Delivery Notes:

- This is a group assignment of 2 members (at most). If you submit as a group of more than two members, ALL the group members will get 0.

- Both students should work and fully understand everything in the submitted solution.

- No late submission is allowed.

- Submission will be on blackboard. It is your duty to ensure that your submission was properly uploaded to blackboard after you finish submitting it. If your submission was not uploaded properly while marking, you will not receive a grade for the assignment.

- No submission through e-mails.

- You will create ONE Word file that includes all the required items/figures, and should include as well the full names of the team members and their IDs. You will save that same file as a PDF file. You will put those two files **(the Word file and the PDF file)** in a folder named CS251_Assign1_firstStudentID_SecondStudentID and compress them to a .zip file with the same folder name. The compressed file would be the file to be delivered.

- **Failing to abide by the naming conventions of the file or failing to submit the files as per the requested extension, would result in a ZERO for both team members.**

- **In case of cheating you will get a negative grade whether you give your solution to someone, take the solution from someone/internet, or even send it to someone for any reason.**

Assignment 1 [6 points]

Read the following problem statement and then solve the tasks below:

A web customer uses some web site to **book seats** online within some theater booking system. The Web customer is considered a new customer until he certifies. Web Customer can **view performances**, **book seat,** and **certify** as a **certified customer**. The customer could use view performances if the customer only wants to find and see the performances that are offered by that theatre. This functionality could also be used as a part of the book seat function. When a web customer certifies as a certified customer, he can get some discount promo codes based on belonging to specific institutes offered by the Web site promo service (e.g., if the certified customer is a member of some syndicates-organizations, he could be offered promo codes). Note that **the Checkout** function is not available by itself - checkout is part of the book seat.

The web customer can **explore**, **search**, **add seats to cart**, **join waiting list**, and **view offers** during viewing performances. View offers and join waiting list demand customer **authentication**. At the same time, the item could be added to the shopping cart without user authentication. Use authentication could be done through the theatre booking system´s login page, through the user´s Facebook/twitter accounts. Using Facebook/twitter accounts requires external identity provider participation.

To checkout, the customer needs to be authenticated, and a payment function should be involved. The payment could be done either through some credit card payment service, or using certified customer loyalty points.

Required tasks:

1. State the functional and non-functional requirements. For the non-functional requirements, you need to mention at least (2x team size) non-functional requirements.
2. **Build a use case diagram describing the above system.**
3. **Create a classes diagram for the above system.**
4. Create use case descriptions/table for at least (**2 x team size) use cases** for the **most complex** use cases, where each team member would be responsible **for submitting two use case descriptions**. You may add more details within your use case descriptions.
5. Create sequence diagrams for the **most complex** scenarios. The submitted sequence diagrams should be **2 x team size**, where each team member would be responsible **for submitting two sequence diagrams**. The covered sequence diagrams should be for the same use case that had use case descriptions.

Grading Criteria

- Correctness and coverage of the submitted items for the features of the system of interest.
- Correctness and variation of the used notations for the submitted items.
- Consistency among the different submitted items.

Due date and submission

Assignment 1 is due on Friday, March 25th at 11:55 PM (Cairo Local time). Submission needs to be done through the course's Blackboard only.