Informatics and Computer Science	**Coursework Brief Proofing & Printing Confirmation Sheet**

Module Title **Programming In Java**	Module Code **20CSCI04C**
Module Leader **Assoc. Prof. Abeer Hamdy**	Semester **Two**
Proofed by **Prof. Khaled Nagaty**	

I hereby confirm that:

- This coursework brief has been proof-read (spelling and grammar) *
- This coursework brief assesses the ILOs for the module *
- This coursework brief follows the approved template *
- All questions (and sub questions) have their marks specified *

Signed (Proof Reader): _____

Signed (Module Leader)_____

Informatics and Computer Science	**20CSCI04C** **Assignment 2** **2020/ 2021**
Module Title **Programming In Java**	
Module Leader **Assoc. Prof. Abeer Hamdy**	Semester **Two**
Assessment Weight **20% of the total module mark**	Due Date **Week 11**

Instructions to Students:

1. This is an individual work that should be integrated by the group in one submission.

2. Submission: The submission is via the e-learning system only, by 12:00 pm on the deadline day.

3. Assessment: Assessment will be based on the class diagram and the code submitted in addition to scheduled discussions if needed.

4. Feedback: Will be given through generic feedback in labs and specific written feedback for each group three weeks after submission.

5. You can only submit your own work. Any student suspected of plagiarism will be subject to the procedures set out in the GAR.

Cairo Monorail Ticket booking System

Finalize your system and continue working using the code developed in assignment 1 based on the feedback received, but each student should get involved in individually developing the GUI, IO, and Exception Handling. Implement the functionalities that makes the system user-friendly and functional. Linking the GUI with the code developed in assignment 1 is a must.

Requirements as follows:

1) Classes Design & Implementation:

a. A class diagram for the system should be submitted. Rethink and adjust your design based on feedback you got on Assignment 1.
b. Add any necessary interfaces and implement the needed ones from the Java APIs (Comparable and Serializable for example).
c. Make use of the Java Collections by selecting from it the data structures suitable for classes in your application.

2) Graphical User Interface:

Implement the GUI for the system to enable access to all the functionalities implemented from assignment 1or any other extra functionalities that seem necessary. Proper Linking to GUI

3) Saving and Loading from Files

Implement saving/loading your data to/from files. According to the number of members in the team, select files to save and load from. Every team member is responsible for one file to handle. **No use of database is allowed.**

4) Exception Handling:

Implement error handling mechanism through Java Exception handling. Every team member is to implement, at least, two exceptions to handle. One Exception making use of a known Java Exception Class and one **user defined Exception Class.**

Submission: Each group needs to submit a pdf file and their source code as follows:

1) Team members and **a description of work division among them.**
2) Detailed Class Diagram.
3) A zipped project file with the Java source code.

Marking Scheme:

Classes Design + Collections	**Group mark**	**4%**
GUI and modified Implementation	**Individual mark**	**10%**
Files Saving/Loading	**Individual mark**	**3%**
Exception Handling	**Individual mark**	**3%**