

Software Design Coursework 3

F28SD

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Introduction

This report is about a software-based Meeting Management System. This system supports employees to organize and schedule meetings with ease.

This coursework is a continuation of the first coursework. From the feedback received for the first coursework, some changes have been made. All changes have been highlighted.

This coursework shows the class diagram for the MMS system. It also shows a sequence diagram and an activity diagram for one use case each. A state machine diagram is created to represent the scheduling, managing, and archiving a meeting from the perspective of MMS. A set of scenario test cases have also been derived.

All the diagrams have been drawn using UMLet. All diagrams are created using UML syntax.

D1: Assumptions

- RBS can be accessed externally by MMS
- Both organizer and participants are employees of SPOOKS Inc.
- MMS authenticates employee's NIC and PIN correctly.
- MMS has access to SCS.
- The touch screen functions properly.
- MMS maintains a record of all ongoing meetings.
- MMS is connected to MAS
- MAS archives all recorded meetings.
- The organizer can request to update an employee's security clearance.
- All external systems(RBS,SCS,MAS) function properly

No changes have been made to the assumptions.

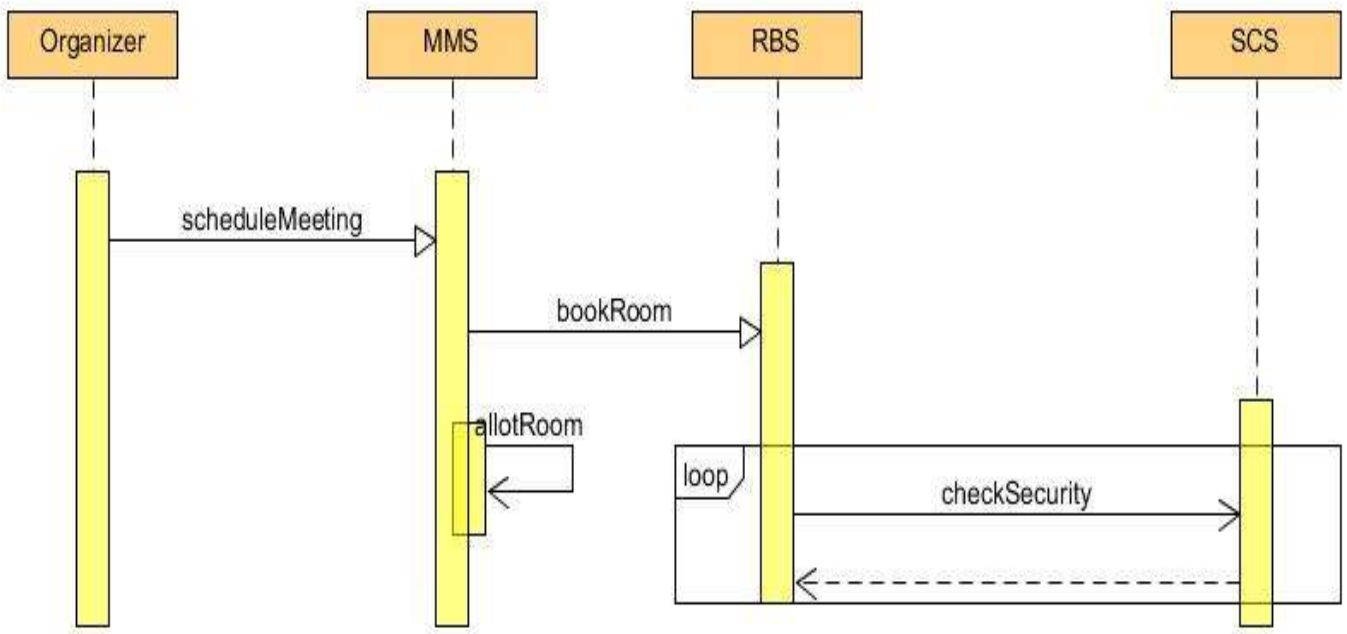
D2:Functional requirements

ID	Description	Priority
FR1	The meeting room does not exceed the maximum room occupancy	M
FR2	Meeting should have an organizer	S
FR3	All attendees are SPOOKS INC employees	M
FR4	Organizer's security clearance is same or below the meeting's security level	M
FR5	Participant's security clearance is same or above the meeting's security level	M
FR6	RBS shall hold details of all meeting rooms	M
FR7	MMS shall access RBS to book a room	M
FR8	MMS shall authenticate an employee's NIC	M
FR9	MMS shall authenticate an employee's PIN	M
FR10	Organizer will provide each participant with an NIC	M
FR11	MMS authenticates anyone entering the room using a security airlock	M
FR12	MMS authenticates anyone leaving the room using a security airlock	M
FR13	MMS maintains a record of all ongoing meetings	S
FR14	MMS retains all meeting records for 30 days	S
FR15	After 30 days, MMS sends the meeting records to MAS	S
FR16	HR department can update an employee's security clearance at any time	S
FR17	Updates in an employee's security clearance will be supplied to MMS by HR manager	M
FR18	All updates in security clearance will be validated by the HQS	M

