

Task Analysis

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WHAT IS IT?

Task analysis is a method by which UX practitioners learn how users perform their tasks, step-by-step, by observing them in action, without guidance or prompting. The objective of a task analysis is to capture and understand the user's perspective of their tasks, not of the existing technology.

When designing a new system, task analysis allows you to explore various approaches to completing the same task. When analysing an existing system, it can help you to optimise particular interactions.

It is important to note that task analysis is not the same as use cases. Use cases are system-centric, describing how the actors interact with the system, not how the user performs their tasks.

WHY DO YOU NEED IT?

The analysis helps identify the tasks that your applications must support and can also help you define your site's navigation and information architecture.

The process can also help you understand the experiences (personal, social and cultural) users bring to tasks. Also how previous applications or experience influences how they interact (think and do) with the current application. In addition, you can learn how a user's environment can affect how they do their tasks and achieve their goals.

Task analysis can provide the basis for creating user journeys.

WHEN DO YOU NEED IT?

Task Analysis is best performed early in the design process after you have been able to observe users performing all of the required tasks.

A task analysis can be viewed as an audit of the current state of a product and its information flows. It is generally performed ahead of creating a new design. However, It can easily apply when modifying an existing design.

The end goal for you, once you have established the user's tasks to achieve goals and how they perform these, is to optimise the procedure, improving the experience for the user.

HOW DO YOU DO IT?

There are essentially three stages to performing a task analysis:

1. Identifying the user task to be analysed

If you do not already know (either through user feedback, support desk – indirect – feedback, also through web analytics or competitor analysis), simply ask users what overall tasks they are trying to accomplish or how they currently perform the task. Also get an understanding of what the user's goal and motivation is for achieving it.

2. Detailing the steps users must perform to accomplish their goals

While you can guess the way someone performs a task, the point of task analysis is to learn from the user's perspective how he or she complete a task. Observational user research is necessary to do this.

What should you look for in a user observation session?

- **Trigger** – What gets users to start their task?
- **Desired Outcome** – How they will know when the task is complete?
- **Base Knowledge** – What will the users be expected to know when starting the task?
- **Required Knowledge** – What they actually need to know to complete the task?
- **Artifacts** – Which other tools or information do they use in the course of the task?

From the observation recordings and your notes, breakdown the high-level task into its constituent subtasks. The subtasks should be specified in terms of objectives and, between them, should cover the whole area of analysis.

Create a hierarchical task diagram to clearly identify the breakdown of steps to reach the goal. You may find that there are multiple paths to achieving the same goal, document these too. Also be sure to make a note of any steps that were problematic for the user. Labelling the steps in the diagram is useful when creating a 'plan'. A plan describes the way in which the task analysis assembles the subtasks that let users achieve a particular goal and any conditions the subtasks must fulfil.

3. Optimising these procedures

The optimisation process identifies the real opportunities and unmet needs that will support your users and greatly improve their experience with your product.

One way to optimise the users' task is to start the process with the desired outcome and work backwards up the task flow. The goal is to find ways to eliminate user steps, getting the system to do more of the work for the user.

A key approach to automating some of the task involves applying your user personas to determine where the task requires information or knowledge that the users are not likely to have, but need.

EXAMPLE

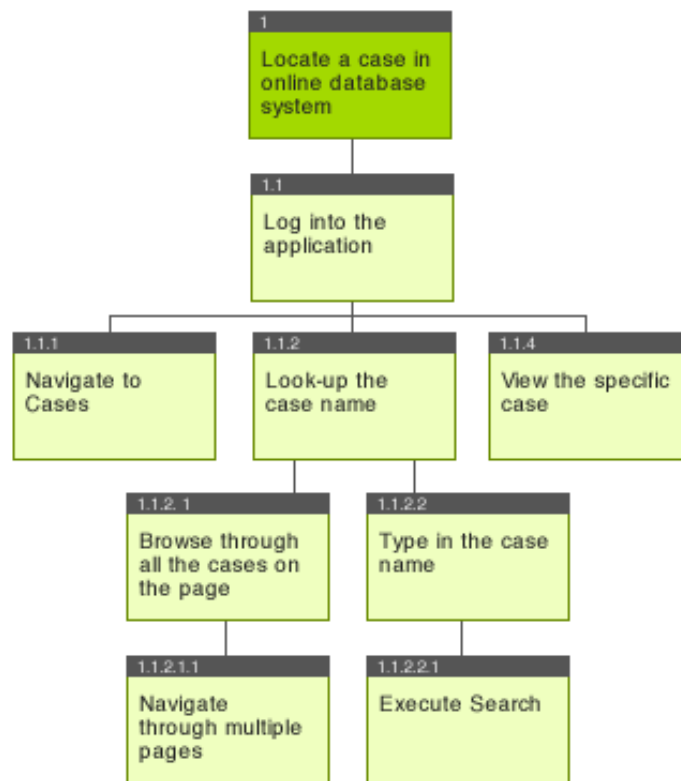
Task: Locate a case in online database system

Breaks down to the following subtasks:

1. Log into the application
Move to the navigation bar
2. Click Cases from the navigation
Move to the text search field
3. Type the case name
Check the spelling (because it needs to be precise to return a match)
4. Click the Search button
View results
5. Click the specific case.

The inclusion of the physical in-between steps, although not necessary, further helps when looking at ways to optimise the task actions.

Visually you create the following hierarchical task analysis diagram:



Plans

- If a user is not logged in, complete Task 1.1
- If a user has logged in and browses for the case, complete Tasks 1.1, 1.1.1, 1.1.2, 1.1.2.1, 1.1.2.1.1 and 1.1.4
- If a user has logged in and searches for the case, complete Tasks 1.1, 1.1.1, 1.1.2, 1.1.2.2, 1.1.2.2.1 and 1.1.4

Optimising the task

- As this is a common task, the Cases can instead be searched from anywhere in the application, rather than only the Cases page.
- We can remove the need to click the Search button step by showing a list of matching cases as the user begins typing any letters in the search field.

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