

# Design

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*Textbook pp283-295*

**Design is planning**

- how the solution will function
- the appearance of the resulting information
- Evaluation criteria

## Design Creation

Design creation typically involves:

- identifying what specific data is required
- how the data will be named, structured, validated and manipulated

Typical design tools for this purpose include:

- data dictionaries
- data structure diagrams
- input-process-output (IPO) charts
- Flowcharts
- Pseudocode
- object descriptions

Design creation also involves explaining how the various components of a solution relate to one another. For example:

- Spreadsheets: formulae, functions, data manipulation
- Web pages: style sheets, HTML, scripts
- Programs: modules, procedures, functions

Typical design tools used to show relationships include:

- storyboards
- site maps

Design creation also involves determining the appearance of information, typically:

- the position of text, images and graphics
- font sizes, colours and text enhancements

Design tools used for this purpose include:

- layout diagrams
- annotated diagrams/mockups

## Test plans

Once the design has been created, means of testing it must be planned:

- What functionality needs to be tested?
- How will each of these functions be tested?

Tools for testing include a test plan, which typically contains columns for:

- function to be tested
- test data
- expected result
- explanation
- actual result
- comment

## Specifying evaluation criteria

What measures will be used to judge whether or not the goals have been met?

These criteria should relate to the solution requirements identified in the analysis stage