Problem (4 points). NASA has hired ISWSoft to develop a software product to control the operations of the Artemis I mission. The mission manager uses the system to record a tentative launch date by inserting a date and time for the launch. This date may be postponed by the mission manager at any time by inserting another date and time and a text describing the reason that caused the delay. If the mission is postponed the system sends an email notification to mission area coordinators. Area coordinators are in charge of scheduling the work to be done. To do so, coordinators create tasks by giving a task name, description, delivery date and, optionally, assign it to a technician. If the task is not assigned to a technician when it is created the coordinator may assign it later to a technician. When a task is created and if the task is urgent then coordinators mark it as urgent and assign it a priority level. Any pending task may be deleted by the area coordinator who created it. To do so, the system lists all the tasks created by the area coordinator that are pending, the coordinator selects and deletes the corresponding task.

The system checks every day whether there are any urgent tasks that are due the next day. If so, it sends a notification to the area coordinator and to the assigned technician (if any) to let them know that there is a pending urgent task about to be overdue. Once a task is finished it is marked as finished by the technician. In some situations, tasks require extra costs. In this case, the technician describes the nature of the cost and amount of money when the task is finished. Area coordinators may obtain a list of pending tasks. Once the list is obtained the area coordinator may select a task and send a reminder to the assigned technician.

All technicians, coordinators and mission managers are registered users that must log in before using any functionality of the system.

Thirty minutes ahead of the launch the system starts a time launch counter and sends a notification to the mission manager. The rocket is equipped with many sensors that at any time may raise an alarm that is sent to the mission manager and to area coordinators describing the nature of the problem.

In addition, any person at NASA may trigger an alarm by pushing buttons available in public spaces in case of an emergency. When this is done, a message is sent by the system to all registered users.

Obtain the UML Use Cases Model (context and structured diagrams) and describe the text template for the use case “Create New Task”