ST. CLAIR COLLEGE @ ACE ACUMEN ACADEMY

COMPUTER SYSTEMS NETWORKING

COURSE – 000

ASSIGNMENT *n*

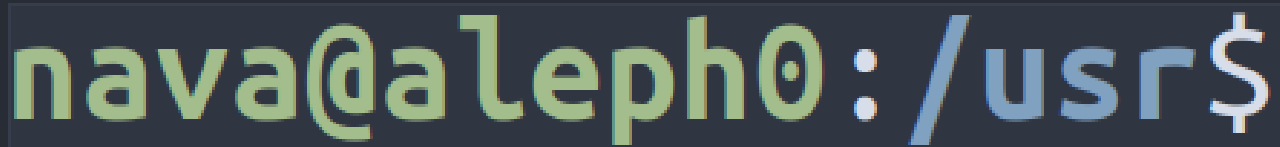| Instructor	Lab Tech/Instructor	Section(s)
Instructor Name	Lab Tech Name	000

April 4, 2024

Figure 1: Something

```
admin@system:~$ ls -lh | grep "something"

admin@system:~$ ls -lh

admin@system:~$
```

> *Something nice*

> Stuff

>> more stuff

1. Stuff

> More stuff

Date & Time

There are no classes on Monday, October 9; thus, it is not possible to conduct the test during the lecture. However, your lab instructor will conduct the **midterm test during the lab hours between October 10 and 13**.
Notice: If I am your lab instructor on Monday, then you will take the midterm during the lab time on Monday October 16.

Duration

You will have a total of **60 minutes** to complete and submit the test.

Format

> The test will be a combination of MCQ and Short Answer Questions

>> **15 MCQs** [50%]

>> **5 short answer questions** [50%]

> You can have access to your **Linux Server, not the desktop version.**

> You will take the test through **Microsoft Forms** using the school's computers.

Contents

The test will comprehensively evaluate knowledge from **weeks 1 to 5**.

Rules

> **Absolutely no communication during the test.**

> **Cheating will result in a grade of zero in the test and an Academic Misconduct Form.**

Sample MCQ

Question: Which of the following Linux distribution is best suited for servers?

