

# Operating System Project Report

## Team Members

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## Purpose

The purpose of this operating system is to provide users with a simple and intuitive interface for managing files, directories, and basic system processes in a simulated shell environment. It demonstrates fundamental concepts of operating systems, including file system management, process simulation, and user interaction through a command-line interface.

By implementing core functionalities like listing, creating, deleting, moving, and renaming files and directories, this system mimics essential features of modern operating systems. Additionally, the integration of a simulated process management feature helps users understand basic multitasking concepts. The inclusion of a start menu enhances usability and provides a welcoming interface for new users.

## Explanation of the Implemented Functions

### 1. Start Menu:

The start menu acts as an initial interface for the operating system. Users can choose to:

- Start the shell interface.
- View help documentation for available commands and usage examples.
- Exit the program.

### 2. File Management and Directory Management Commands:

- **ls**: Lists all files and directories in the current directory.
- **create <dir>**: Creates a new directory with the specified name.
- **create\_file <file>**: Creates a new file with the specified name.
- **delete <path>**: Deletes the specified file or directory. If it's a directory, all its contents are removed.
- **move <src> <dest>**: Moves a file or directory from the source path to the destination path. If the destination is a directory, the file is moved inside it.
- **rename <old> <new>**: Renames a file or directory from the old name to the new name.
- **cd <path>**: Changes the current working directory to the specified path. This allows users to navigate through the file system.

### 3. Help Command:

- **help**: Displays a detailed list of available commands, their descriptions, and usage examples. It ensures that users can understand and utilize the operating system's features effectively.
4. **Exit Command:**
- **exit**: Exits the shell interface and terminates the program.

**The total number of lines of code: 287**