June	28 June	submit	Marks
Assig 6	29 June	12 July	submit	Marks

COMP 103 Assignments web page

https://ecs.wgtn.ac.nz/Courses/XMUT103_2020T1/Assignment1PartA

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↑ XMUT103 home

Course Outline

Lecture Schedule

Weekly Timetable

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Your Marks

People

Java Resources

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Plagiarism Log

School of Engineering and Computer Science > Courses/XMUT103_2020T1 > Assignment1PartA

Introduction to Data Structures and Algorithms

Assignment 1 Part A: ArrayLists

- Due , 7pm

Resources and links

- Download [zip file](#) containing the necessary code and data.
- Java [Documentation](#)
- [Submit](#) your answers
- [Marks and feedback](#)

What To Hand In

- **SlideShow.java**

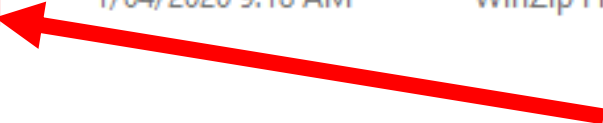
Do not rename these files.

Remember to submit all of these files. When you have submitted them, check that you can read the files listed on the submission page, and complete the submission process.

Download zip file

Download & unzip the file

Name	Date modified	Type	Size
SlideShow	1/04/2020 9:23 AM	File folder	
XMUT103-2020T1-Assig1PartA.zip	1/04/2020 9:18 AM	WinZip File	1,031 KB

 Downloaded zip file

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Name	Date modified	Type	Size
SlideShow	1/04/2020 9:23 AM	File folder	
XMUT103-2020T1-Assig1PartA.zip	1/04/2020 9:18 AM	WinZip File	1,031 KB

