DRAFTING REQUIREMENTS, ISSUES, RISKS

AGENDA

01 Simple Practice

02 Draft Requirements Table

03 Draft Ethical and Legal Issues Table

04 Draft Risk Assessment Table

05 Updating Requirements Table

06 Linking to Next Weeks

section 1

SIMPLE PRACTICE

1.1. Drafting requirements - Simple Practice

A new point of sale software-based system to be used in retail stores, called **iHandleCustomer**, supports sales and customer-related services. It includes the following hardware components: a computer, a bar code scanner, a card payment terminal and a card reader. The system provides an interface to enable cashiers to: handle sales, issue customer rewards cards (recording name, address, email, contact telephone number and given card number), process returns of bought items and corresponding refunds, and consult the price of items sold in store. Payments may be done using cash or payment cards (debit or credit). The system must provide adequate mechanisms of authentication; staff to swipe their cards on the reader before doing any operations with the terminal. Card payments should not take longer than 1 minute. Authentications should not take longer than 30 seconds. The system keeps a record of the sessions opened by staff for the purpose of accountability.

Given the above brief, draft a table of functional and non-functional requirements

section 2

DRAFT REQUIREMENTS TABLES

2.1. Brainstorming functional requirements

If you have not chosen a case study yet, this exercise would be a good one to help you choose a case study and prepare for D1/D2.

Activity

For your chosen case study (or for multiple case studies), brainstorm 5-7 functional requirements.

2.2. Brainstorming sub-requirements

Although some functional requirements are concise, others can be broken down into sub-requirements.
Ask yourself and your peers: would this sentence be enough for a developer to implement it or is further clarification required?

Activity

For each functional requirement, answer the question above, and write 1-2 sub-requirements for it where need be.

2.3. Brainstorming non-functional requirements

Regardless of features, the target users would want the solution to meet certain qualities or constraints. Identify the target users from the given case study briefs and map them to common qualities in this week's lecture.