> Ubuntu Desktop

> CentOS

> Kali Linux

> Manjaro

Answer: CentOS

Sample Short Answer Question

Question: See my prompt below. I have a file named `file1` in my home directory. Type the command to append the string "I am acing this test" to `file1` without changing the current working directory.
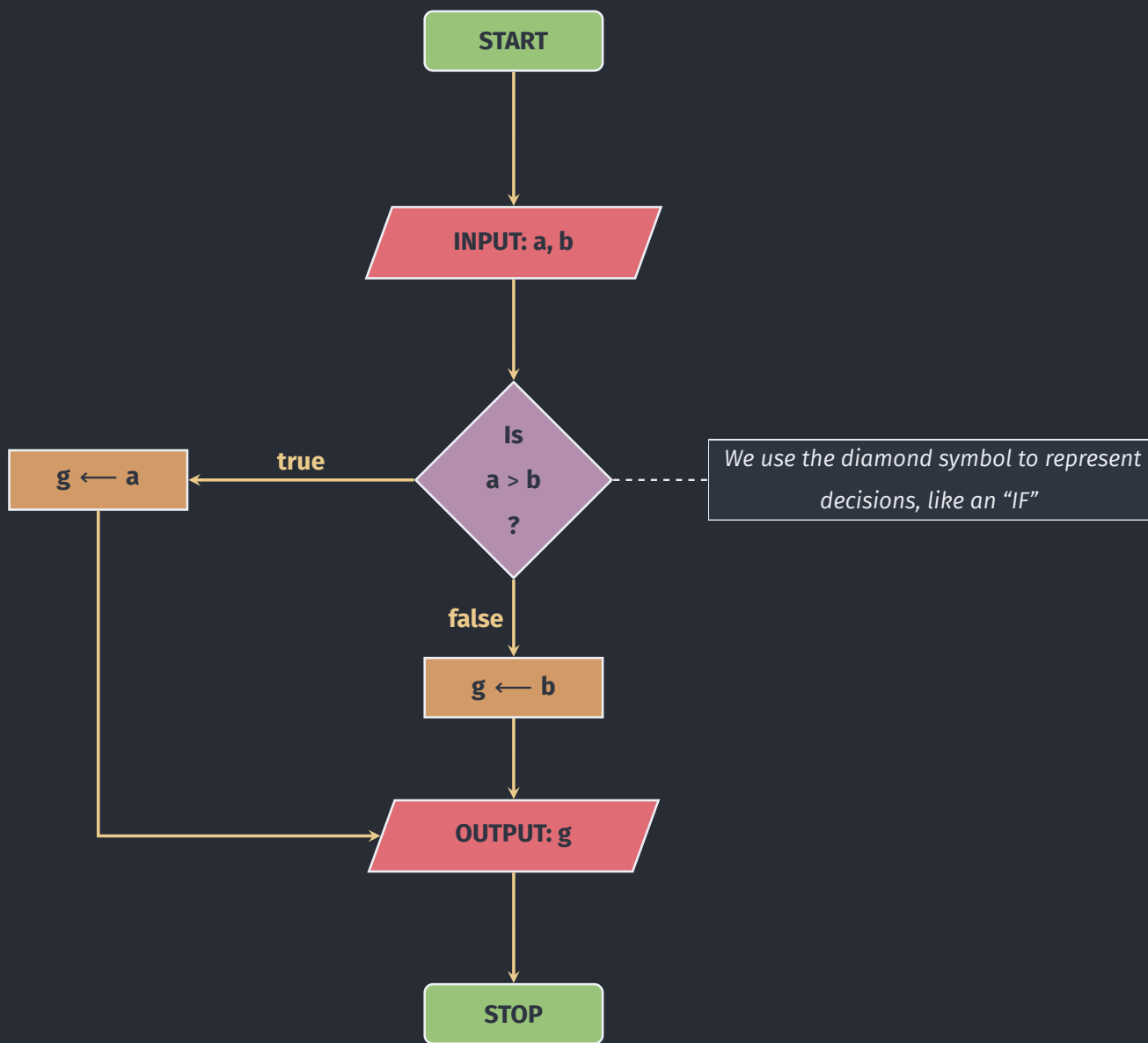
```
# My prompt is as below

admin@system:/usr$
```

Possible Answer: `echo "I am acing this test" >> /home/admin/file1`

Possible Incorrect Answer: `echo "I am acing this test" >> file1`

Explanation: The promt lets me know that my current working directory is `/usr`. Thus, if I want to append a string to `file1`, I need to specify the file's absolute path after stdout redirection.

```mermaid
flowchart TD
    START([START]) --> INPUT[/INPUT: a, b/]
    INPUT --> DECISION{Is a > b ?}
    DECISION -->|true| GA[g ⟵ a]
    DECISION -->|false| GB[g ⟵ b]
    GA --> OUTPUT[/OUTPUT: g/]
    GB --> OUTPUT
    OUTPUT --> STOP([STOP])
```

We use the diamond symbol to represent decisions, like an "IF"

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Instructions & Specs

Instructions:

1. Create a new Word document.

2. Include a cover page with relevant information:

   > Your name

   > Your student ID

   > Your section

   > The course name, i.e., Introduction to Programming with PowerShell.

3. Take screenshots where specified in this lab and paste them into your Word document **in the correct order**.

4. Answer **all** the questions (if any.)

5. Save the Word file as `Assignment_8_FirstName_LastName.docx`. Also, save your code as `Assignment_8_FirstName_LastName.txt` file.

6. Upload your word and .txt files to the lab on Teams.

Specifications:

1. Ensure each figure shows all the required information, including information that certifies the authenticity of your work, for example:

   > Comments in your code

   > Unique Solutions

   > Your name and ID in the places I specify

2. Use unique formatting so your work is easily distinguishable from others, but remember that **your document must look professional;** please refrain from using fluorescent colours and extravagant fonts.

3. Total number of screenshots and questions: **1.**

Procedure

Problems

Problem

Create a PowerShell script that does the following:

> Use a while loop to populate an array with the user's input. The elements of the array should be positive integers.

> Create a function that calculates the Geometric Mean of the numbers above.

> The function should receive pipeline input from the array you created above.

> Ensure to include parameter validation so the elements of the array are not larger than 10000.

> Ensure the user's values do not produce an indefinite result, i.e., calculate an even root of a negative number.