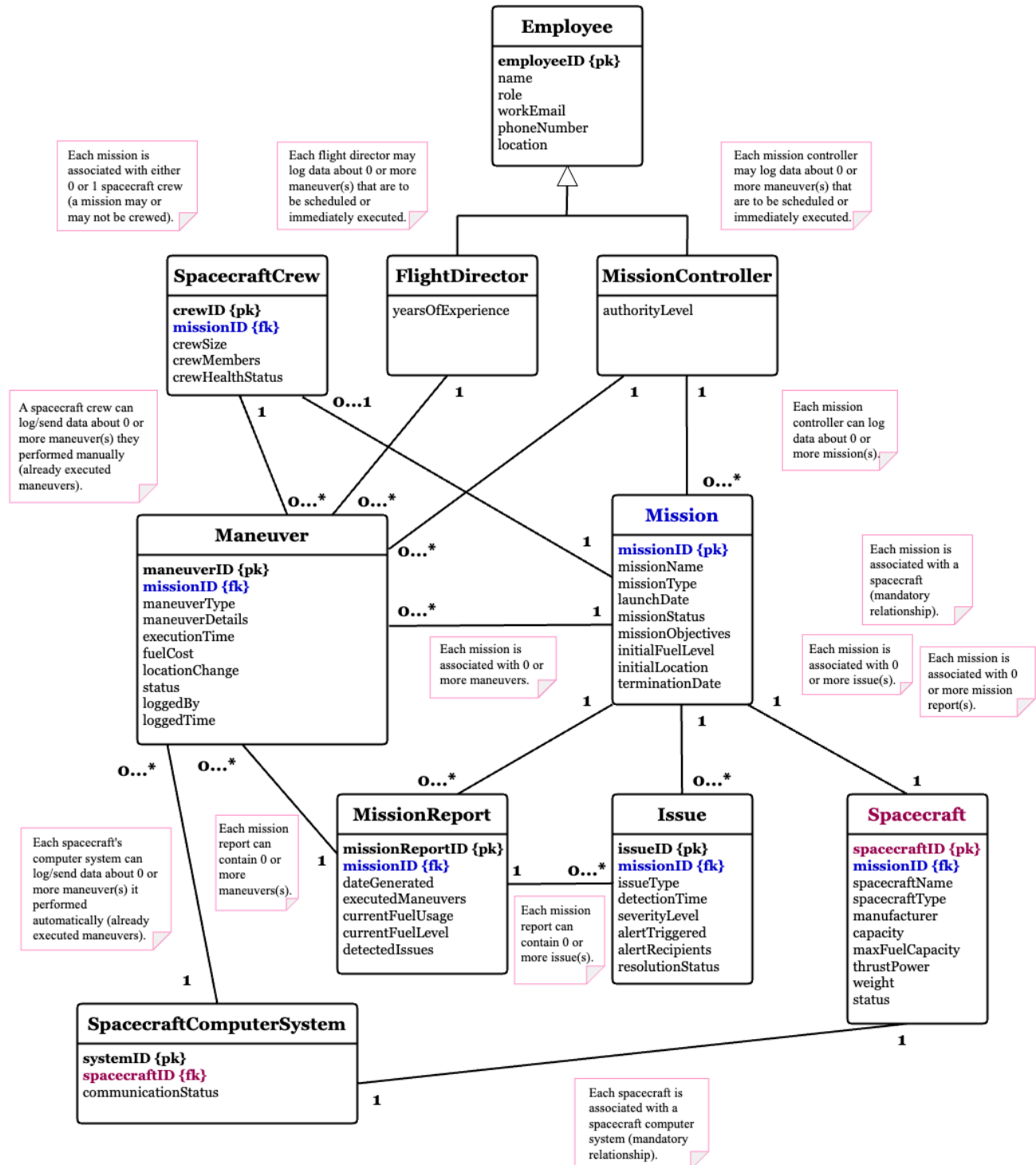


CS3560.03 Group Assignment #2

1. Use methods covered in the class to identify "thing" (class) . Only include classes that are related to your system. Think carefully about each identified class, all its related attributes and how classes are related (multiplicities)? Identify super and subclasses if any. Use UML tools to develop your system domain model class diagram.



2. In group assignment #1, you identified your system use cases. Revise your list! If any change is required, do it! you might need to add, remove or change some use cases. Once you are confident with your use case list, choose one of them and create its fully developed description table.

Use case name:	Look Up Mission	
Scenario:	User searches for Mission(s) using the system's search form/search engine in order to reference that mission's details.	
Triggering event:	User wants to search for a Mission by submitting a search query.	
Brief description:	This use case begins when a user (mission controller) submits a search query using specific keywords (such as mission name, etc.) to look up a Mission and reference its details. The system should ideally return a list of all matching Mission record(s). If no matches are found, the user is given the option to browse through all Mission(s) stored in the system or return to the main menu. In either case, if the user selects a Mission from the returned list, the system retrieves its details and displays it.	
Actors:	Mission Controller	
Related use cases:	None.	
Stakeholders:	<ol style="list-style-type: none"> 1. Mission controllers, flight directors, astronauts, simulation supervisors (essentially all employees involved in carrying out spacecraft missions). 2. Scientists/researchers receiving data from spacecraft missions. 3. Media/general public/space enthusiasts. 	
Preconditions:	The SMMS System must be available and operational (as in all its necessary components such as classes, databases, search engine, etc.).	
Postconditions:	A list of matching Mission record(s) is displayed based on the user's search criteria. If no matches are found and the user chooses to browse all Mission(s) , the system returns a full list of available Mission(s) .	
Flow of activities:	Actor	System
	<ol style="list-style-type: none"> 1. User submits a search query through the search engine using keywords (mission name, etc.). 	<ol style="list-style-type: none"> 1.1 <u>If there are matches</u>, the system returns a list of matching Mission(s), whether archived or active, that match the provided keywords (search criteria). 1.2 <u>If there is no match</u>, the system will display a message and prompt the user: "No matching missions found. Would you like to browse all

	<p>2. The user <u>makes a selection</u> from the prompt (if they were prompted), either selecting "Yes" to browse all missions or "Cancel" to exit.</p> <p>3. If the user selects a Mission from the returned list...</p>	<p>missions?" (Options: "Yes" "Cancel")</p> <p>2.1. <u>If the user selects</u> "Yes," the system returns a full list of all Mission(s) (archived and active).</p> <p>2.2. <u>If the user selects</u> "Cancel," the system terminates the search process and returns to the main menu.</p> <p>3.1 The system retrieves and displays all relevant details for that particular Mission, such as associated maneuvers and spacecraft data (using relationships).</p>
<p>Exception conditions:</p>	<p>1.1 If the user submits the search form without entering any keywords, the system displays an error message. The search won't be processed until valid input is provided.</p> <p>1.1 If the system cannot access the mission database during the search, it displays an error message (ex: "Search cannot be completed at this time due to a system error. Try again later.") and terminates the search process.</p> <p>1.1 Desired mission record that the user is trying to search has not yet been created or there are no mission records in the system at all.</p> <p>1.1 If the system locates matching missions but fails to display the results, it displays an error message (ex: "Unable to display search results. Try again later.") and redirects the user back to the search form.</p>	

3. Use UML tools to develop an activity diagram and SSD for the use case described in part B.