Activity

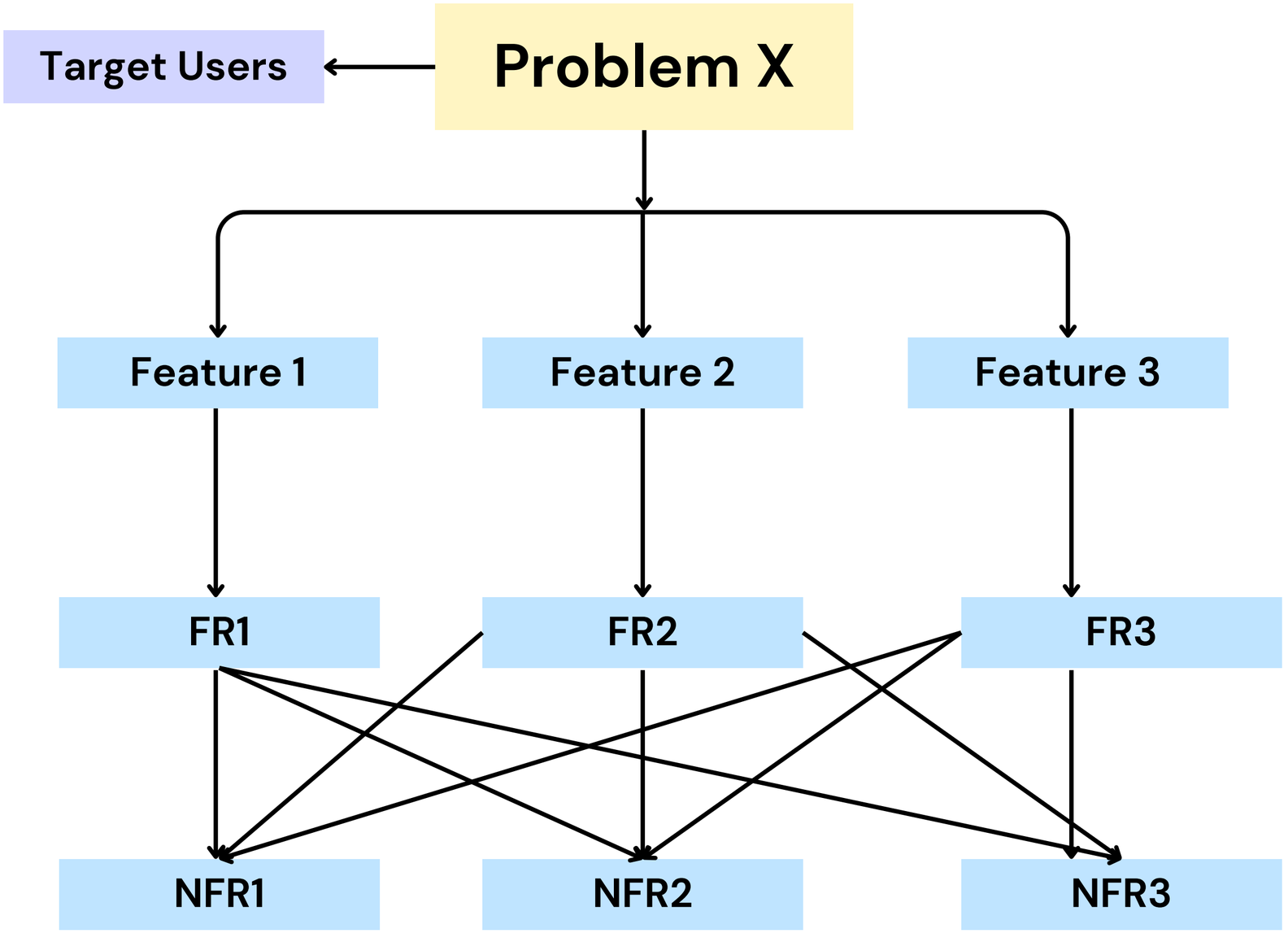
- Map relevant qualities from the lecture slides to target users of your chosen case study (or potential one).
- Brainstorm 1-3 measurable non-functional requirements based on relevant qualities.

2.4. Documenting requirements

Once the brainstorming is complete, requirements can be documented in the form of requirement tables.

Activity

- Document a correctly formatted functional requirements table.
- Document a correctly formatted non-functional requirements table.


Target Users
Problem X
Feature 1
Feature 2
Feature 3
FR1
FR2
FR3
NFR1
NFR2
NFR3

section 3

DRAFT ETHICAL AND LEGAL ISSUES TABLE

3.1. Brainstorming ethical and legal issues - Sample

The principal goal is to prevent unauthorised access to BCU's premises. The system resolves a security problem of BCU; only staff and students may access BCU's premises through the automated gates system.

The ethical issues are as follows:

Id	Ethical Issue	Justification
Ei1	The system should not injure anyone when shutting the barriers.	Because of the safety of the people using the system. The university may be liable for compensation if someone gets hurt
Ei2	Data of entries and exits is private and must not be disclosed	The data contains patterns of access to the university of both staff and students which should not be made public
Ei3	The barriers must not be in the way of anyone whenever the buildings need to be evacuated (such as a fire situation)	Because of safety; BCU must ensure that its premises provide a safe environment for staff, students and visitors

3.1. Brainstorming ethical and legal issues

The defined problem and target users might imply certain ethical and legal issues related to your solution.

Activity

- For your chosen case study brainstorm 5 ethical and legal issues.
- Document why these issues would be a problem to your target user(s).

3.2. Linking ethical and legal issues to requirements

The identified issues would need to be addressed through your functional and non-functional requirements.

