

Choice Based Assessment - 4

Category 1: Variables & Environment Logic

Focus: Variable Scope and Substitution

- **Option A (The Scope Experiment):** Create a short script that demonstrates the difference between a **Local** variable and an **Exported (Global)** variable. Explain what happens to the variable when you call a sub-shell or another script.
 - **Option B (The Substitution Task):** Write a command using **Command Substitution** (backticks or \$()) that creates a directory named with the current system date and the current logged-in user (e.g., folder_2026-01-30_student).
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Category 2: Conditional Logic & Branching

Focus: If/Else and Case Statements

- **Option A (The System Guard):** Write a Shell Script snippet using if-else that checks if a specific file (e.g., /etc/passwd) exists and is readable. If it is, print "Security Check Passed"; if not, print "Alert" and exit.
 - **Option B (The Menu Builder):** Use a case statement to create a simple menu for a user. The user should be able to press 1 to see the current uptime, 2 to see disk usage, and 3 to exit. Why is case often preferred over multiple if-elif blocks for menus?
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Category 3: Iteration & Loop Control

Focus: For, While, and Until Loops

- **Option A (The Bulk Processor):** Write a for loop that iterates through all .txt files in the current directory and renames them to .bak files.
 - **Option B (The Monitoring Loop):** Write a script using a while or until loop that checks for the existence of a file named stop.txt. The script should print "Monitoring..." every 5 seconds and only stop once the file stop.txt is created by the user.
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Category 4: Script Optimization (Loop Control)

Focus: Break and Continue

- **Option A (The Skip Logic):** Write a loop that counts from 1 to 10 but uses the continue statement to skip the number 5.

- **Option B (The Early Exit):** Write a loop that processes a list of items but uses the break statement to stop immediately if it encounters an item named "DANGER".

Submission Rules:

1. Submit the assessment in PDF format.
2. For each category choose one option.
3. PDF should contain the screenshot/snapshots of the scripts executed for each category.