

# Assignment 1

**CS3402 Database Systems**

# Assignment

- This is an individual assignment.
- The deadline is 23:59:59 on April 18, 2019. No file program can be updated after April 18, 2019; otherwise, you will get zero mark for this assignment.
- I will access <https://cs3402.cs.cityu.edu.hk/~e-id/assignment/> to mark your assignment. Make sure you put all the program files in the required directory.
- Make sure all the seats of all the houses are available before the submission deadline.

# Hard Copy Assignment Submission

- You must submit one hard copy report of the following items
  - ER model diagram of the database system
  - Relational model of the database system
- No need to submit any hard copy of program code!!
- A submission box will be arranged outside the CS General Office.

# Grading Policy

- 20% on the ER model and 20% on the relational model
- 60% on the system implementation based on the ER and relational models

- All required inputs
- Required outputs
- Correctness
- Efficiency (if the response time is too long compared to other students)

- Late submission

Time (after the deadline)	Total mark deduction
Within 24 hours	20%
Within 48 hours	40%
Within 72 hours	60%
Within 96 hours	80%
More than 96 hours	100%

# Application Scenario (1/2)

- In this assignment, you are required to build a simplified online ticket ordering system for a cinema.
- The cinema has 5 houses (i.e., A, B, C, D, and E houses). Each house has 50 seats (i.e., 5 rows \* 10 columns).

5 rows

A	A0	A1	A2	...						A9
B	...									
C	...									
D	...									
E	E0	E1	E2	...						E9
	0	1	2	3	4	5	6	7	8	9

10 columns

# Application Scenario (2/2)

- For each house, tickets are allocated to client users from A0 to E9.
- For ordering tickets, a client user selects a house, enter the number of tickets (from 1 to 10), name and email address. No need to enter date and time. The order is successful if the required number of tickets on the SAME row can be allocated to the client user. Otherwise, the order fails. For both cases, you should display the seating plan in which green seats are available and red seats are occupied.
- For a successful order, update the database to mark the required seat(s) as occupied and store the user name and email.

# Example 1

- Input: Order 2 tickets in House A
- Result: The order is successful. The tickets are A0 and A1.

**House A**

A	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9
B	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9
C	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
D	D0	D1	D2	D3	D4	D5	D6	D7	D8	D9
E	E0	E1	E2	E3	E4	E5	E6	E7	E8	E9
	0	1	2	3	4	5	6	7	8	9

# Example 2

- Input: Order 10 tickets in House A
- Result: The order is successful. The tickets are B0 to B9.

**House A**

A	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9
B	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9
C	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
D	D0	D1	D2	D3	D4	D5	D6	D7	D8	D9
E	E0	E1	E2	E3	E4	E5	E6	E7	E8	E9
	0	1	2	3	4	5	6	7	8	9



# Example 3

- Input: Order 3 tickets in House A
- Result: The order is NOT successful.

House A

A	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9
B	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9
C	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9
D	D0	D1	D2	D3	D4	D5	D6	D7	D8	D9
E	E0	E1	E2	E3	E4	E5	E6	E7	E8	E9
	0	1	2	3	4	5	6	7	8	9

# Implementation Environment

- You must implement the system using PHP. I will provide some program codes for you.
- The information for connecting the Oracle server:
  - HOST: ora11g.cs.cityu.edu.hk
  - PORT: 1522
  - SERVICE\_NAME: orcl.cs.cityu.edu.hk
- Web server:
  - Put your PHP programs in your h:\www (when you login lab computers), then you can access the web page through <https://cs3402.cs.cityu.edu.hk/~e-id/assignment/>
  - You need to access the web server within the CityU campus or through CityU VPN

# FAQ

- If you want to protect your assignment from other students, you can set up a login page and write down the login information on the report. This is an optional function and no bonus mark will be given. Make sure that the login information is correct; otherwise, you will get zero for the system implementation part.
- You should save the user name, email and ordered tickets for a successful order in the database.
- You should assume each user email is unique per successful order in the database.