
Group 16

FDM Employee Portal

**ECS506U Software Engineering
Group Project**

Requirements Elicitation Report

1. List of Requirements

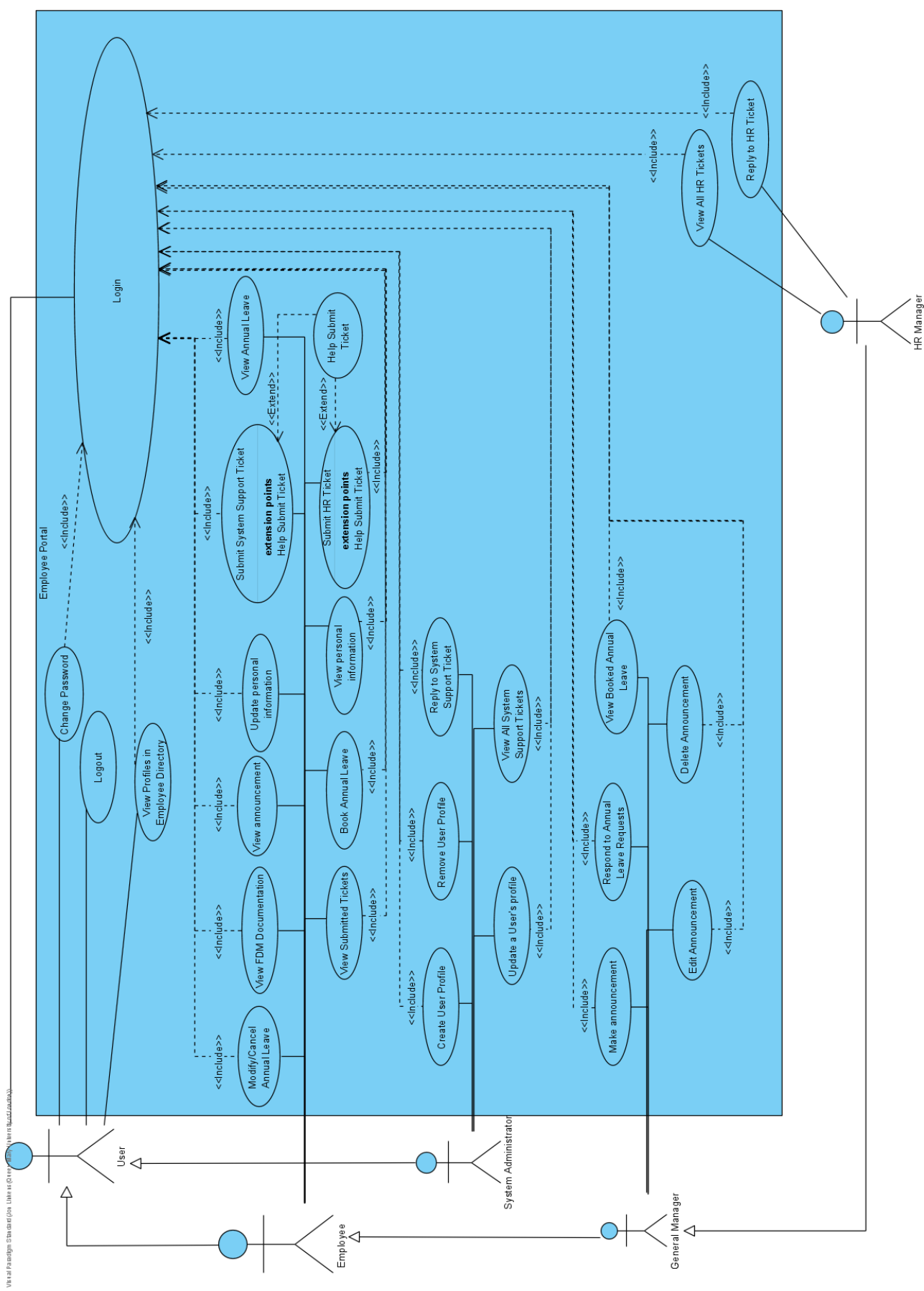
ID	Requirement	Type	Priority	Use Case
Login				
1	Each user must be identified with a unique username.	Functional	Core	Login
2	Users must only be able to login using their assigned username and password (no other credentials).	Functional	Core	Login
3	The EPS must automatically validate a user's login credentials before permitting system access.	Functional	Core	Login
Announcement				
4	Employees must be able to view FDM announcements.	Functional	Core	View announcement
5	The latest FDM announcement must be visible on the EPS homepage as soon as a user signs into the system.	Functional	Core	View announcement
6	The system must store the body (contents) as well as both the date and time of when the announcement was posted.	Functional (D)	Core	Make announcement
User				
7	The EPS must store each user's full name, email address, username and password.	Functional (D)	Core	Create User
8	The EPS must allow users to Logout from the portal.	Functional	Core	Logout
9	A confirmation email should be sent to a user once they have been registered to the EPS.	Functional	Optional	Create User
10	Users of the EPS must have the ability to change their password.	Functional	Core	Change Password
Employee				
11	Employees must be able to view their own private (e.g., salary, pay scale, home address, etc.) personal information.	Functional	Core	View personal information
12	The EPS must store both public and private information regarding employees.	Functional (D)	Core	Update personal information
13	Employees must be able to update their personal information.	Functional	Core	Update personal information
14	Employees must be able to view their personal profile. (i.e., view the information that is available to all users on the Employee Directory).	Functional	Core	View Personal Profile
15	Employees must be able to submit a System Support ticket.	Functional	Core	Submit System Support Ticket
16	Employees must be able to submit a Human Resources ticket.	Functional	Core	Submit HR Ticket

