RE Exercise
Requirements Examples
1. External Interface Requirements
   1.1 User Interfaces
   1.2 Hardware Interfaces
   1.3 Software Interfaces
   1.4 Communication Interfaces

2. Functional Requirements
   Actions that must take place in the software in accepting and processing the inputs and in processing and generating the outputs.
   Generally listed as “shall” statements starting with “The system shall…”

3. Performance Requirements
   Numerical requirements placed on the software or on human interaction with the software as a whole
   *Remember to state this in measurable terms!*

4. Design Constraints
   4.1 Standards compliance
   4.2 Hardware limitations

5. Software System Attributes
   5.1 Reliability
   5.2 Availability
   5.3 Security
   5.4 Maintainability
   5.5 Portability
Example System Context

Shopping System

- **Subject facet:**
  - **Objects:**
    - customer
    - invoice (product name, quantity, billing information),
    - product
    - vendor
  - **Event:**
    - add product to cart
    - search for product

- **Usage facet:**
  - show products for purchase
  - online payment for products
  - collect data about customer

- **IT system facet:**
  - integration with payment system

- **Development facet:**
  - privacy legislation
External Interface Requirements

1. **User interface**: The graphical user interfaces (GUI) of the shopping system must follow a similar theme.

2. **Hardware interfaces**: The shopping system should run on popular web browsers.

3. **Software interfaces**: The shopping system can use operating systems capable of running different web browsers.

4. **Communication interfaces**: The shopping system should use HTTP protocols to facilitate communications between client and server machines.
Functional Requirements

1. The shopping system should show the discounts applicable for the particular product of a vendor

2. The shopping system should grant user access to system functionalities according to the user role and permissions

3. The shopping system should provide the following preconfigured user roles: “Customer”, “Vendor”, “Administrator”

4. The shopping system should allow the vendor to organize their products to product portfolios

5. The shopping system should provide the possibility to delete a product, and its product information permanently

6. The shopping system should perform total price calculation every time a product is added to cart
Non-functional Requirements

Performance Requirements

1. The shopping system should support concurrent work of at least 200 users that are logged into the system.
2. The shopping system should be able to retrieve product details within 10 s

Design Constraints

1. The shopping system should ensure that all mandatory fields should be filled by customer during checkout
2. The shopping system should require user consent before storing user cookie information
Non-functional Requirements

Software System Attributes

1. **Reliability**: The average time between the shopping system failure and being returned to service should not exceed 2 hours within the operational hours and 8 hours outside operational hours.

2. **Availability**: The shopping system should be available for use at 24 hours a day, 7 days a week.

3. **Usability**: End-users with different background knowledge should be able to use the shopping system.

4. **Security**: The shopping system should ensure that data about different types of transactions is processed through a secured channel.
Any questions

... reach out to us.