Activity

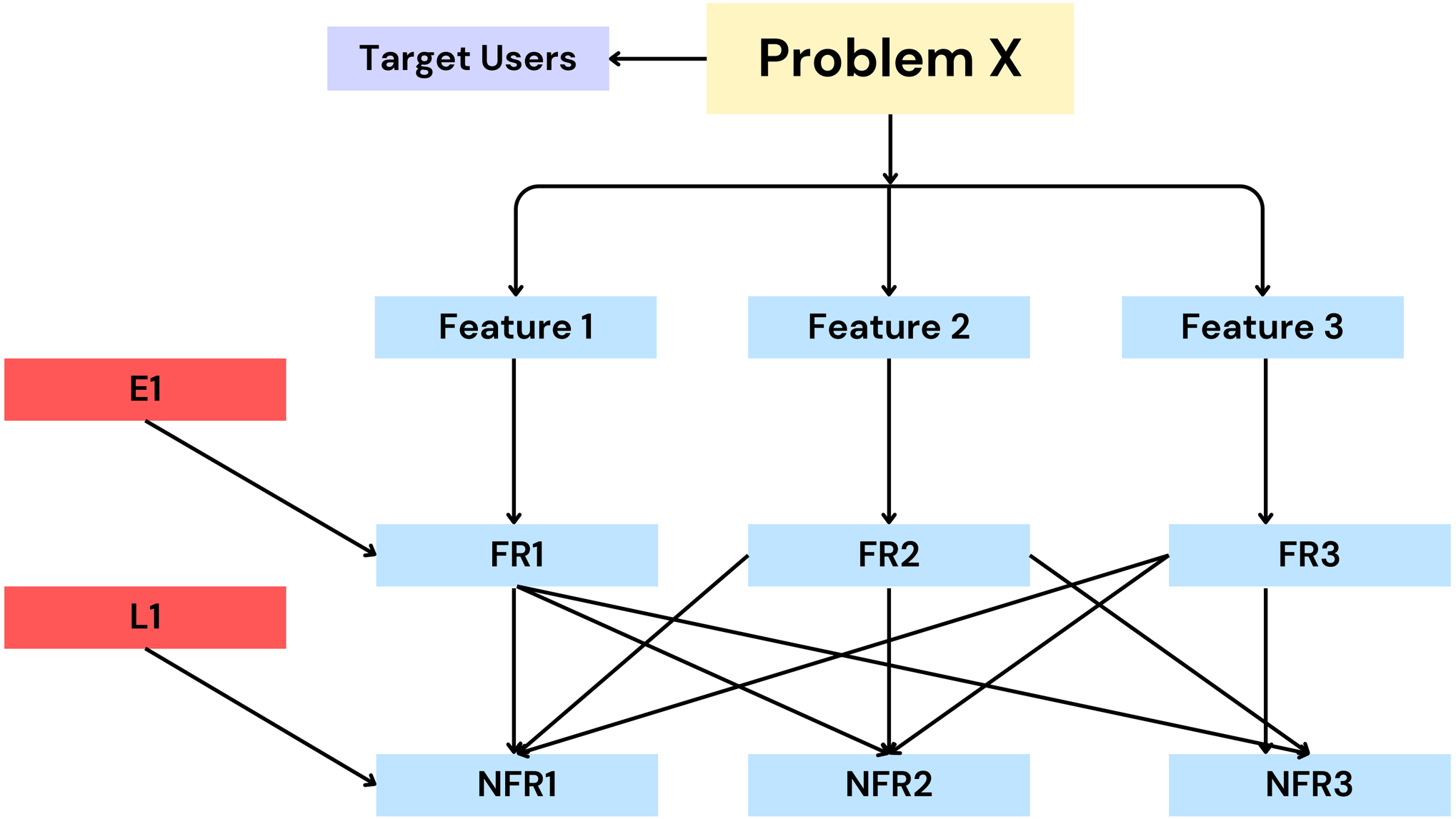
- Map the ethical and legal issues to the requirements that address them.
- Identify which issues are not addressed in your requirements.

