



VE280 Exercise 1

Introduction

Welcome to VE280 exercise 1! The exercises in this course are designed to consolidate what you've learned in the lectures. They won't be hard, so take it easy and enjoy the coding process. And don't get frustrated if you can't solve them at once. It's normal to get stuck and have multiple attempts even for the best programmers. Anyway, let's get started!

Background

In this exercise, you will write a bash script to practice and enhance your skill in basic linux commands. This exercise requires you to write a bash script that automates the creation and management of a directory named `Coursework` and its related files and subdirectories, including content manipulation and organizational tasks.

A bash script is a file containing a series of commands that are executed as if they were entered on the command line. The execution sequence is the same as the order of the commands in the file. The first line of the script should begin with:

```
#!/bin/bash
```

Your Tasks

1. Setup Coursework Directory:

- Create the base directory named `Coursework`.
- Inside, create two subdirectories: `assignments` and `reports`.

2. Manage Assignments:

- Navigate to the `assignments` directory.
- Create two files named `assignment1.txt` and `assignment2.txt`.
- Add the following content to `assignment1.txt` by the following command:

```
echo "This is assignment 1." > assignment1.txt
```

- Add the following content to `assignment2.txt` by the following command:

```
echo "This is assignment 2." > assignment2.txt
```

- Copy `assignment1.txt` to the `reports` directory.

3. Rename and Move Files:

- Rename `assignment2.txt` to `renamed_assignment.txt`.
- Move `renamed_assignment.txt` to the `reports` directory.

4. Handle Exams:

- Create an `exams` directory within `Coursework`.
- Inside `exams`, create `exam1.txt` and `exam2.txt`.
- Copy the entire `exams` directory into both `assignments` and `reports`.

5. Cleanup and Documentation:

- Remove the `exams` directory.
- In the base `Coursework` directory, create `directory_info.txt` listing the contents of `Coursework` in long format.
- In the base `Coursework` directory, create `content_comparison.txt` showing the differences between `assignment1.txt` and `renamed_assignment.txt` by `diff`.

Requirements

- Do not write and test the script in the root directory `/`. All operations should be done in the `Coursework` directory and should use relative paths.
- Utilize the command line operations through your bash script. The order of commands does not matter, but the structure of the `Coursework` directory should be correct.
- Ensure the script is executable and well-formatted.

Testing

To execute the script, you need to make it executable by running the following commands:

```
chmod +x ex1.sh # make the script executable  
./ex1.sh # execute the script
```

If you encounter any errors, a dumb way to debug is to execute the commands in the script manually one by one and check the corresponding outputs and directory structures.

Submission

Submit your `ex1.sh` to canvas directly. **The due date is Oct. 7th, 23:59.**