Problem Set 1:

(10 points) Cohort Exercise 2:

Design and implement a program that supports accepting two complex numbers from the user; adding, subtracting, multiplying, and/dividing them; and reporting each result to the user.

(10 points) Cohort Exercise 4:

Work as a group, document one use case of the App that you are developing.

(10 points) Cohort Exercise 5:

Draw individually a user case diagram for KBO.

(10 points) Cohort Exercise 6:

Draw as a group a sequence diagram for one of your use cases.

(10 points) Cohort Exercise 7:

Draw a class diagram for the following scenario. In a university there are different classrooms, offices and departments. A department has a name and it contains many offices. A person working at the university has a unique ID and can be a professor or an employee.

- A professor can be a full, associate or assistant professor and he/she is enrolled in one department.

- Offices and classrooms have a number ID, and a classroom has a number of seats.

- Every employee works in an office.

(10 points) Cohort Exercise 8:

A hardware update wizard can be in three states as follows:

1. Displaying a hardware update window.

2. Searching for new hardware.

3. Displaying new hardware found.

The wizard starts by displaying a hardware update window. While displaying this window, the user can press a "Search" button to cause the wizard to start searching for new hardware, or the user can press a "Finish" button to leave the wizard. While the wizard is searching for new hardware, the user may cancel the search at any time. If the user cancels the search, the wizard displays the hardware update window again. When the wizard has completed searching for new hardware, it displays the new

hardware found. Draw a state machine diagram that represents the function of the hardware update wizard just described.

(40 points) Homework Question 1:

Work as a group, document five use cases of the App that you are developing. The use cases should be written following the recommended format (slide 49). Draw the corresponding sequence diagrams.