SlideShow folder files



Atmosphere.jpg



BachalpseeFlowers.jpg



BoraBora.jpg



Branch.jpg



DesertHills.jpg



DropsOfDew.jpg



Earth_Apollo17.jpg



Frame.jpg



Galunggung.jpg



HopetounFalls.jpg



package.bluej



Palma.jpg



Sky.jpg



SlideShow.java



SoapBubble.jpg



Sunrise.jpg



Winter.jpg

```
SlideShow.java - Notepad
File Edit Format View Help
// This program is copyright VUW.
// You are granted permission to use it to construct your answer to a COMP103 assignment.
// You may not distribute it in any other way without permission.

/* Code for COMP103 - 2020T1, Assignment 1
 * Name:
 * Username:
 * ID:
 */

import java.util.*;
import ecs100.*;
import java.awt.Color;

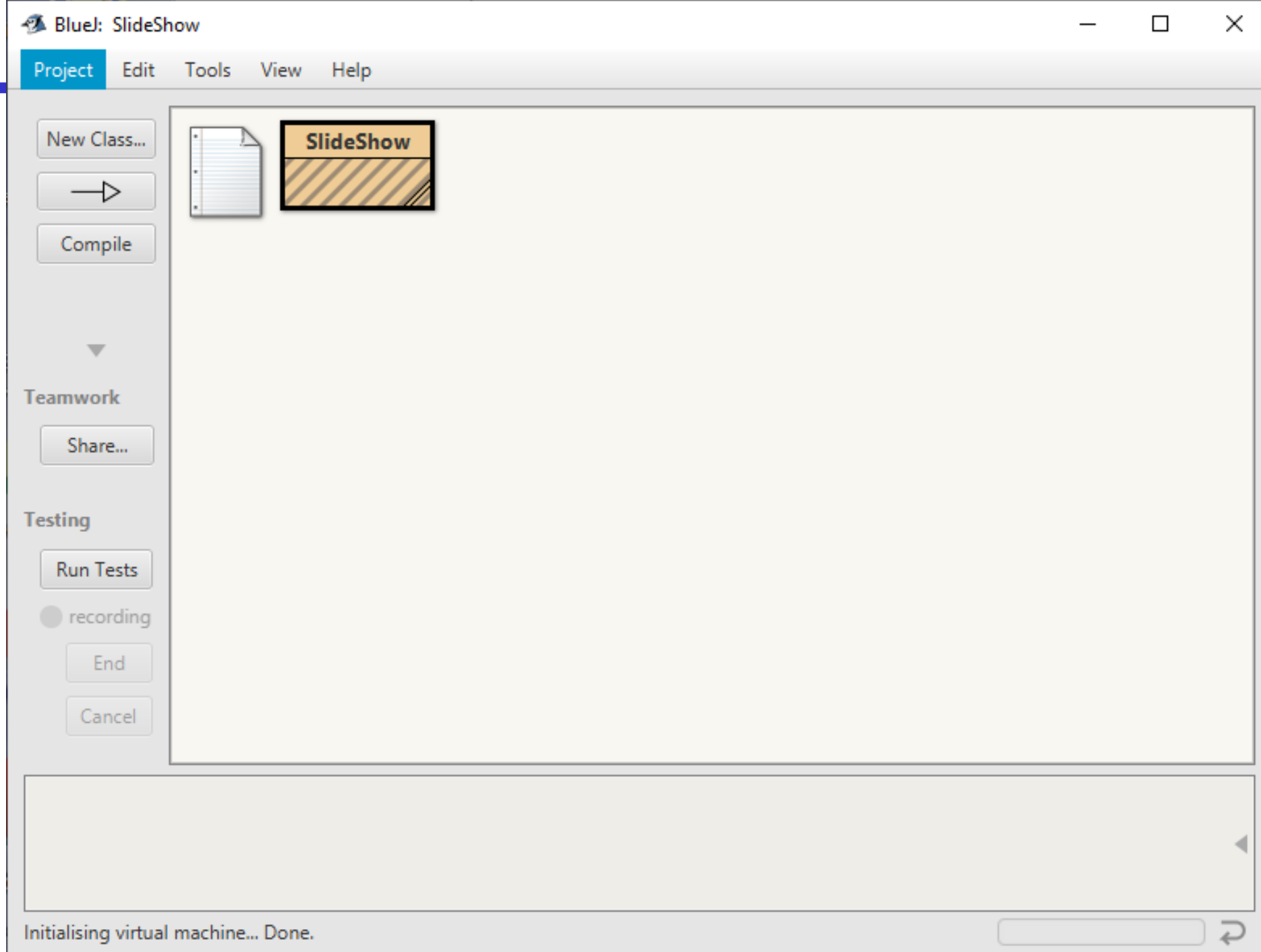
/**
 * This class contains the main method of the program.
 *
 * A SlideShow object represents the slideshow application and sets up the buttons in the UI.
 *
 * @author pundy
 */
public class SlideShow {

    public static final int LARGE_SIZE = 450; // size of images during slide show
    public static final int SMALL_SIZE = 100; // size of images when editing list
    public static final int GAP = 10; // gap between images when editing
    public static final int COLUMNS = 6; // Number of columns of thumbnails

    private List<String> images; // List of image file names.

    private int currentImage = -1; // index of currently selected image.
    // Should always be a valid index if there are any images

```




```
1 // This program is copyright VUW.
2 // You are granted permission to use it to construct your answer to a COMP103 assignment.
3 // You may not distribute it in any other way without permission.
4
5 /* Code for COMP103 - 2020T1, Assignment 1
6  * Name:
7  * Username:
8  * ID:
9  */
10
11 import java.util.*;
12 import ecs100.*;
13 import java.awt.Color;
14
15 /**
16  * This class contains the main method of the program.
17  */
```

