Requirements Engineering

Definition 0.1

Requirements Engineering, (RE) is the process of establishing the needs of **stakeholders** that are to be solved by software.

> So, what is the importance of RE?

One of the reasons that RE exists today is because of most software failures are actually caused by **poor requirement definitions**, rather than a lack of qualified resources or inadequate risk management.

Software runs on some hardware and is developed for a purpose. Re is about identifying that process. However, identifying that task can often be an extremely hard task.

- Sheer **complexity** of the purpose/requirements
- People often don't even know what they want themselves
- Multiple stakeholders can have conflicting requirements

Definition 0.2

Non-functional requirements: criteria that can be used to judge the operation of a system, rather than specific behaviors.

Basically, they describe how the systems performs aka. its quality, rather than what it does (actions).

Definition 0.3

User Requirements: Requirements written for customers

- Often written in natural language and doesn't have any technical details

System Requirements: Requirements written for developers

- Detailed functional and non-functional requirements
- Clearly and rigorously specified

Note 0.1

Sometimes, you may need to prioritize some resources over others, known as resource prioritization. This often happens if aren't able to satisfy all the requirements so you need need to prioritize them.