

# OPERATING SYSTEMS FINAL PROJECT

new and improved :: *touch*

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23 April 2021

The background features a solid blue color with two decorative wavy lines composed of small, light blue dots. These lines curve across the middle of the slide, framing the central text.

**touch** <filename>

# Project Description

if (touch a file that already exists) {

**touch** tells the user that the given file already exists;

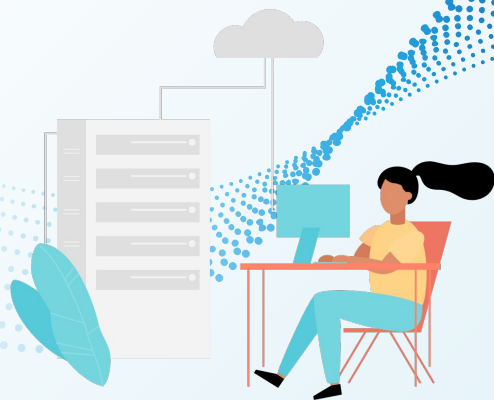
} else {

**touch** works as intended, creating the file;

**touch** += a little bit of ASCII fun

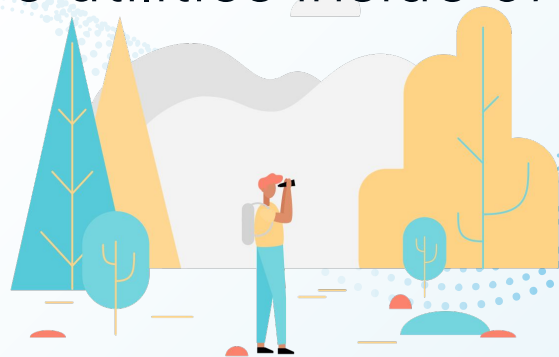
# Project Inspiration

- Receive indications of success or failure
- Avoid trying to make files that already exist
- Remove ambiguity
- Ensure user is up-to-date
- Have fun



# Research

- Existing commands and their shortcomings
  - *touch*, in particular
- Modifying shell commands vs kernel commands
- GNU core utilities library and documentation
- How to modify core utilities inside of a new kernel build



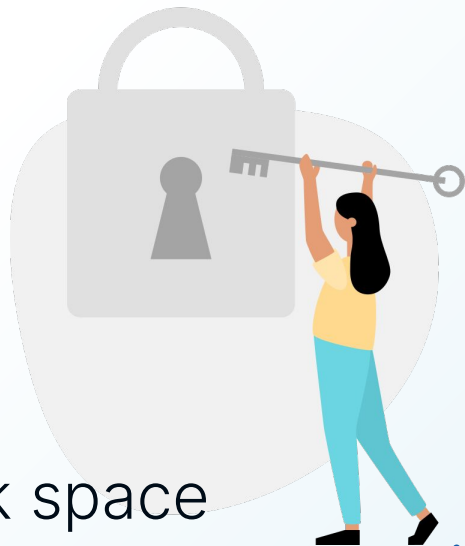
# Obstacles

- Building of the kernel
  - Computer crashing, disk space
- touch is a core utility, not a kernel command
- TARBALL-CEPTION
- File structure permissions
- Machines placement of touch executable
- Learning GNU core utilities and how to use them



# Solutions

- Untarred another tarball for core utilities
- Removed and reinstalled Ubuntu
- Dynamically allocated more storage/disk space
- Iterative development
- Keeping our laptop batteries charged throughout the build process
- Dr. Johnson's words of advice!



# Project Demo

The background features a solid blue color. Overlaid on this are several wavy, horizontal lines composed of small, dark blue dots. These lines create a sense of motion and depth, with some lines appearing more prominent than others, giving the impression of a 3D effect or a stylized wave pattern.



# What We Learned



- Better understanding of how Operating Systems work behind the scenes
- Higher comprehension of C at a fundamental level
- Increased comfortability with commands including “grep” and “find”
- How to effectively navigate through a complex system while interpreting and interacting with thousands of lines of code written years ago by someone else

# Thank you!

## Any questions?

