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 <u>resource prioritization</u>. This often happens if aren't able to satisfy all the requirements so you need need to prioritize them.