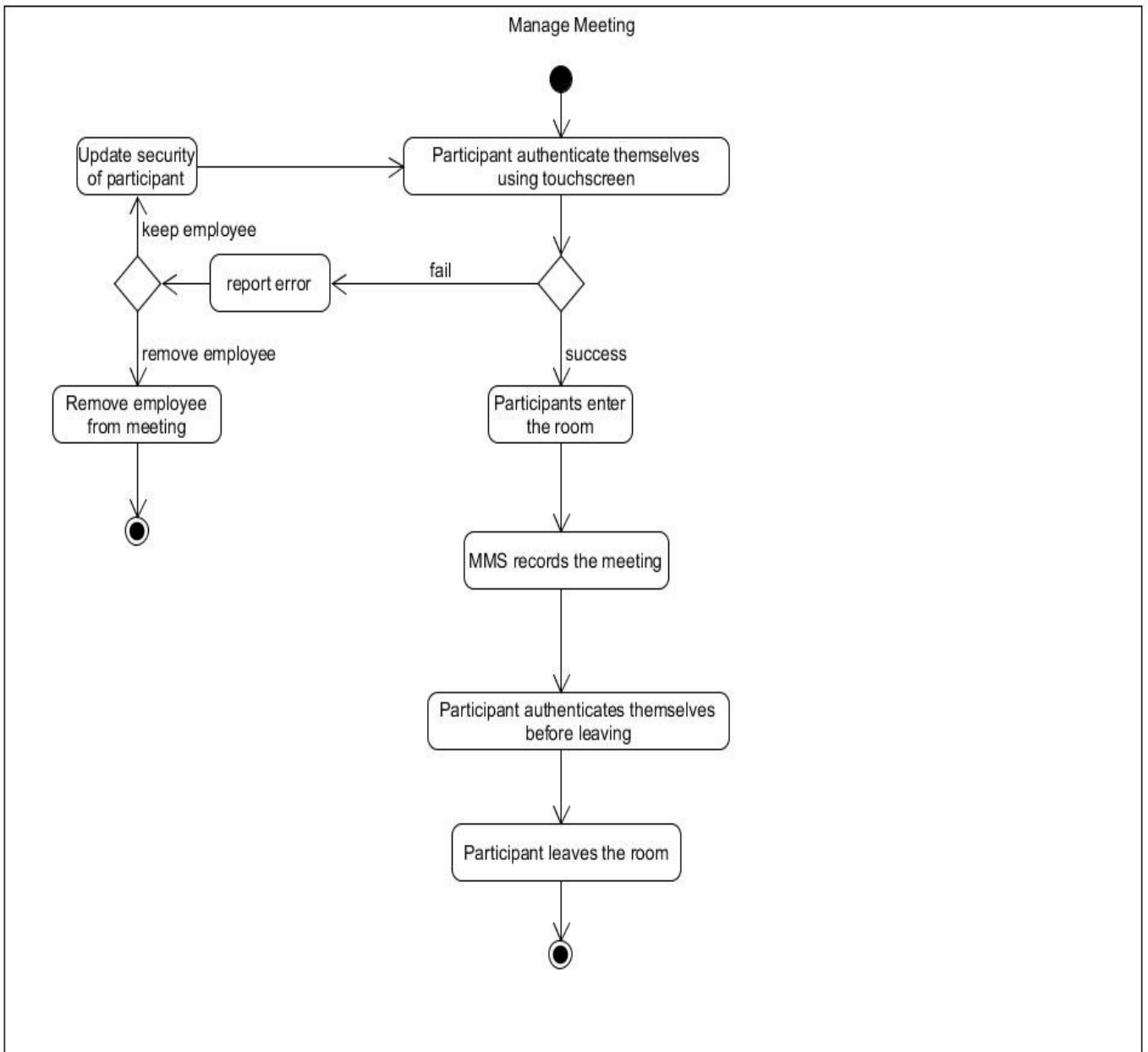
All changes made to the functional requirements are highlighted. The prioritizing follows MoSCoW rule.

