

ID2207 HT23 Modern Methods in Software Engineering (50928)

Homework 1 - Group 8

Dominika Drela, Eugen Lucchiari Hartz

Question 1

Identified roles in this business are:

Role	Responsibilities
Developer	a) Filling salary raise request with required details
Manager	a) Reviewing, approving or rejecting applications b) Negotiating the application when possible

Identified use cases in this business:

- a) Login
- b) ValidateUser
- c) CreateSalaryRaiseRequest
- d) ReviewApplication
- e) CheckPerformanceReport
- f) CheckPriority
- g) FinalizeApplication

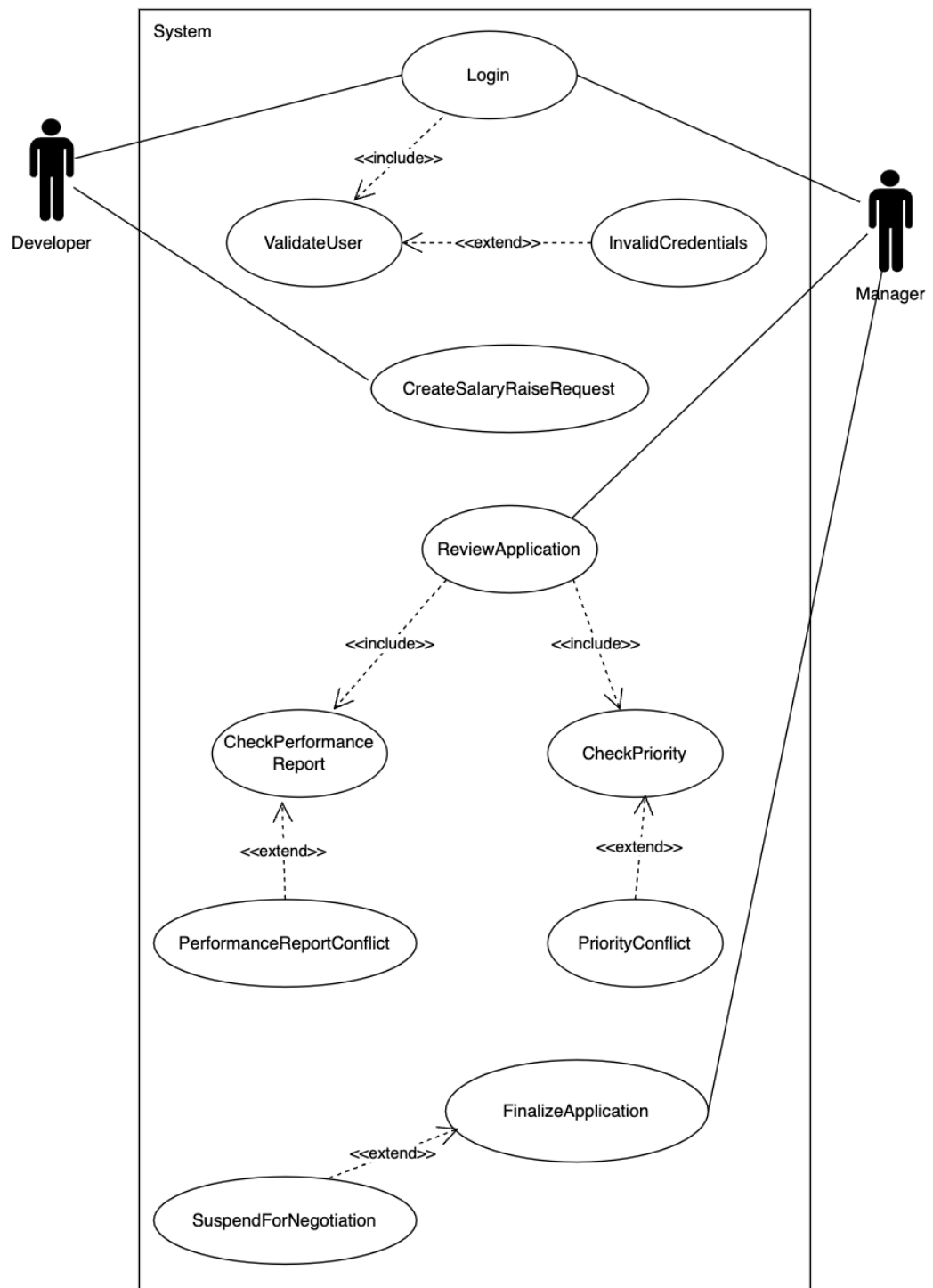
Some exceptional use cases:

