

Introduction To Programming: Independent Investigative Effort 3

Due: See [Canvas→Assignments](#) for due dates, marks and submission link.

Obtaining help method 1: Create a post in the corresponding Canvas→[Discussions→IIE forum](#), post a screenshot of your preliminary/faulty [along with a brief explanation](#) and your tutor will help in a general way. Debugging will still need to be done by the student as it is an important aspect of programming.

Obtaining help method 2: Weekly tutor chats (not to be confused with ‘live lecture’) of this week will give directions (not solutions) on how to approach this IIE. [Check recordings](#) if you cannot attend.

Getting feedback: For specific questions asked, you will receive feedback via the forum within 1-2 working days by your group tutor. If you ask during a tutor chat, you would receive feedback immediately.

Late submissions: Accepted for up to 1 week with an automatic 10% penalty for each day late (unless special consideration received).

Solution: Solution, recommended approach, common mistakes to avoid, etc. for main tasks will be shown during the [weekly live lecture](#) that starts at the time of submission.

Marks: IIEs are not tests. Marks are given based on effort and not on correctness. Marks turnaround time is approx. 10 working days after submissions close.

Access issues: For non-programming technical issues (relating to infrastructure, passwords, 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.

Extensions: For all new extensions, [apply for special consideration online](#). Contacting your tutors, instructors first will lead to delays.

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

1. Check your [official @student.rmit.edu.au email account](#) for announcements and other communication from the university. If getting in touch with your instructors, please only use this account (not Canvas inbox, messages, personal email, phone, Microsoft Teams, etc.)

2. [Watch any unwatched recordings](#) of the **Weekly Live Lecture** and complete all missed tutorials **before going further**. For your convenience, the time stamps of recordings are sent via student email/Canvas→Announcements.

3. Is there something that you have not fully grasped from what has been covered so far? Please have your doubts clarified via one of the relevant forums under [Canvas→Discussions](#). Leaving gaps has shown to be severely detrimental to learning.

4. Did you want to make any additions to the previous IIE? Please do by replying to your original post. i.e. do not edit, change the images of existing posts as it affects submission timing.

5. This week’s programming task will cover concepts required by Assignment 2. 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→"IIE03"):

Follow Canvas→[Modules→Week 3](#) first. It covers further topics on if-statements (compound conditions and nested if-statements) and using while-loops for repeating a specified number of times.

a. Make a copy of your IIE02 Eclipse project and rename the project to IIE03 or similar, as shown during the week 1 ‘weekly live lecture’. Ensure that your .java file is not PleaseRenameMe.java and it is something relevant to your application (avoid names such as IIE03.java; give it a personality!) but remember to follow class naming conventions (refer to IIE01).

Now modify some or all of the if-statements to include compound conditions and nested if-statements. It may not be possible to do these for all of the values but aim to do for as many as possible to gain experience. **Are you stuck? Please ask your friendly tutor by creating a post in the relevant IIE forum.**

b. Add a “scenario 1” type while loop to repeat the input-taking. The user can specify how many “records” they will enter and your loop must repeat this many times to process that many records. **Are you stuck? Please ask your friendly tutor by creating a post in the relevant IIE forum.**

c. For each declaration, condition and code block, add justification comments as required by Assignment 1/2’s specification. This is a skill at which you will get better with experience and it is important to get started. **Are you stuck? Please ask your friendly tutor by creating a post in the relevant IIE forum.**

d. Make a copy of your IIE03 and name it IIE03C. Now get your program to work using Scanner and System.out to operate exclusively via the console area of Eclipse (IIE03C should not have any mentions of GTerm or JOptionPane). You must only use Scanner’s .nextLine() method to take inputs as Strings first and then covert them to relevant primitive types using the wrapper classes (e.g. Integer.parseInt(), etc.). Do not use .nextInt(), .nextDouble(), etc. **Are you stuck? Please ask your friendly tutor by creating a post in the relevant IIE forum.**

e. [Optional] Make a copy of the ‘Week 1 Template’ project and name it IIE03-Optional. Independently investigate how to [obtain random numbers in Java](#). Next, use Random numbers with using GTerm’s .setXY, .setColor methods to experiment with different types of outputs that you can create. Use “scenario 1” type loops to repeat your random effects.

Submission Checklist for Step 5:

- a. Ensure steps above have been followed in sequence.
- 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 dummy submission for Assignment 2 by submitting **your .java file to Canvas→Assignments→Assignment 2**. Do the same for Assignments 3 as well. 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 embed the **screenshots in a post under Canvas→Discussions→Independent Investigative Exercise 3**. The mark for this week's work will be given based on this submission.
- e. Download your own file(s) from the discussion forum and ensure that it is correct. If it is not, you can edit/delete your post and retry.