D3: Class Diagram

D4: Sequence Diagram



D5: Activity Diagram

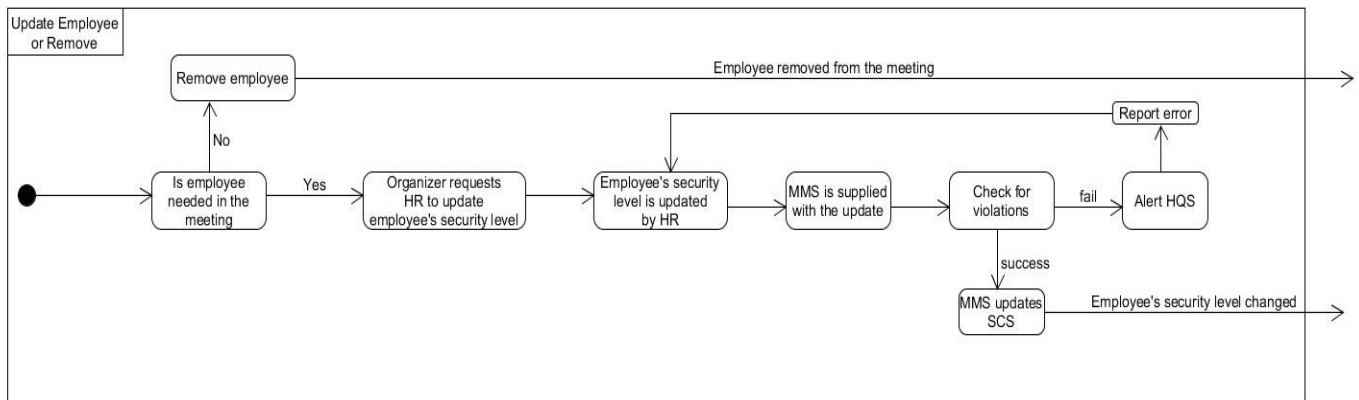
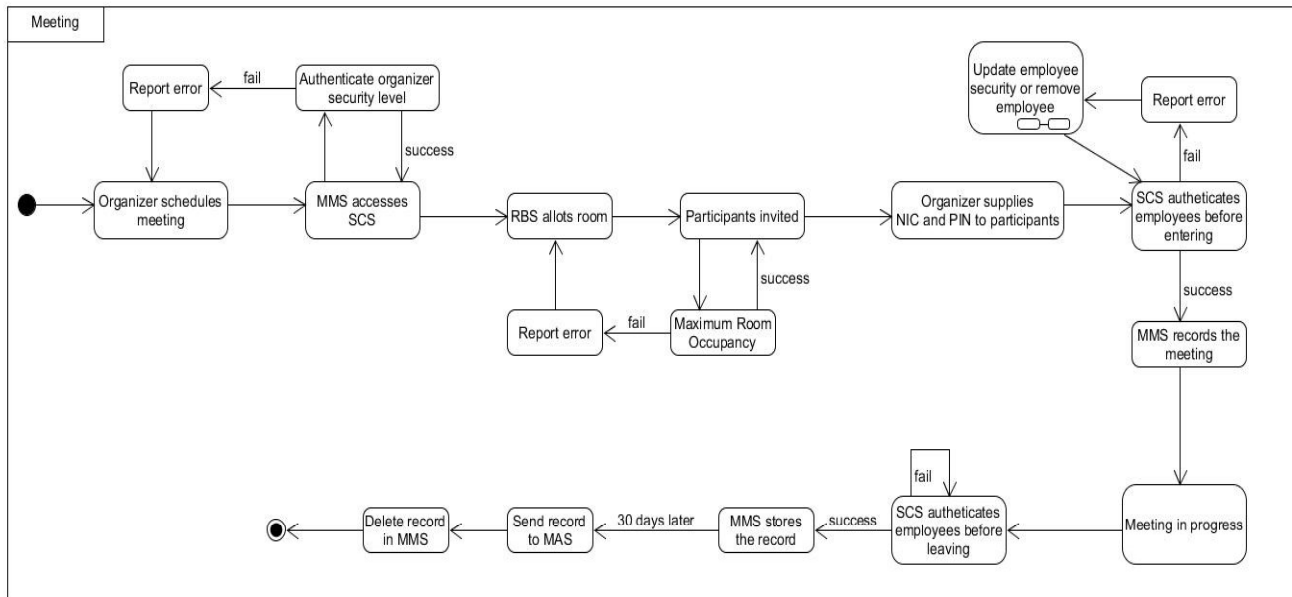


The activity diagram shows the main and alternate flow in the process of managing a meeting.

D6: State Machine Diagram

The state machine diagram shows the scheduling, managing and the archiving process of a meeting from the perspective of the MMS.

A substate is used to show the process of updating an employee's security level.



D7: Test Case Scenarios

The test case scenarios are derived from the activity diagram.

The paths are also shown below.

Path	Comment	Path Condition
1	Successful authentication of participant	* Authenticate PIN(valid) * Enter meeting
2	Successful authentication of participant after updating their security clearance	* Authenticate PIN(invalid) * Update security level * Authenticate PIN(valid) * Enter meeting
3	Remove participant from the meeting	* Authenticate PIN(invalid) * Remove participant