- a) InvalidCredentials
- b) PerformanceReportConflict
- c) PriorityConflict
- d) SuspendForNegotiation

Use case description:

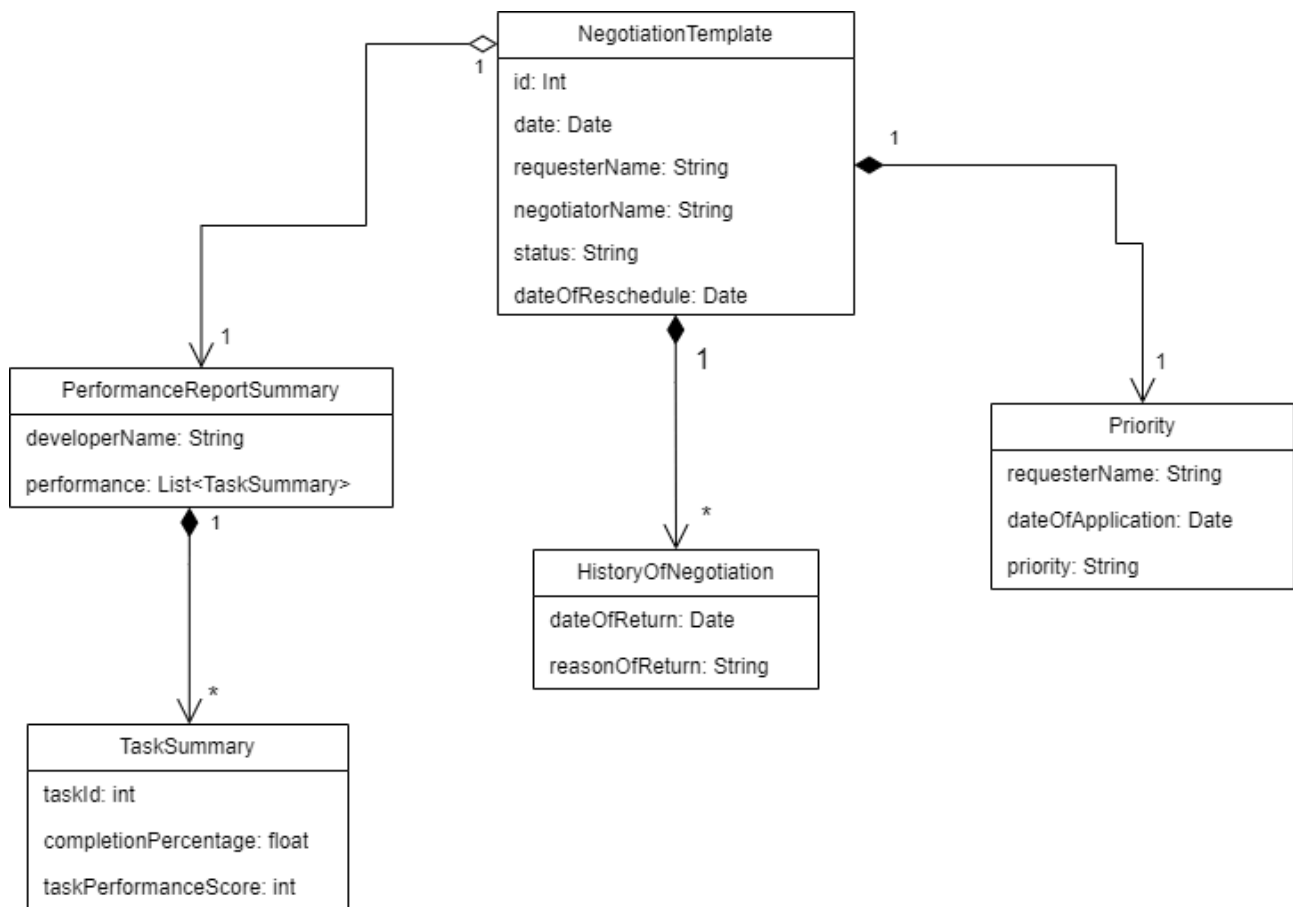
Name: ManageSalaryRaiseRequests
Participating actor(s): Developer (Initiator) Manager
Entry Conditions: <ol style="list-style-type: none">1. Developer logs in to the system.2. System validates the developer credentials.3. Developer accesses the create salary raise request functionality <p>This use case extends InvalidCredentials, PerformanceReportConflict, PriorityConflict, and SuspendForNegotiation use cases. They are initiated when the login credentials are invalid, or when there are problems with the performance report of the developer, or when there are other developers who requested a salary raise and the developer has no priority, or when the application needs to be suspended for further negotiation.</p>
Exit Condition: Developer and Manager have agreed whether to approve, cancel or negotiate the salary raise request.
Quality Conditions: The system should be available and functioning without unexpected interruptions.
Event Flow: <ol style="list-style-type: none">1. Developer chooses to create a new salary raise request application.2. System displays the requested form.3. Developer fills the application with the required amount by which the salary should be raised and reason for salary raise.4. Developer chooses to send the application to the manager.5. System displays the new request to the manager.6. Manager reviews the application and chooses to review the performance report.7. System displays the performance report to the manager.8. Manager chooses to review the salary raise priorities for the other developers.9. System displays the list of salary raise requests to the manager.10. Manager reviews the application and chooses to approve, reject, or suspend the application.

