**COMP 2920 L: Software Architecture & Design**

**Class Activity**

**Problem Description**

For the payroll system, some common requirements are as follows:

* It should allow employees to record time card information electronically
* It should automatically generate paychecks based on the number of hours worked & total amount of sales for commission-based employees
* It should have a web based interface to allow employees to interact with the system
* It should allow employee to operate ONLY on their own data records
* It should allow employees to choose payment type
* For payment, employees can be paid by the hour or salaried
* The calculated salary of the hourly workers must be paid every two weeks on the Friday, where for salaried employees, it should be paid at the end of the month (last Friday of the month)
* The system must be able to provide various types of reports for employees and managers.

**Exercises**

1. Define the architecture style you would use
2. Can you draw the overall use case?
3. identify two major use cases and translate them into sequence diagrams.
4. Draw an overall class diagram. Clearly identify dependencies and associations (aggregation & composition).
5. Can you list five functional and at least two nonfunctional requirements of this system
6. Draw a component diagram as to how the system can be integrated with mainframe based data source.