Type your full name,
username &
Student ID number

Class Edit Tools Options

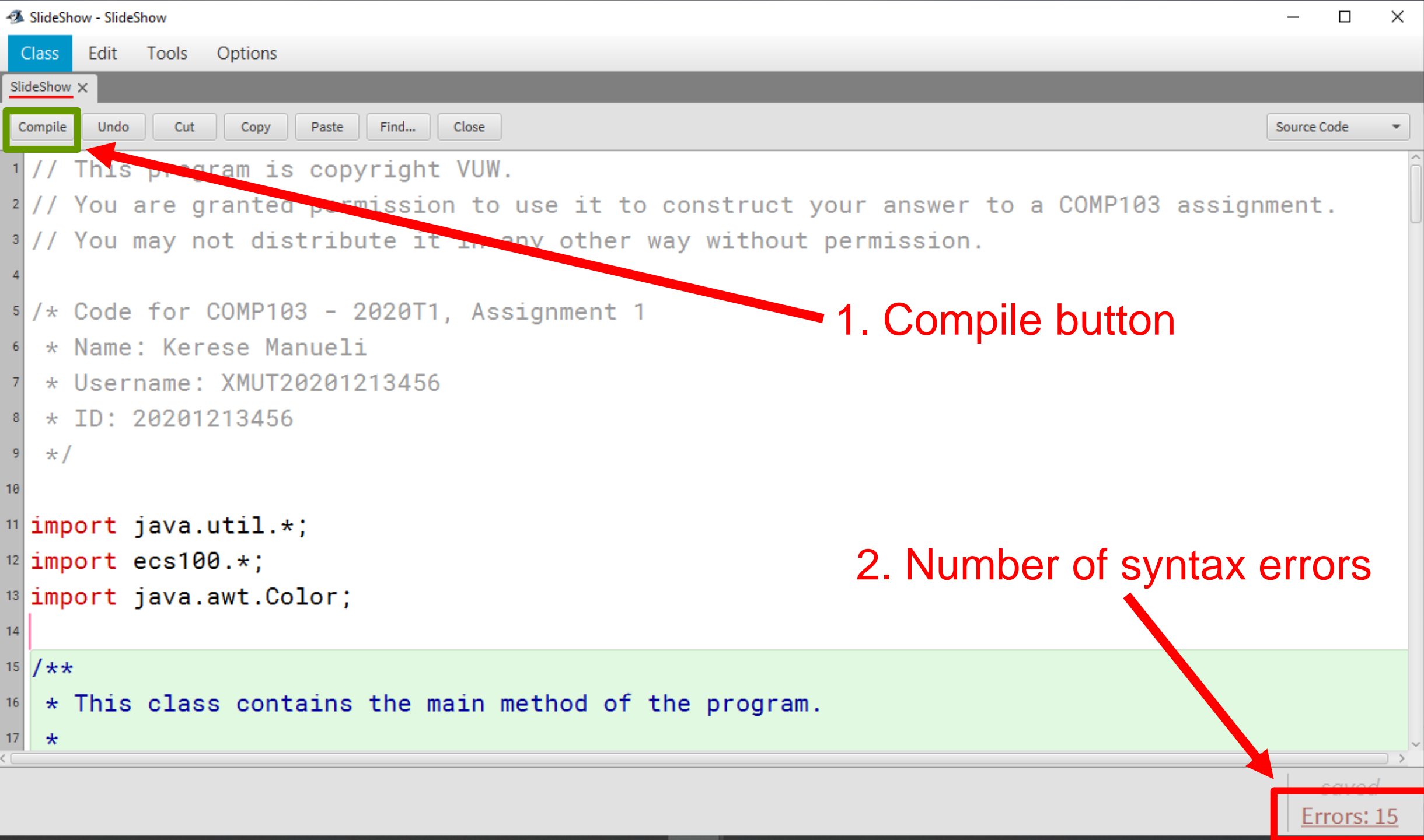
SlideShow ×

Compile Undo Cut Copy Paste Find... Close

Source Code ▾

```
1 // This program is copyright VUW.
2 // You are granted permission to use it to construct your answer to a COMP103 assignment.
3 // You may not distribute it in any other way without permission.
4
5 /* Code for COMP103 - 2020T1, Assignment 1
6  * Name: Kerese Manueli
7  * Username: XMUT20201213456
8  * ID: 20201213456
9  */
10
11 import java.util.*;
12 import ecs100.*;
13 import java.awt.Color;
14
15 /**
16  * This class contains the main method of the program.
17  */
```

