

# Unix Tutorial Design Document

## Goals:

I would like my Unix Tutorial to be easy to use and therefore very easy to navigate. I will attempt to implement a gradually revealing navigation system, with a straightforward global navigation and relevant second stage navigation. I want this tutorial to be effective at introducing users to Unix by actually teaching them the basics and more.

## Objectives:

1. Easy to use and understand.
2. Easy to navigate. Where you can how and how to get to where you want to go.
3. Actually be a learning resource.

## Audience:

My intended audience is beginning level Unix users that do not need to have previous computer experience. I will present them with explanations of very basic Unix system tips, tricks, and multiple commands.

## User Experience:

### John Smith

Background: Has used Windows exclusively for the past 5 years. Has heard about all the talk about Linux/Unix and is making an attempt at trying out the Operating System.

John's Goal: John hopes to learn enough about the Unix console to navigate and manipulate the file system like his Linux using friends. He has seen the ease at which they use the console and envies that dexterity.

### Scenario:

1. John visits the website without a set plan. He wants a quick introduction to Unix, so glancing at the navigation sees just that and proceeds to "An Introduction To Unix"
2. The reading should not be text, text, and more text. In fact, short paragraphs make him feel like he is getting somewhere fast. After reading the introduction he follows the tutorial into the basic commands.
3. Given a nice list, he decides to follow it in order, starting with the Fundamentals
4. Each command gives a quick background and then a working example with a hands on activity.

John tries out each of the steps and checks to make sure he gets the desired results.

5. After reading the fundamentals he is given a choice to branch off in several directions, and feeling bold he checks out each of these routes.

Results: The site should provide an introduction to Unix before presenting the commands. Without an understanding of the Unix File Structure, the Unix file system manipulation commands do not make any sense. Most Windows users will not understand the usr, home, etc, root, and so on file structure that the Unix file system employees. By introducing the visitor to these rules the commands, and their actions have more concrete meanings.

### Larry Wall

Background: A basic Unix user, familiar with the fundamental commands, but wishes to learn of a few more aspects of the Unix terminal interface.

Larry's Goal: Larry is going to go to the website with a mentality that he wants to learn something new. What Larry wants to learn may or may not already be in mind when he goes to the website, but he hopes that what he learns can improve his terminal experience.

Scenario:

1. Larry visits the website and checks the navigation to see what options are available to a more experienced Unix user. He then selects the "Develop Skills" section.
2. There are a list of skills, in loose order, to choose from. Some of which Larry knows, others he has heard of but has not used. He selects one that is of interest.
3. The tutorial provides an explanation, example code, and a hands on portion. Also available are a few conceptual question sections. A question asking for the expected output of a command. A click of a button reveals the answer and explanation. Finally there is a link to more in depth discussion of the concept at an advanced level.
4. Having learned a skill and how it can benefit him, Larry decides to call it a day and individually work on uses for he has just learned.

Results: There is a "Develop Skills" section which provides tutorials for commands and concepts that are above the fundamental level. These sections are much like the fundamental ones but they include a question and answer portion to test the readers understanding of the concept. This kind of tutorial, one with high involvement, incorporates user interaction as well as reading to aid in the teaching process.

## Competitive Analysis

Competitive Analysis of websites was based on multiple criteria with grades ranging from 1 (worst) to 10 (best), or as available or unavailable (yes/no). Examples would be that navigation could be graded on the 1-10 scale, but whether or not the website had search capabilities would be a yes or no evaluation.

There are a few Unix tutorial websites that are worth mentioning:

1. <http://linuxcommand.org/> - Best quality, this tutorial lays out everything in plain English.
2. <http://www.ee.surrey.ac.uk/Teaching/Unix/> - One of the better tutorials
3. <http://www2.ocean.washington.edu/unix.tutorial.html> – A Google front page result.

Of these tutorials, linuxcommand.org was by far the best and one that I actually used myself when I started learning shell scripting on my own. Here is my review on linuxcommand.org:

Criteria	(1) linuxcommand.org	(2) ee.surrey.ac.uk	(3) washington.edu
Easy Of Use	8	8	5
Navigation	7	6	5
Look and Feel	6	8	5
Content	9	9	7
Javascript	no	no	no
Contact Availability	yes	yes	no
Search Capability	no	no	no
Unique	A very personalized tutorial. The writer seems to be writing directly to the reader, telling a story rather than just laying out the facts. I like this approach, there seems to be a good connection between the user and the tutorial. There is a lot of user involvement.	Excellent graphical representations. The graphics really draw the user into the tutorial. Once again there is user involvement which really draws the reader in. More page style in this tutorial than the others, which aids in the readability.	A more factual approach. One large textual page lacking navigation but for the table of contents. This approach seems less appealing to a user, but still provides all of the valid information in a compact document.

## Results

None of the websites had search capabilities or Javascript enhancements. So for my design I decided to leave out both technologies in order to build a strong working model first. I enjoyed the user involvement found in sites 1 and 2 and planned to incorporate strong user involvement in my tutorial. All of the tutorials had strong content, something that I had planned on having but proves to be necessary for a functional tutorial. The aspect lacking in all of the tutorials was strong navigation. That is where I hope my tutorial will be the standout.

## Content

The project requires a full website consisting of at least 20 separate pages. That means that my tutorial does not have to be exhaustive, and I am given free discretion to choose what content I would like to teach. I decided that I would not teach 20 different commands, but rather a select bunch of commands that are fundamental to using the terminal. Since adding more and more commands would just be a

repetitive process I decided it would be a waste of my time to make a tutorial focusing only on the commands. In hopes of teaching a broader range of subjects I decided to also teach more advanced skills available to the Unix Tutorial, offer Tips and Tricks to the tutorial, and also background information for the Unix Operating System that could help users better understand Unix. Also because this would be a fully functional website I must offer a collection of pages providing my own personal background, personal contact information, and feedback capabilities.

The groups that I originally determined to be my global navigation subjects were:

1. Home – a term many web users and therefore computer users are comfortable with and understand that it is not geared toward content as much as an introduction to the website.
2. Unix Introduction – Unix Operating Systems concepts that should be understood for a better grasp of the file system and more subjects.
3. Fundamentals – commands that are deemed essential to using the terminal.
4. Tips and Tricks – more advanced concepts and features of the terminal

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5. Skills – I determined that there were so many features, that I could take a number of those features and group them into their own category.