17	Employees must be able to view the details and/or progress regarding their submitted ticket/s.	Functional	Core	View Submitted Tickets
18	Employees must be able to view their own current annual leave arrangements.	Functional	Core	View Annual Leave
19	Employees must be able to submit an annual leave request.	Functional	Core	Book annual leave
20	Employees must be able to view FDM documentation (e.g., the employee handbook, documents on FDM policies and procedures, etc.)	Functional	Core	View FDM Documentation
21	Employees (if required) should be able to access specific support documentation to assist in the correct submission of a ticket.	Functional	Optional	Help Submit Ticket
22	An employee must receive a notification email when a manager has responded to their annual leave request.	Functional	Core	Respond to Annual Leave Requests
23	An employee must be able to modify or cancel their upcoming annual leave.	Functional	Core	Modify/Cancel Annual Leave
Annual Leave				
24	The EPS will only allow annual leave requests to be submitted if the requested days are less than or equal to the remaining amount number of annual leave days for that employee.	Functional	Core	Book Annual Leave
25	The system must store an employee's annual leave request.	Functional	Core	Book Annual Leave
Ticket				
26	The system should store the following details for a HR ticket: sender's name, date and time, body (contents of the ticket) as well as a unique ticket number.	Functional (D)	Core	Submit HR Ticket
27	The system must remove the HR ticket from the HR-exclusive page/board of unaddressed tickets once the submission has been responded to.	Functional	Core	Reply to HR Ticket
28	The EPS should store the following details for a System Support ticket: a unique ticket number, the sender's name, selected checkboxes, body (contents of the ticket), any attached images as well as the date and time of submission.	Functional(D)	Core	Submit System Support Ticket
29	The EPS must remove the System Support ticket from the Administrator-exclusive page/board of submitted tickets once the submission has been responded to.	Functional	Core	Reply to System Support Ticket
General Manager				
30	Managers must be able to approve or deny annual leave requests.	Functional	Core	Respond to Annual Leave Requests
31	Managers must be able to view all of the annual leave already booked by employees.	Functional	Core	View Booked Annual Leave

32	Managers must be able to make announcements.	Functional	Core	Make announcement
33	Managers must be able to edit their own announcements after submission.	Functional	Core	Edit announcement
34	Managers must be able to delete/remove their announcements.	Functional	Core	Delete Announcement
35	Managers must get a notification email when a new annual leave request has been submitted by an employee.	Functional	Core	Book Annual Leave
Administrator				
36	System Administrators must be able to create new user accounts.	Functional	Core	Create User Profile
37	System Administrators must be able to delete user accounts.	Functional	Core	Remove User Profile
38	System Administrators must be able to reply to System Support tickets.	Functional	Core	Reply to System Support Ticket
39	System Administrators must be able to update an employee profile. E.g., change their assigned role from Employee to General Manager.	Functional	Core	Update a User's profile
40	System Administrators must be able to view all submitted System Support tickets.	Functional	Core	View All System Support Tickets
HR Manager				
41	HR managers must be able to view all submitted HR tickets that have been unaddressed.	Functional	Core	View All HR Tickets
42	HR managers must be able to reply to submitted HR tickets.	Functional	Core	Reply to HR Ticket
Employee Directory				
43	The first name, surname, email address as well as contact number (if available) must be displayed on each employee profile.	Functional	Core	View Profiles in Employee Directory
44	The employee directory must display all employee profiles alphabetically.	Functional	Core	View Profiles in Employee Directory
Non-Functional Requirements				
45	The EPS must be accessible on both Desktop and Smartphone web browsers.	Non-functional (Compatibility)	Core	-
46	The system must leave an audit trail in the event of an Administrator changing a user's password.	Non-Functional (Auditability)	Core	
47	The EPS should load in 3 seconds when the number of concurrent users is > 1000.	Non-functional (Performance)	Core	-

