**Exercise 1**

**1-** To what category of event processing application does this use case belong?

Ans: The category of the event processing application should be “Dynamic operational behaviour” as components of this system are sending or reacting events with other components of the system.

**2-** Who can be the stakeholders in this scenario?

Ans: In this scenario, the main stakeholders should be University, Student and Municipal.

**3-** What can be the components of the target system?

Ans: System for Bus management, Live Bus information feed, Applications for Lectures management, Applications for students, Municipal utility service, Live weather feed system.

**4-** What is the role of each component in the target system?

**5-** What are the messages exchanged between system components? Let’s take some example processes, which could be performed in our target system; trip scheduling, trip cancellation, and the number of students per trip.

**6-** What is the information needed in each of the processes?

**7-** In terms of data streams, what are the data streams processed by the system?

**8-** Draw a simple chart that illustrates the architecture of the system, and the flow of the different data streams between the different components in the system (similar to the Fast Flower Delivery overview)

**9-** In the application, which components act as event producers, consumers, or both? Draw a simplified event processing network for the application.