3.3. Documenting ethical and legal issues

Once the brainstorming is complete, the issue can be documented in an ethical and legal issues table.

Activity

- Document a correctly formatted ethical and legal issues table.


Target Users
Problem X
Feature 1
Feature 2
Feature 3
E1
L1
FR1
FR2
FR3
NFR1
NFR2
NFR3

section 4

DRAFT RISK ASSESSMENT TABLE

4.1. Brainstorming risks - Sample

Id	Description	Severity	Mitigations
Ri1	Someone gets injured when the barriers shut	Serious	* Barriers only shut after someone is detected as having crossed
Ri2	Data concerning entries and exits is disclosed	Moderate	* Data protection policies are in place to prevent disclosures * Data is of moderate sensitivity
Ri3	Someone gets trapped in or is blocked by the barriers when buildings are being evacuated	Serious	* There are several emergency exits * Barriers open if a fire is detected * Possible to open all gates to evacuate buildings

4.1. Brainstorming risks

Each functional and non-functional requirement might not be delivered for several reasons. Each reason poses a risk to your solution. Risks have likelihoods and impacts. Each risk needs to be mitigated to ensure successful delivery.

Activity

- Brainstorm 3-5 risks related to your requirements table. Aim for having at least one risk for each functional and non-functional requirement.

4.2. Analysing risks

Based on available resources and target users, the likelihood and impact of the risk can be analysed to categorise the risk as negligible, tolerable, moderate, serious, or catastrophic. Discuss with your peers what the criteria for these categories would be.

Activity

- For each identified risk, categorise it under one of the 5 categories above.
- Get peer feedback on your categorisation.

4.3. Mitigating risks

Based on the category of the risk and available resources, the mitigation strategy can be avoiding the risk, minimising its likelihood, or having a contingency for its impact in case the impact occurs.

Activity

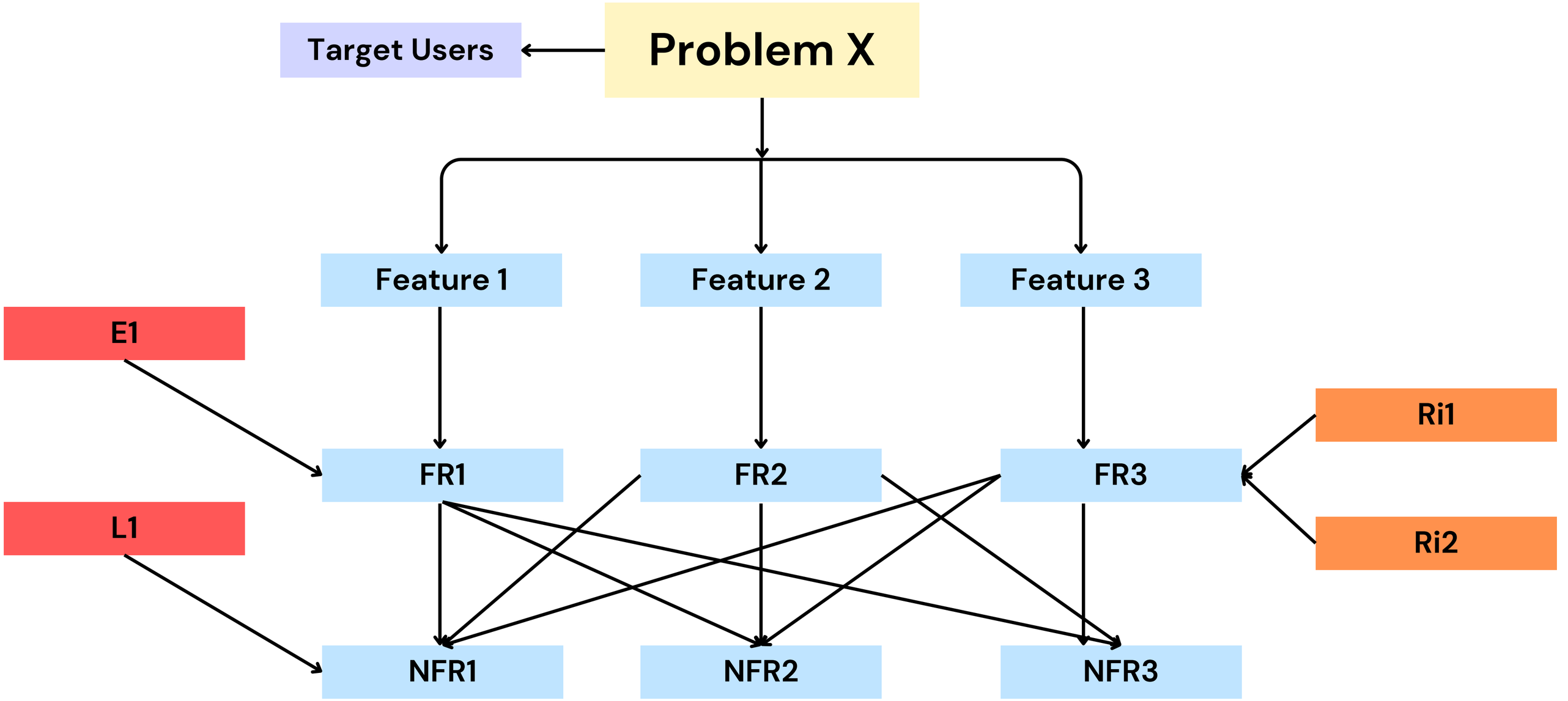
- For each identified risk, identify a mitigation strategy for it.
- Map the mitigation strategies to your requirements tables. Are the mitigation strategies included already?