48	Users of the system must not be able to perform any EPS functionality without first logging in.	Non-functional (Security)	Core	-
49	The portal should login the user within 5 seconds after credential verification 99% of the time.	Non-functional (Performance)	Optional	-
50	The EPS must update the annual leave calendar within 5 seconds after an Annual Leave Request has been made.	Non-functional (Performance)	Core	-
51	All aspects of the Employee Portal System must comply with The General Data Protection Regulation (GDPR) legislation.	Non-functional (Legal)	Core	-
52	Employees of the system must not be able to view the annual leave dates booked by other employees.	Non-functional (Privacy)	Core	-
53	Users should have the capability of modifying their own personal viewing of the EPS to meet their needs and/or desires. (E.g., if a user requires larger sized fonts or wants to hide certain system functionalities).	Non-functional (Accessibility/ Usability)	Optional	-
54	The EPS should be able to perform a full-system backup successfully within 1 hour.	Non-functional (Backup)	Optional	-
55	System Support and HR tickets must successfully submit to their required locations (the ticket boards) 99% of the time.	Non-functional (Reliability)	Core	-
56	User must change the assigned password after their first successful login	Non-functional (Security)	Core	-
57	All sensitive data stored within the EPS must be protected using the latest encryption technology.	Non-functional (Security/ Privacy)	Core	-
58	The system should only go down for maintenance at most once every two weeks for a maximum of 20 minutes.	Non-functional (Maintainability/ Performance)	Optional	-
59	The system should notify the user via email within 2 minutes if the system goes down unexpectedly?	Non-Functional (Performance/ Maintainability)	Optional	-

2. Use-Case Diagram



3. Use Case Description

Name: Book Annual Leave

Brief Description: Use case which allows employees enrolled in the system to book their annual leave. It will permit the booking of annual leave through the completion of a form which would then be submitted as a ticket. This ticket would then need to be approved by a manager and withheld in a queue.

Actors: Employee (including Basic Employee, General Manager and HR Manager)

Preconditions:

- User must be logged into the system to be able to access this feature/use-case
- User must be an *employee* of FDM
- User must have either a role of Basic Employee, General manager, or HR manager

Basic Flow:

1. Basic Employee, General manager, or HR manager logs into the system via login details
2. Employee selects "Book Annual Leave" feature/option on the main menu interface
3. Employee finds the specific days for which leave is wanted, on the calendar interface
4. Employee then selects the specified days which would highlight the days in question
5. After each requested booking, a temporary counter, which would hold the amount of annual leave available, would deduct by the number of days that are being booked off
6. Employees would then submit a request to book the highlighted days off which would get sent to the employees within FDM who have the authority to either approve or deny annual leave (these are the General managers and the HR managers)
7. Ticket would be added into a queue which the manager(s) would need to approve/deny
8. The employee would get a receipt via their emails about the days which have been requested off.
Receipt will be generated once ticket gets appended to queue

Alternative Flows:

- **System fails to verify login details:**
 - o 1.1 System fails to verify employee login details due to incorrect or non-existent credentials.
 - o 1.2 System displays an error message that informs the employee that the system has failed to log in and prompts the employee to try again.
 - o 1.3 System is redirected to the first step of logging in.
- **Employee selects wrong date:**
 - o 4.1 Employee tries to highlight a date which has expired
 - o 4.2 System displays an error message to inform that the date selected cannot be chosen
- **Employee requests incorrect amount of days**
 - o 5.1 Employee tries to request more annual leave than is available (shown in temporary counter)
 - o 5.2 System displays an error message to inform the employee about the maximum annual leave days available
 - o 5.3 System prompts the employee to select the days again.

