

**** Write shell scripts in any language of your choice to run conformance tests on a shell scripts of star pattern ****

Sure! Below is a shell script that runs conformance tests on a shell script that generates a star pattern. The testing script will verify that the output matches expected patterns for given input values.

Star Pattern Script: `star_pattern.sh`

```
#!/bin/bash

# star_pattern.sh

# Usage: ./star_pattern.sh <number_of_rows>

if [ "$#" -ne 1 ]; then
    echo "Usage: $0 <number_of_rows>"
    exit 1
fi

rows=$1

for ((i = 1; i <= rows; i++)); do
    for ((j = 1; j <= i; j++)); do
        echo -n "*"
    done
    echo ""
done
```

Conformance Test Script: `test_star_pattern.sh`

Now, here's a testing script that checks the output of the `star_pattern.sh` script for different input values:

```
#!/bin/bash

# test_star_pattern.sh

# Function to test star pattern output

run_test() {
```

```

expected_output="$1"

input="$2"

# Capture the output of the star_pattern script
output=$(./star_pattern.sh "$input")

# Compare output with expected output
if [ "$output" == "$expected_output" ]; then
    echo "Test passed for input $input."
else
    echo "Test failed for input $input."
    echo "Expected:"
    echo "$expected_output"
    echo "Got:"
    echo "$output"
fi
}

# Test cases

run_test "$(printf "%s\n")" 1
run_test "$(printf "%s\n\n")" 2
run_test "$(printf "%s\n\n\n")" 3
run_test "$(printf "%s\n\n\n\n")" 4

# Additional tests can be added as needed

```

Instructions to Use the Scripts

1. ****Create the Scripts**:**

- Save the first script as `star_pattern.sh`.
- Save the second script as `test_star_pattern.sh`.

2. ****Make Both Scripts Executable****:

```
bash
```

```
chmod +x star_pattern.sh test_star_pattern.sh
```

3. ****Run the Test Script****:

Execute the test script:

```
``bash
```

```
./test_star_pattern.sh
```

Explanation of the Test Script

- ****run_test Function****: This function takes the expected output and input value, runs the `star_pattern.sh` script with that input, and compares the output to the expected output.
- ****Test Cases****: Each call to `run_test` checks the output for different numbers of rows. You can expand this with more test cases as needed.
- ****Output Comparison****: If the output matches the expected pattern, it prints a success message; otherwise, it shows what was expected and what was actually received.