SE2030 Lab2: Sequence Diagrams Lab Spring 2018

Overview: In this lab you will be creating sequence diagrams for the transit application project. Note that this is an individual lab, but you will be getting feedback from peers that you are expected to incorporate into your diagram.

Learning Outcomes:

- Create sequence diagrams
- Use Enterprise Architect to create sequence diagrams

Instructions:

Using the transit project description and your use cases, you should break down the workflows for the specified scenarios below into high-level substeps. Using text analysis, identify the potential objects (nouns) and actions between the objects (methods). Translate both of these scenarios into an **on-paper** sketch of a high-level UML sequence diagram (no boundary, control or entity objects yet). You should have two diagrams.

- A transit manager imports valid files into the application and searches for a specific stop (by stop id) to find the next trip arriving at that stop.
- A route planner imports valid files into the application and changes a time that an individual trip arrives and departs at a given stop. She then exports the files and uploads them to the Google Transit API to be displayed on Google Transit.

Exchange one of your high level diagrams with at least one neighbor and get their feedback. The feedback must be given in a different color ink and the person giving their feedback should sign the top of your paper**. If your diagram doesn't have useful feedback that informs a change in your diagram, then find someone else for additional feedback.** After identifying required modifications in your diagram, please call over the instructor to get feedback on your diagram **and** planned modifications (you do not need to implement the changes on paper).

Next, you should identify boundary, entity and control objects to further refine the diagrams. Note that you may not have all three of these for both sequence diagrams. You are encouraged to get further feedback from peers after this step. You do not need to re-write your handwritten diagram, but you should capture updates on it to make the translation into EA easier.

Next, you should take your sequence diagram and implement it in Enterprise Architect. Details of how to create a sequence diagram in EA are available here:
http://www.sparxsystems.com.au/resources/demos/sequence/Sequence_diagram.htm

https://www.youtube.com/watch?v=ehz3ha5Jp94

https://emerald.msoe.edu/resources/development_tools:enterprise_architect:seq_diag

(The emerald link must be accessed from on campus or through Global Protect)

It is important to note that EA requires that a "Class" Model is created before allowing the creation of a "Sequence Diagram." After you have created the Class Model (use the default settings), right click on

"Class Model" in the project browser directly under "Model" and select "Add Diagram." The Sequence Diagram is a "UML Behavioral" diagram.

Deliverables: Pdfs of your EA sequence diagrams should be uploaded to blackboard by the due date.

Lab Checkoff: You should show a draft of your (hand-drawn) first sequence diagram with peer feedback to the instructor **before** implementing it in EA.

Due Date:

- Morning section: Start of class, Thursday of Week 3.
- Afternoon section: Start of lab, Wednesday of Week 3.

Grading:

Hand-drawn diagram creation	20%
Diagram Syntax	30%
EA diagrams	20%
Diagram Semantics	20%
In class checkoff	10%
TOTAL	**100%**