

COSC 412

Fall 2024

ASSIGNMENT 1

Due 1st October 2024 11:59 PM

Question 1 (10 points)

Consider different process models (not process flows) introduced in chapter 1-4, please select **two** different process models, and provide an example of software project that is suitable for each model. Please sufficiently justify why you think the example is suitable for the process model you select.

Question 2 (10 points)

Towson University is planning on doing away with the parking permits used previously and moving towards a “pay as you go” system employing price elasticity (i.e., the parking price will change based on current demand for that parking garage at a particular time). In such a system, each parking space will be fitted with an RFID sensor to detect if the spot is being used and each parking garage will have a number of parking pass kiosk systems that will allow a user to purchase a ticket for a requested period of time. To determine the parking price, the kiosk will determine the current system usage (i.e., the demand for parking in all parking garages across campus as well as the kiosk’s home garage) and utilize historical parking demand data for that time period. Users will be able to pay for their parking using a credit card or their TU OneCard.

- a) **(4 points)** Please list TWO functional requirements in this project. For each functional requirement you list, please identify whether it is functional **user** requirement, or
- b) **(2 points)** Please list TWO **measurable** non-functional requirements in this project.
- c) **(4 points)** Please draw one use case diagram for this project. Please provide all the assumptions you use.