Additional Requirement Types

External Interface

Why External Inerface?

- Often, your product belongs to a larger system.
- External interfaces simply outline where the product is “situated”.

Scope of external interfaces

- ✗ In terms of physical location
- in terms of where the product sits **logically** among other entities outside the product
  » an external interface shows how the product itself relates to something else in the system.

Describe the way in which these connections are made

- Media - Protocols - Formats - Levels of a compatibility

External interfaces

A software application example

- Display information to an end user
- Access a remote database.

External interfaces – to end user & to the data base

The external interfaces show:

- The protocols which the application needs to interact with the database
- How the information should be presented to the user

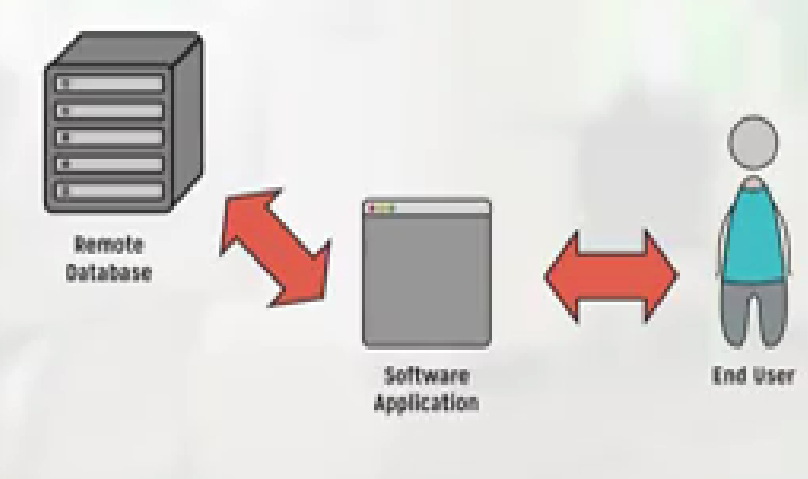
External interfaces & data flow diagram

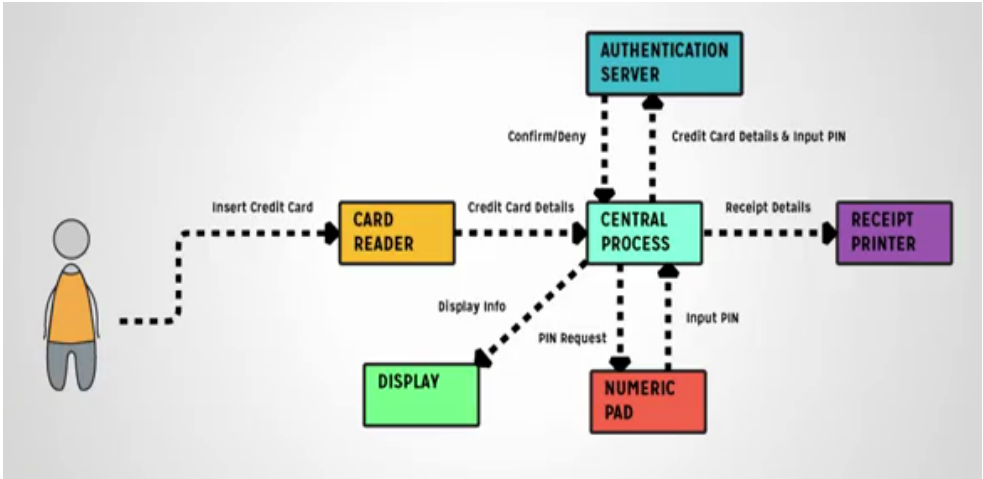
data flow diagram

"A data flow diagram is one which shows all the components of a product in one place and makes explicit reference to **how data is passed to and from outside entities in the whole system**."