4.4. Documenting risks

Once the risk brainstorming and analysis is complete, the risk assessment table can be written.

Activity

- Document a correctly formatted risk assessment table.

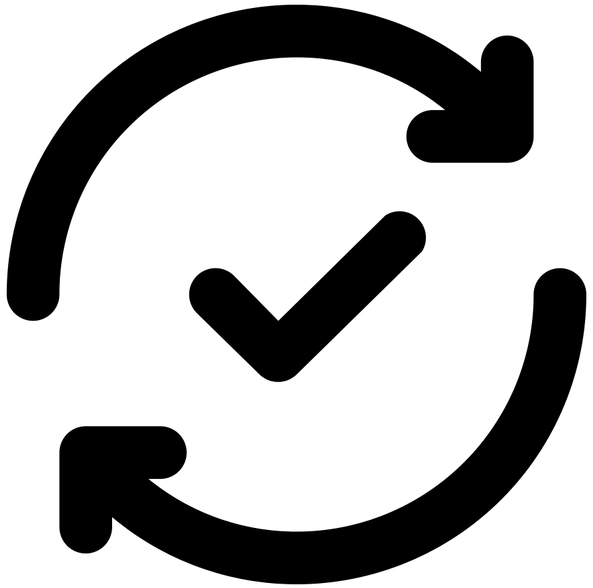

Target Users
Problem X
Feature 1
Feature 2
Feature 3
E1
L1
FR1
FR2
FR3
Ri1
Ri2
NFR1
NFR2
NFR3

section 5

UPDATING REQUIREMENTS TABLE

5.1. Updating requirements table

The ethical and legal issues + risks identified need to addressed within the requirements to ensure successful delivery and satisfied target users.

