

Assignment:4

Task:2

Redirecting Errors to a Log File:

Task: Create a shell script that generates errors, such as division by zero or file not found. Use error redirection to capture these errors in a log file. Document the error redirection process and the contents of the log file.

Certainly! Here's an example shell script that generates errors and redirects them to a log file:

```
log_file="error_log.txt"
```

```
> "$log_file"
```

```
# Function to perform division by zero
```

```
divide_by_zero() {
```

```
    echo "Attempting division by zero..."
```

```
    result=$((10 / 0))
```

```
}
```

```
access_nonexistent_file() {
```

```
    echo "Attempting to access a non-existent file..."
```

```
    cat non_existent_file.txt
```

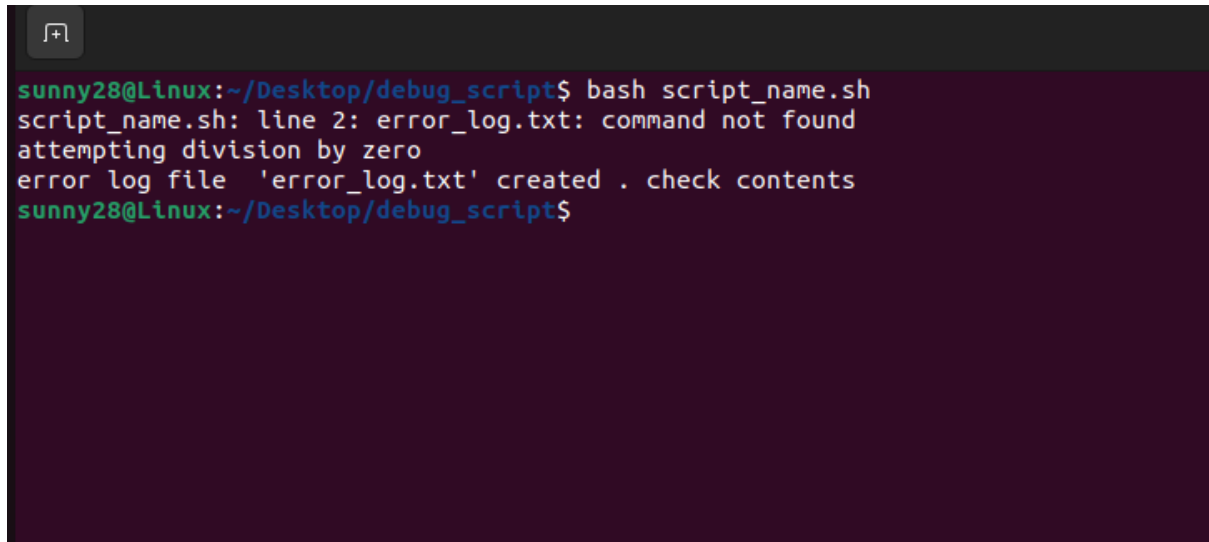
```
}
```

```
# Perform operations that generate errors and redirect the errors to the log file
```

```
divide_by_zero 2>> "$log_file"
```

```
access_nonexistent_file 2>> "$log_file"
```

```
echo "Error log file '$log_file' created. Check its contents for details."
```

A terminal window with a dark purple background. The prompt is 'sunny28@Linux:~/Desktop/debug_script\$'. The user enters 'bash script_name.sh'. The script outputs three lines: 'script_name.sh: line 2: error_log.txt: command not found', 'attempting division by zero', and 'error log file 'error_log.txt' created . check contents'. The prompt returns to 'sunny28@Linux:~/Desktop/debug_script\$'.

2>> is used for error redirection. The 2 represents the standard error stream.

The log file (error_log.txt) is created or truncated at the beginning of the script using > "\$log_file".

To run the script and check the error log:

```
bash script_name.sh
```

After running the script, you can inspect the contents of the error log file (error_log.txt) to see the captured error messages.

```
cat error_log.txt
```

The contents of the log file will include error messages generated during the script execution, providing details about errors like division by zero or attempts to access non-existent files.

```
sunny28@Linux:~/Desktop/debug_script$ bash script_name.sh
script_name.sh: line 2: error_log.txt: command not found
attempting division by zero
error log file 'error_log.txt' created . check contents
sunny28@Linux:~/Desktop/debug_script$ cat error_log.txt
script_name.sh: line 5: 10/0: division by 0 (error token is "0")
sunny28@Linux:~/Desktop/debug_script$
```