Use Case Diagram:



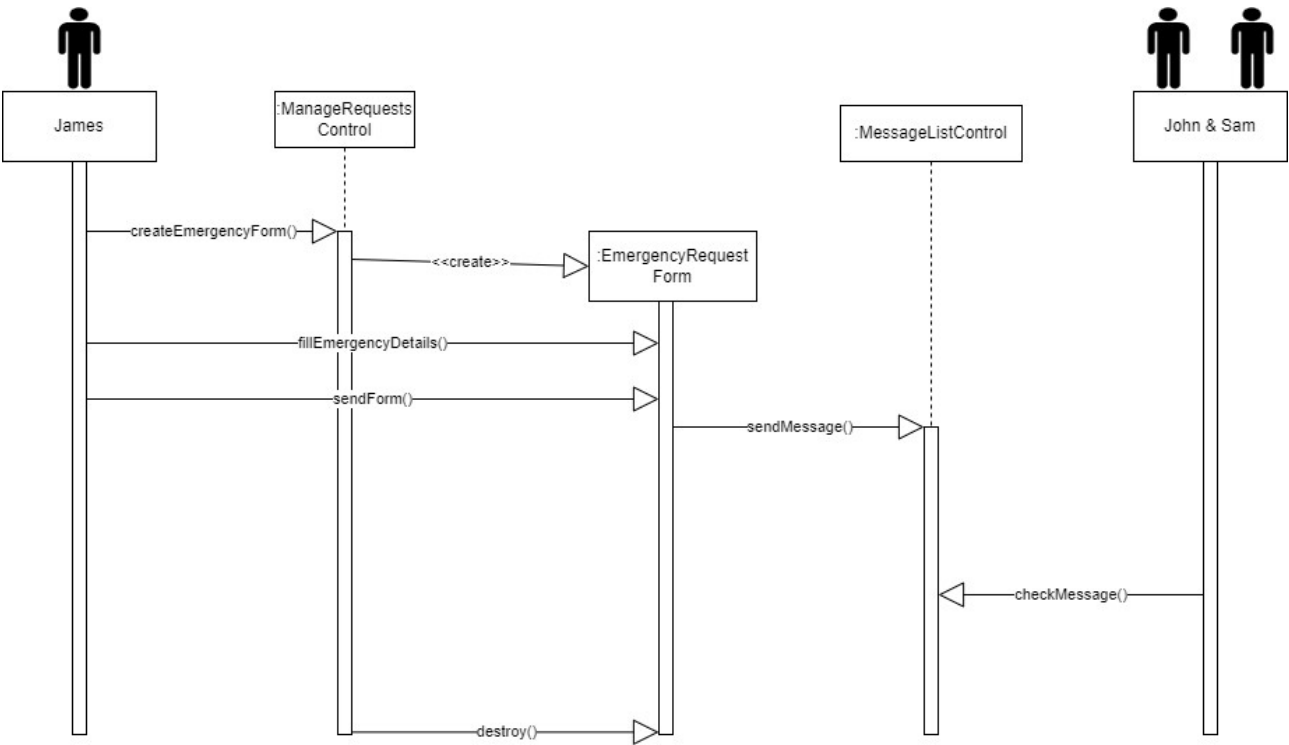
Question 2

Class diagram:



Question 3

Sequence diagram:



Question 4

Activity diagram:

