

CSE 3330 – Database Systems

Project 4: Description and Deliverables

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Due Date: 04/26/2016

Consider the relational schema and instances from project 1 for completing this assignment. You need to complete this assignment with Java and MySQL. We will use MySQL RDBMS on Omega for this project.

Requirement

1) Departure:

- a) This option first prompts the user for the flight number, leg sequence, and date.
- b) It validates the **existence of the specified flight leg** and generates a user error if it does not exist.
- c) If the **leg happens** to be the **first leg of the flight**, the program creates the flight instance record (unless it exists).
 - i) If the leg is **not the first leg**, the program checks if a flight leg instance record, with an **actual arrival time**, had been created for the leg prior to this leg. If there is no such record, the program generates a user error. (i.e., if leg sequence is 2, it means is not a nonstop flight. Thus, the system should check if the prior flight exist, if not then report an error)
- d) The program then proceeds by prompting the user for the actual departure time and the pilot (ID) assigned to the flight leg.
 - i) The program checks the existence of the pilot's record and asserts that the actual departure time is after the previous leg's (if any) actual arrival time. The program generates a user error if any of these checks fail.
- e) The program then creates the flight leg instance record with the given data and informs the user of the operation's success.

2) Arrival:

- a) This option first prompts the user for the flight number, leg sequence, and date.
- b) It validates the existence of the specified flight leg instance record with an actual departure time. A user's error is generated if the check fails.
- c) The program then prompts the user for an actual arrival time.

- d) The time is checked for proper chronological order with respect to the actual departure time recorded for the flight.
- e) The program then updates the flight leg instance record with the actual arrival time and informs the user of the operation's success.

Note that in either option, the user should not be allowed to override an existing record. In other words, previously created arrival or departure records cannot be updated.

Submission

Submit, electronically, all files.

Add a header to each of your submitted files submission using following format:

-- Class: CSE 3330
-- Semester: Spring 2016
-- Student Name: your name (Last, First)
-- Student ID: your id
-- Assignment: project #4

The contents of these files should be as follows:

1. The source code of your program.
2. An output capture of sample runs, in which all program options are tested.
3. Supporting document (design, Architecture) (.pdf format)

There will be a 5 point penalty assessed on submissions that don't not comply with the above submission requirements.

For the electronic submission purposes, combine all of the required files in a zip file names **pr4_NetID.zip** and submit through BalckBoard.