

# Seneca College

Applied Arts & Technology  
SCHOOL OF COMPUTER STUDIES

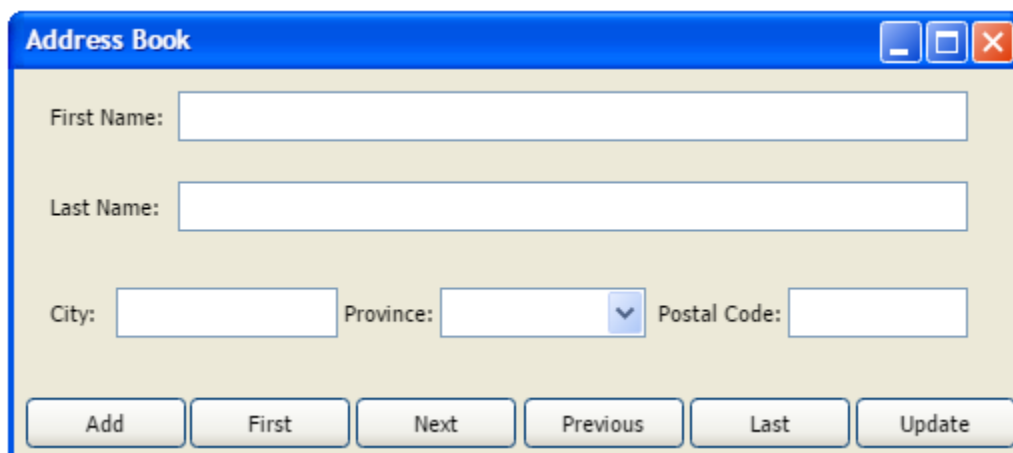
**JAC444****Submission date:****July 05, 2021**

## Workshop 5

**Description:**

The following workshop lets you practice basic java coding techniques, creating classes, methods, using arrays, Java I/O, inheritance, polymorphism, Exceptional Handling, JavaFx (GUI). The focus will be practicing for JavaFx concepts.

**Task 1:** Write a program to display a simple Address Book screen as show below

A screenshot of a JavaFX-style window titled "Address Book". The window has a blue title bar with standard minimize, maximize, and close buttons. The main content area is light beige. It contains four input fields: "First Name:" (a single-line text box), "Last Name:" (a single-line text box), "City:" (a single-line text box), and "Province:" (a dropdown menu). To the right of the "Province:" dropdown is a "Postal Code:" label followed by a single-line text box. At the bottom of the window, there is a row of six buttons: "Add", "First", "Next", "Previous", "Last", and "Update".

**Task 2 (Event-Handling):** The following task is a continuity of **Task – 1** and based on some research as well.

**Research Part:**

During the lecture of Week 5 and in the workshop 4 you have practiced different concepts on

- How to read a file.
- How to write a file.
- Mostly everyone has practiced FileReader or FileWriter, FileInputStream or FileOutputStream, Buffered Readers etc.
- Task - 2 required you to first search on **RandomAccessFile** in Java,
  - Advantages.

- Where to use it.
- How to use it.

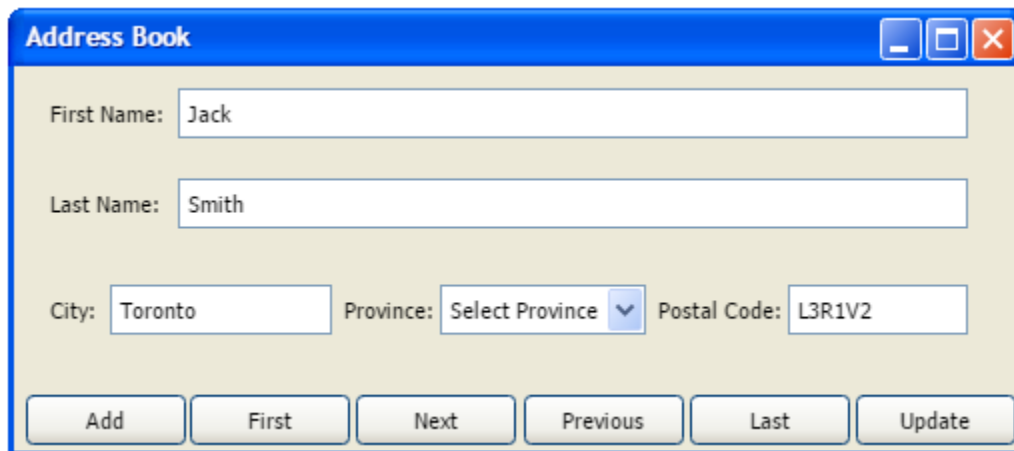
Once you have read about the advantages and disadvantages of the RandomAccessFile in java then you can start the coding for the workshop.

