SE (M) 2017-2018 Lab 2 – Solution

Modelling with UML - Online Reservations Case Study

Please get together in pairs or groups of 2-3 people to work on this lab.

Prerequisites: User Requirements Definition

A piece of software for a travel agency provide reservations facilities for the people who wish to travel on tours by accessing a built-in network at the agency bureau.

The application software keeps information on all the tours.

Users can access the system to make a reservation on a tour and to view information about the tours available online.

Users can access the system to cancel a reservation that he/she has made.

Any complaints or suggestions that the client may have could be sent by email to the agency or stored in a complaint database.

The employees of the corresponding agency could use the application to administrate the systems operations. Employees can add, delete, and update the information on the customers and the tours.

For security purposes, the employee should be provided a login ID and password by the manager to be able to access the database of the travel agency.

Task 2.1: Identify Users and Use Cases for the System

Look through the user requirements definition and identify who actually uses the system.

SOLUTION: **Customer, Employee**

Identify all of the actions that can be completed using the system. Which use cases should be developed for this system?

SOLUTION: **Reserving, Cancelling, Viewing Information, Complaining, Administrating**

Task 2.2: Designing with Objects and Relationships

Looking through the user requirements definition, list all names/nouns described.

Which of these should become objects? Think in Java. Refine the list until it is as simple as possible but still covers all functions. List the attributes and methods that should be with each object based on the user requirements and your own inference about what the system needs to work.

You may want to think about the following:

-Where is the data stored?

-How do users access the system?

-What object-oriented paradigms make sense here?

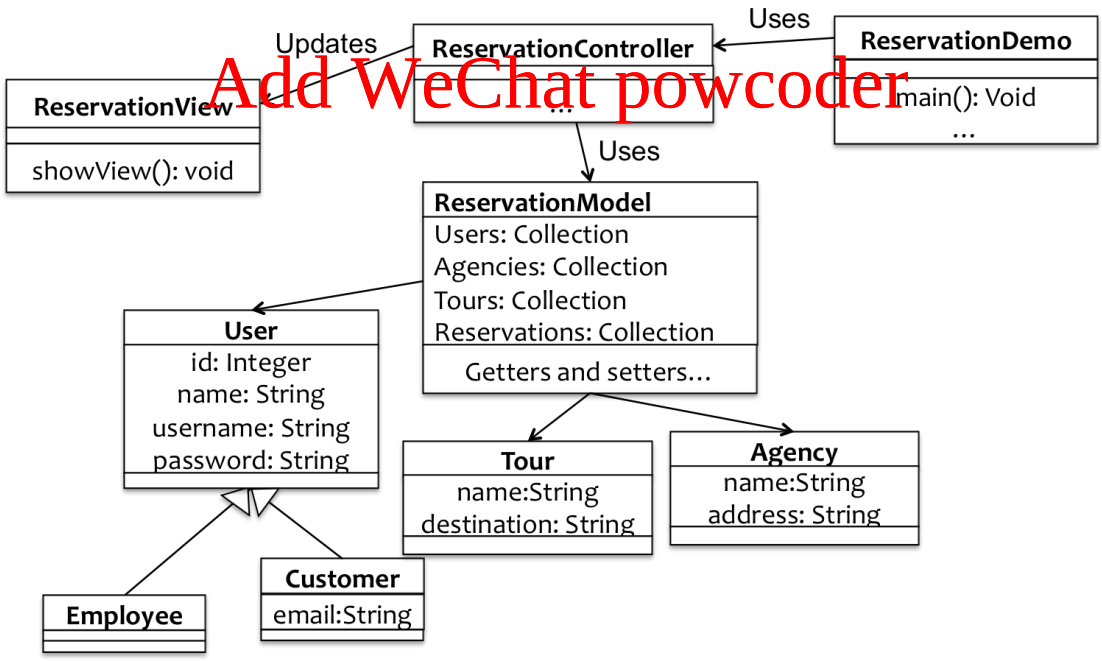
-What architecture makes sense here?

-…

Task 2.3: Modelling with UML

Create a UML diagram of your design (perhaps iterate the design and modelling steps a few times). You could use http://www.draw.io to create the diagram. Please upload your diagrams to the Moodle Forum under Week 2.

SOLUTION: **We'll work through the example with model view controller.**



This shows a possible strategy for getting started [different solutions will be discussed in week 5 or 6 after cohesion and coupling]. The example is incomplete in sections (on purpose) – the focus should be on the domain model not very low-level system design aspects which are discussed in later weeks.