

TUTORIAL 2

- **Problem solving exercises**
- **Functional vs Non Functional Requirement identification**
- **“5 Whys” exercise**
- **Client meeting & discussion**

Problem solving exercises

1. Gerald's age

Gerard who is twelve years old is three times as old as his sister Jane.

How old would Gerald be when he is twice as old as Jane?

13 years, 16 years, 17 years, 19 years, 22 years

2. Which Passenger will you choose?

You are driving down to road in your car on a wild, stormy night, when you pass by a bus stop and you see three people waiting for the bus:

- An old lady who looks as if she is about to die.
- An old friend who once saved your life.
- The perfect partner you have been dreaming about.

Knowing that there can only be one passenger in your car, whom would you choose ?

3. The Double Jeopardy Doors

- You are trapped in a room with two doors. One leads to certain death and the other leads to freedom. You don't know which is which.
- There are two robots guarding the doors. They will let you choose one door but upon doing so you must go through it.
- You can, however, ask one robot one question. The problem is one robot always tells the truth, the other always lies and you don't know which is which.

Which is the question you'd ask ?

Functional vs Non Functional Requirements identification

❑ Scenario for Students:

- You've been asked to build a booking system for a doctor's office.

Below is a list of requirements. Classify them as functional or non-functional.

❑ List of Requirements:

- 1.The system must allow patients to book appointments online.
- 2.The website must load within 3 seconds.
- 3.Only doctors can cancel or modify appointments.
- 4.The system should be able to handle 500 users at the same time.
- 5.The user interface must be easy to learn and use.
- 6.Patients should receive email notifications for upcoming appointments.
- 7.All data must be stored securely and meet data privacy regulations.

5 Whys exercise

❑ Scenario for Students:

○ **Problem Statement:** "Our online store needs a complete redesign."

❑ **Objective:** Use the "5 Whys" technique to dig deeper into the root cause of why the redesign is needed.

❑ Example of 5 Whys:

1. Why do we need a redesign?

- *Our current website is outdated and not performing well.*

2. Why is it not performing well?

- *Customers are leaving before completing purchases.*

3. Why are customers leaving before completing purchases?

- *The website is slow and not mobile-friendly.*

4. Why is the website slow and not mobile-friendly?

- *The current design is outdated and wasn't built for mobile devices.*

5. Why wasn't it built for mobile?

- *It was created many years ago when mobile wasn't as important.*

❑ Conclusion:

○ The real problem isn't just the need for a redesign. It's the poor mobile experience and slow performance