Post Conditions: User gets an email giving a summary of the days they are trying to book off

4. Risk Assessment

Risk	Likelihood	Severity	Impact	Preventative / Mitigating Actions
Absent team member(s) due to ill health	High	Medium	Reduced productivity / Low quality product / Unfinished product / Product pushed back	Adjust the plan so that the unwell team member has extra time to catch up with their tasks, once their health improves. If this is not possible, other team members will complete the tasks on behalf of the unwell member.
Project requirements are misinterpreted by the team	Low	High	Unsatisfactory product for the stakeholders / Incomplete product	Have frequent meetings with the stakeholders to avoid any misconceptions and make calculated decisions with all team members' approval.
Decision-making disagreements between team members	Medium	Medium	Reduced productivity / Reduced team morale / Low quality product / Unfinished product	Assign a team leader who will make the final decision based on what most members agreed on while keeping the stakeholder in mind.
Team member's work is of a low standard	Medium	Low	Increased workload for other members / Team morale reduced / Project pushed back	Have regular meetings to evaluate the progress of all team members. If a member is struggling, provide them with resources that could help their work. Alternatively, assign the member to a different task which better suits their skill-set.
Low team morale and motivation	Medium	Medium	Reduced productivity / Poor communication	Provide team members with enough time to complete their tasks and organise breaks/days off to reduce pressure. Give every team member recognition for their work to increase motivation.
Stakeholders request multiple changes with limited time remaining	Low	High	Project complexity increased / Unsatisfactory product for the stakeholders	Clear communication with stakeholders to identify potential changes as early as possible. Frequent communication with stakeholders to ensure we are notified of any requested changes as quickly as possible. Plan to complete tasks before the deadline to allow for any changes requested at short notice.

Stakeholders provide low quality feedback	Low	Medium	Unsatisfactory product for the stakeholders / Low quality product	Ask for further clarification on unclear requirements. During meetings, provide stakeholders with clear choices and a framework for feedback. This will increase stakeholders' engagement and improve stakeholder feedback.
Poor time management	Medium	High	Unfinished functionalities / not meeting specification / delayed project delivery	Evaluate task progress frequently through meetings. Set goals/deadlines to ensure tasks are completed. If required adjust project planning.
Stakeholders reject the prototype	Low	High	Majority of the project will need to be reworked / project gets pushed back	Ensure to set goals and objectives with the stakeholder in the early stages to avoid disagreements. Also, arrange weekly meetings with the stakeholder to clarify requirements to prevent such circumstances from occurring
Requirements are incomplete	Medium	Medium	Disappointed clients / unfinished product / project gets pushed back / specification not met	Review client requirements frequently and set up objectives to satisfy all functional and non-functional requirements. Make sure to communicate with the client if some functionalities cannot be implemented to avoid conflicts.
Requirements do not comply with regulations (DP/GDPR)	Low	High	Legal issues / reputation of company decreases / increased costs	Make sure legalities of the regulations are reviewed before implementation. Also stay up to date with changes in regulation to avoid legal issues.
Delays and cost overrun due to learning curve	Medium	High	Increased time spent on learning / possible delays / project might get pushed back / low productivity / low quality product	Develop the product using the programming language and technology the team members are experience with. If necessary, inform the stakeholder about required training to learn a new programming language.

Change requests on an inflexible design	Low	High	Increased costs if change implemented / increased complexity when making changes / delays due to need of reworking sections altogether	Make sure to implement an adaptable design for the product with features verified by the stakeholders. Also, structure the project into individual sections for each functionality so it is easy to target a single issue without causing clashes with the other sections in the project.
Project information is lost or leaked	Medium	High	Data breaches / costly to organisation / stop procedures altogether / legal issues	Use reliable platforms to share documents and information (e.g., encrypted platforms). Centralize all major documents in one place and make sure its secure. Make sure to create backups to not lose important data that could delay workflow.
Project overruns specified deadline	High	High	Project gets pushed back / disappointed clients / decreased motivation	Make sure the set goals are met on time through a progress chart. Adjust project plan according to the deadline and ensure the task are completed. Alternatively, let the stakeholder know as early as possible if this were to be the case and prioritize the main features discussed with the stakeholders.