QUESTION 8 ANSWERS

Terminal - coder@dce7ae72477b: ~

File Edit View Terminal Tabs Help

```
#!/bin/bash
if [ $# -ne 1 ]; then
        echo "Usage: $0 <directory_path>"
        exit 1
fi
dir="$1"
dir="${dir%/}"
if [ ! -d "$dir" ]; then
        echo "Error: Directory does not exist."
        exit 1
fi
backup_dir="$dir/backup"
mkdir -p "$backup_dir"
if [ $? -ne 0 ]; then
        echo "Error:Cannot create backup directory."
        exit 1
fi
echo "Script PID: $$"
for file in "$dir"/*; do
        [ "$file" = "$backup_dir" ] && continue
        [ ! -f "$file" ] && continue
        mv "$file" "$backup_dir" &
        pid=$!
        echo "Moving $(basename "$file") in background with PID $pid"
done
wait
echo "All files moved successfully."
~
"bg_move.sh" 27L, 572C                                    1,6           All
```

```
coder@dce7ae72477b:~$ vi bg_move.sh
coder@dce7ae72477b:~$ chmod +x bg_move.sh
coder@dce7ae72477b:~$ mkdir test_dir
coder@dce7ae72477b:~$ cd test_dir
coder@dce7ae72477b:~/test_dir$ touch file1.txt file2.txt file3.txt
coder@dce7ae72477b:~/test_dir$ cd ~
coder@dce7ae72477b:~$ ./bg_move.sh test_dir
Script PID: 843
Moving file1.txt in background with PID 845
Moving file2.txt in background with PID 847
Moving file3.txt in background with PID 849
All files moved successfully.
coder@dce7ae72477b:~$
```

I wrote a shell script that moves all files from a given directory into a `backup` subdirectory, with each move operation running in the background. The script prints the PID of each background process using `$!` and waits for all operations to complete using `wait`. This demonstrates background execution and process synchronization.