Code line numbers 1- 17



1. Compile button

2. Number of syntax errors

Errors: 15

Class Edit Tools Options

SlideShow ×

Compile Undo Cut Copy Paste Find... Close

Source Code ▾

```
37
38 /**
39  * Constructor
40  */
41 public SlideShow() {
42     /*# YOUR CODE HERE */
43 }
44
45 /**
46  * Initialises the UI window, and sets up the buttons.
47  */
48 public void setupGUI() {
49     UI.initialise();
50
51     UI.addButton("Run show", this::runShow);
52     UI.addButton("Edit show", this::editShow);
53     UI.addButton("add before", this::addBefore);
```

Code line number 53



First of 15 syntax errors



invalid method reference

saved
Errors: 15

```
50
51 UI.addButton("Run show", this::runShow);
52 UI.addButton("Edit show", this::editShow);
53 /* UI.addButton("add before", this::addBefore);
54 UI.addButton("add after", this::addAfter);
55 UI.addButton("move left", this::moveLeft);
56 UI.addButton("move right", this::moveRight);
57 UI.addButton("move to start", this::moveStart);
58 UI.addButton("move to end", this::moveEnd);
59 UI.addButton("remove", this::remove);
60 UI.addButton("remove all", this::removeAll);
61 UI.addButton("reverse", this::reverse);
62 UI.addButton("shuffle", this::shuffle); */
63 UI.addButton("Testing", this::setTestList);
64 UI.addButton("Quit", UI::quit);
65
66 UI.setKeyListener(this::doKey);
```

Insert `/*` at the front
of code line 53

Insert `*/` at the end
of code line 62

Number of syntax errors has dropped from 15 to 5!

```
50
51     UI.addButton("Run show",    this::runShow);
52     UI.addButton("Edit show",   this::editShow);
53     /*     UI.addButton("add before",    this::addBefore);
54     UI.addButton("add after",    this::addAfter);
55     UI.addButton("move left",    this:: moveLeft);
56     UI.addButton("move right",   this:: moveRight);
57     UI.addButton("move to start", this:: moveStart);
58     UI.addButton("move to end",   this:: moveEnd);
59     UI.addButton("remove",       this::remove);
60     UI.addButton("remove all",    this::removeAll);
61     UI.addButton("reverse",      this::reverse);
62     UI.addButton("shuffle",      this::shuffle); */
63     UI.addButton("Testing",      this::setTestList);
64     UI.addButton("Quit",         UI::quit);
65
66     UI.setKeyListener(this::doKey);
```

Class Edit Tools Options

SlideShow ×

Compile Undo Cut Copy Paste Find... Close

Source Code ▾

```
122 public void dokey(String key) {
123     /*
124         if (key.equals("Left"))        goLeft();
125         else if (key.equals("Right"))   goRight();
126         else if (key.equals("Home"))    goStart();
127         else if (key.equals("End"))     goEnd(); */
127     }
128
129
130 /**
131  * A method that adds a bunch of names to the list of images, for testing.
132  */
133 public void setTestList(){
134     if (showRunning) return;
135     String[] names = new String[] {"Atmosphere.jpg", "BachalpseeFlowers.jpg",
136         "BoraBora.jpg", "Branch.jpg", "DesertHills.jpg",
137         "DropsOfDew.jpg", "Earth_Apollo17.jpg",
138         "Frame.jpg", "Galunggung.jpg", "HopetounFalls.jpg",
```

Click on Compile button

Class compiled - no syntax errors

saved