Introduction To Programming: Independent Investigative Effort 9

(See Canvas→Assignments for due dates and marks. Late submissions incur a 10% penalty on the full mark for each working date late; submission cut-off is 5 working days late. Marks turnaround time is approx. 10 working days after submissions close.)

Having trouble with watching recordings, usernames, passwords, access, etc.? Please call the RMIT IT Service and Support Centre for quick help on 03-9925 8888 and remember to ask for a reference number and pass it on to your instructor.

Need extensions or special consideration? Please apply for special consideration online.

Please follow/complete all steps below in the given sequence:

1. Please check your official RMIT Student email account for important course communication.

2.a. Watch any unwatched recordings of the **Weekly Live Lecture** and do all missed tutorials before going further. Gaps in programming concepts will lead to difficulties. If you need further help, please also watch your Group's chat recordings.

2.b. If you need help in addition to what has been shown in the compulsory weekly live lecture, you are also expected to speak to your **group tutor via discussion forums** and attend/watch their live sessions. Please note that group tutors cannot debug your assessment code on your behalf as debugging is a part of every programming assessment.

3. Check any available feedback of your previous submissions and if you have any unresolved questions or if you need further feedback, post the relevant parts of your submitted work in a new post under Canvas→Discussions→Independent Investigative Effort and ask from your instructor. E.g. you can ask "*Gayan showed _____ but I did mine like _____, so which is the better approach and why?*", etc. Please note that the university requires teaching to be conducted in an equitable manner so please only use email for matters such as special consideration.

4. How did you go during the past week? Please give feedback to Gayan so he can improve your learning experience, before it's too late, during this study period itself!

5. This week's programming task will cover some concepts required by Assignment 3. **You should aim to get the help of your tutors and make further revisions.**

Coding exercise steps (Hint: Need help? Ask your tutor via Canvas→Discussions→"IIE09"):
Follow Canvas→Modules→Week 9 first. Ensure that you have followed and adapted the concepts from the IIE08 solution. Next, make a copy of your IIE08 and rename it to IIE09. Note: Your work must not be about the student manager.

a. Instead of having the records spread across separate arrays, we want to create an array of our own/custom class type. For example, if this were to be about the student manager, you would create a Student class as follows (note: simplified version shown):

```
public class Student {
		private String firstName;
		private int yearOfEnrolment;

		public Student(String firstName, int yearOfEnrolment) {
			this.firstName = firstName;
			this.yearOfEnrolment = yearOfEnrolment;
		}
}
```

We will then replace the following arrays in the BackEnd.java:

```
private String[] firstNames;
private int[] enrolmentYears;
```

with one array:

```
private Student[] students;
```

What other changes would you need to integrate the above? If you are unsure, make a post in the IIE09 forum and discuss with your tutors.

[Side note: The concepts of packages, polymorphism, inheritance (parent-child/super class-sub class relationships), abstract classes, interfaces, etc. are not covered in Intro To Programming and therefore must not be used in assessments. Subsequent courses such as Programming 1, Further Programming, etc. will cover these in detail.]

Submission Checklist for Step/Exercise 5 (There is also a Step/Exercise 6 in this IIE):
a. Ensure steps above have been followed in sequence. Your work must not be about the **Student** or the **StudentManager**.
b. Ensure that there are no red dots (compilation errors) in your code. Code with red dots are not valid Java and cannot be marked.
c. If you have not made a final submission for your Assignment 2, make a progress/dummy submission for Assignment 2 by submitting **your .java files to Canvas→Assignments→Assignment 3.** Remember, you can overwrite this submission any time when you have a proper submission for your assignment.
d. Take screenshots of the code and the running program (as you did for IIE01) and **only embed screenshots** in a post **under Canvas→Discussions→Independent Investigative Exercise 9**. Please do not attach the images or post your answers in any other format as this would make the submission invalid. The mark for this week's work will be given based on this submission.
e. Ensure that your files are correct. If they are not, you can edit/delete your post and retry.

6. Reply to your post(s) from Step 5/Exercise 5 of this IIE, and complete the following:

a. Assume that you are required to add another class to your project's "back end" set of classes. What are the DO's and DON'Ts of adding/removing further/existing classes?

b. Discuss how you would add another class to your project and explain: The name of the new class, what purpose it would serve, what changes you would need to make to the rest of the code.

Remember to modify and incorporate any feedback that you tutor gives you.