External interfaces

A description of the logical placement of the product among other entities within an entire system





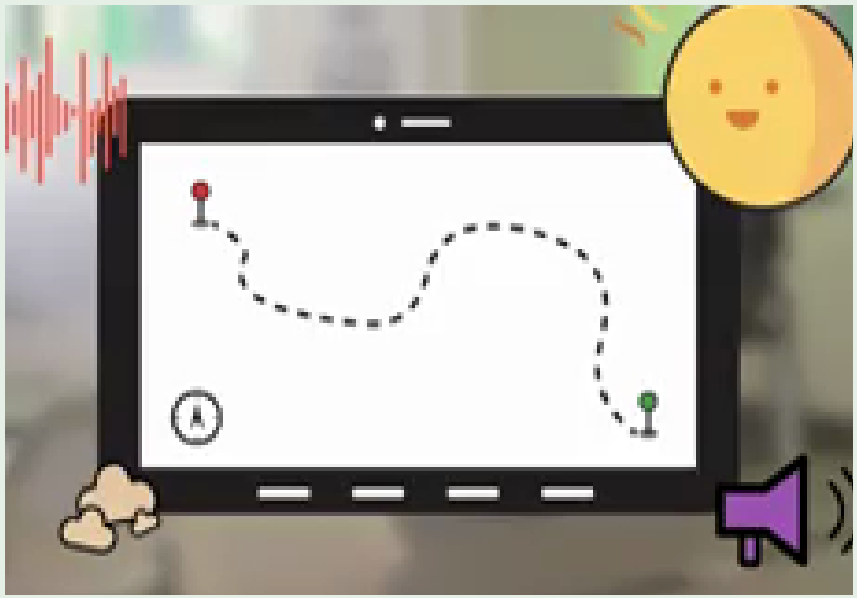
Physical setting

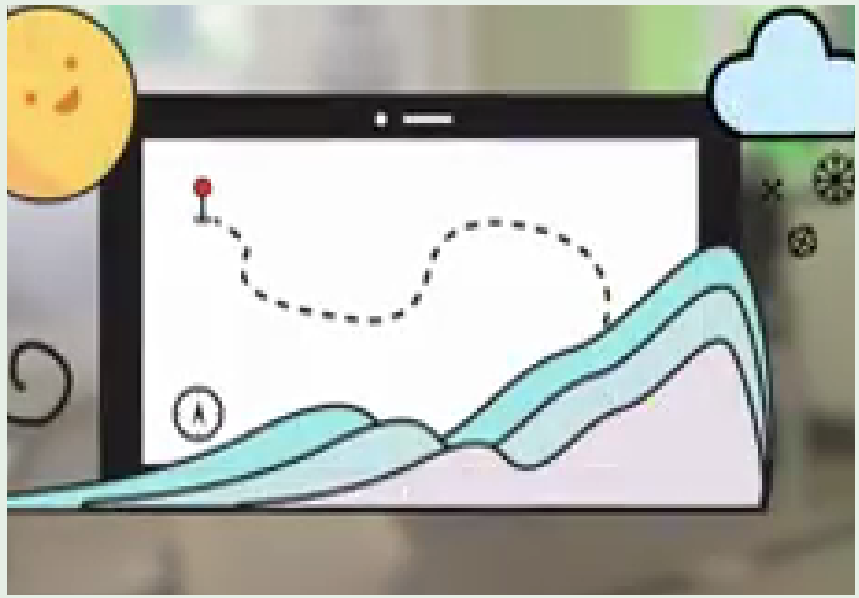
External interfaces vs physical location

Physical Setting Requirements

» How the product should be designed around its physical environment.

Sahara vs Antarctica





Quiz

Which of the following would be considered an external interface requirement?

- A. The product must be able to communicate to a customer database and an ad server.
- B. The product must be able to remain on battery power for six hours.
- C. The product must be able to withstand impact from a drop of no less than fifty meters.
- D. The product must withstand full sunlight for ten hours per day.

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Development constraints

With all the above requirements at hand [we talked about earlier]

"Is your development team capable of creating the product you designed?"
» Knowing the answer to this question is very important.

Development constraints

Outline the implementation technology, conventions, documentation, and the process which your team will use.

Other aspects:

- » Which devices or platforms the development team will support
- » How much memory, bandwidth, or processing power they're limited to using

Development constraints

When to consider development constraints

- It's usually best to specify this later in the specification phase so that the product does not become limited in vision by available technology
  » Technology advances, therefore, so should the product.
- By discussing developing constraints last, you can avoid the possibility that you design prematurely with old technologies and abilities.

Requirements

Requirement types

- Business requirements and business rules
- Core requirement types:
  - » user requirements
  - » functional requirements
  - » non-functional requirements
- additional context for the design and implementation of the product
  - » external interfaces
  - » the physical product setting
  - » and development constraints