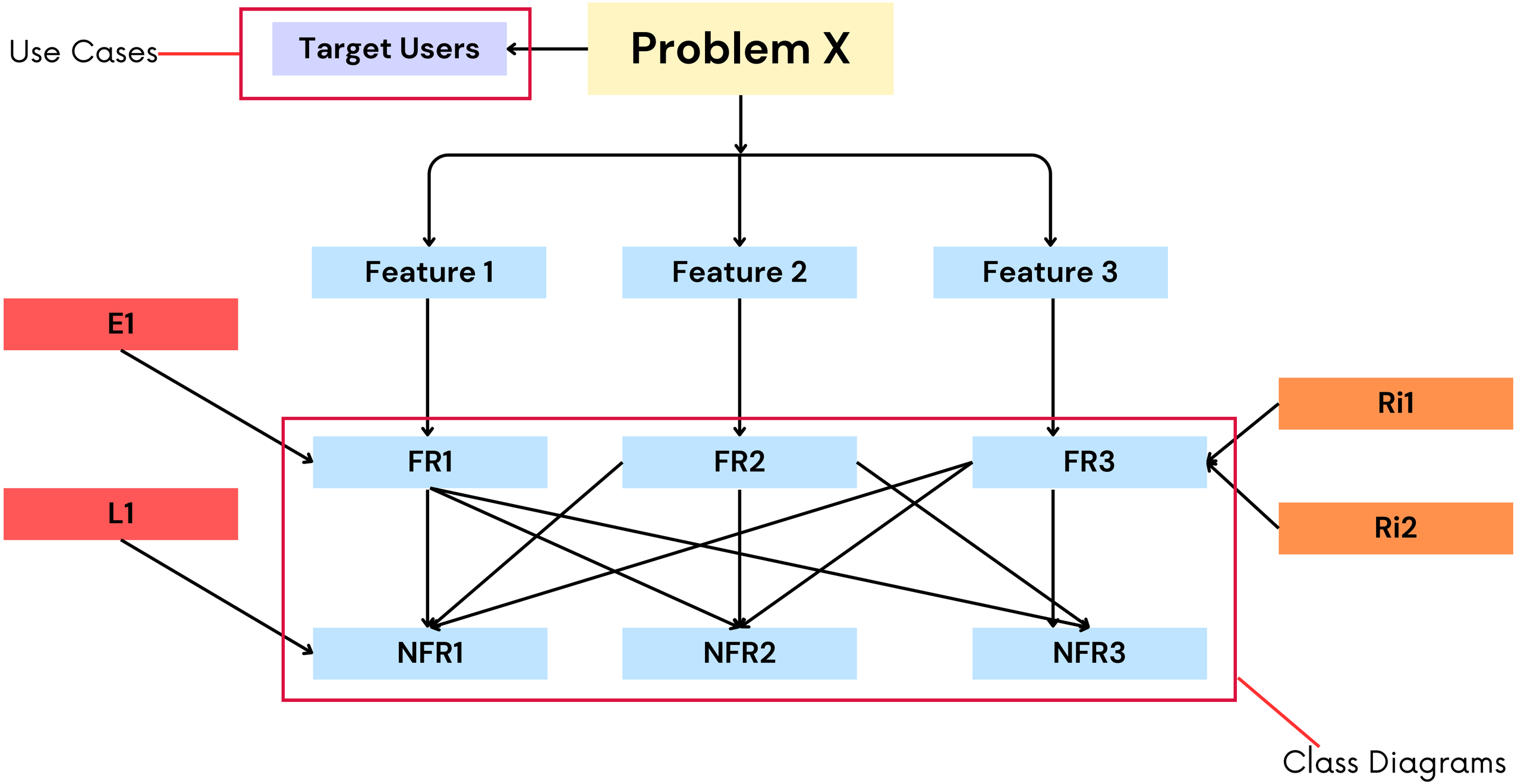


Activity

- Add requirements which cover unaddressed ethical and legal issues.
- Add requirements which cover unaddressed risk mitigation strategies.

section 6

LINKING TO NEXT WEEKS


Use Cases
Target Users
Problem X
Feature 1
Feature 2
Feature 3
E1
L1
FR1
FR2
FR3
Ri1
Ri2
NFR1
NFR2
NFR3
Class Diagrams

Thank You!

ANONYMOUS FEEDACK