### Coding Part:

Write a program that stores, retrieves, adds and updates addresses as shown in the figure below.

- Use **random access file** for reading and writing an address.
- When the program starts your files should contains minimum 5 proper records **[make sure the added records are proper not some random strings and/ or postal code etc]**.

**Hint:** Use fixed-length string for storing each attribute in the address.



**Deliverables for Task - 2:** there will be two different deliverables for this workshop.

1. A word document includes your findings about Random Access File.
  - a. Advantages
  - b. Disadvantages
  - c. Usage.
  - d. Syntax.
  - e. Constructors
  - f. Methods

**Note:** Also include your references from where you search.

2. Code for the application.

## Workshop Header

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**Workshop #**

**Course:**<subject type> - Semester

**Last Name:**<student last name>

**First Name:**<student first name>

**ID:**<student ID>

**Section:**<section name>

*This assignment represents my own work in accordance with Seneca Academic Policy.*

*Signature*

**Date:**<submission date>

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## Code Submission Criteria:

Please note that you should have:

- Appropriate indentation.
- Proper file structure
- Follow java naming convention
- Document all the classes properly
- Do Not have any debug/ useless code and/ or files in the assignment
- **Do not have everything in the *main method*.**
- Have a separate TestClass with the main method in it.
- **Check your inputs if the user is not entering garbage inputs.**
- **Use exceptional handling or other methods to let the user know if the inputs are incorrect.**

## Deliverables and Important Notes:

**All these deliverables are supposed to be uploaded on the blackboard once done.**

- You are supposed to submit a video/ detailed document of your running solution. **(40%)**
  - Things to be considered if you are uploading a video.
    - A reasonable length of video should be posted. 5%
    - Your video should show the running solution with different inputs. 5%
    - In a minute discuss the design of your solution. 10%

- In a minute (max 3 to 5) discuss the important functions/ methods in your solution. 20%
- If you are using in your solution concepts that are not discussed in the class then in a minute or two explain,
  - What is that concept?
  - Why did you use it?
  - How does it benefit your solution?
- Things to be considered if you are uploaded the detailed document.
  - Should include **screen shots** of your output. 5%
  - Underneath each screen shot explain in 2 to 4 lines what is happening. 10%
  - In 3 to 5 lines explain the design logic of your program. 10%
  - Screen shots of important methods/ functions in your solution and discuss them underneath each screen shot (3 to 6 lines). 15%
  - If you are using in your solution concepts that are not discussed in the class then in a minute or two explain,
    - What is that concept?
    - Why did you use it?
    - How does it benefit your solution?
- A word/ text file which will reflect on learning of your concepts in this workshop. (Also include the instructions on how to run your code, if required) **(30%)**
  - Should state your Full name and Id on the top of the file and save the file with your last name and id, like Ali\_123456.txt
- Submission of working code. **(30%)**
  - Make sure your follow the “**Code Submission Criteria**” mentioned above.
  - You should zip your whole working project to a file named after your Last Name followed by the first 3 digits of your student ID. For example, **Ali123.zip**.
- Your marks will be deducted according to what is missing from the above-mentioned submission details.
- Late submissions would result in additional 10% penalties for each day or part of it.
- Remember that you are encouraged to talk to each other, to the instructor, or to anyone else about any of the assignments, but the final solution may not be copied from any source.