



ACADEMY
OF DIGITAL ARTS
EGYPT



Adobe

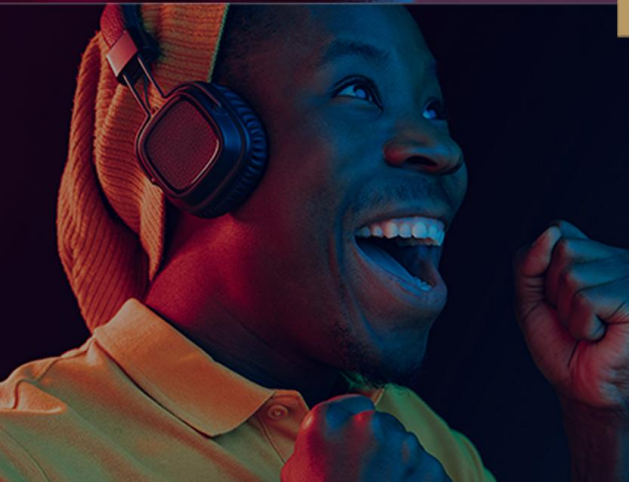


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START
YOUR TECH JOURNEY
WITH ADA



JavaScript Session 2 - Student Task

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Objective:

By completing this task, you will:

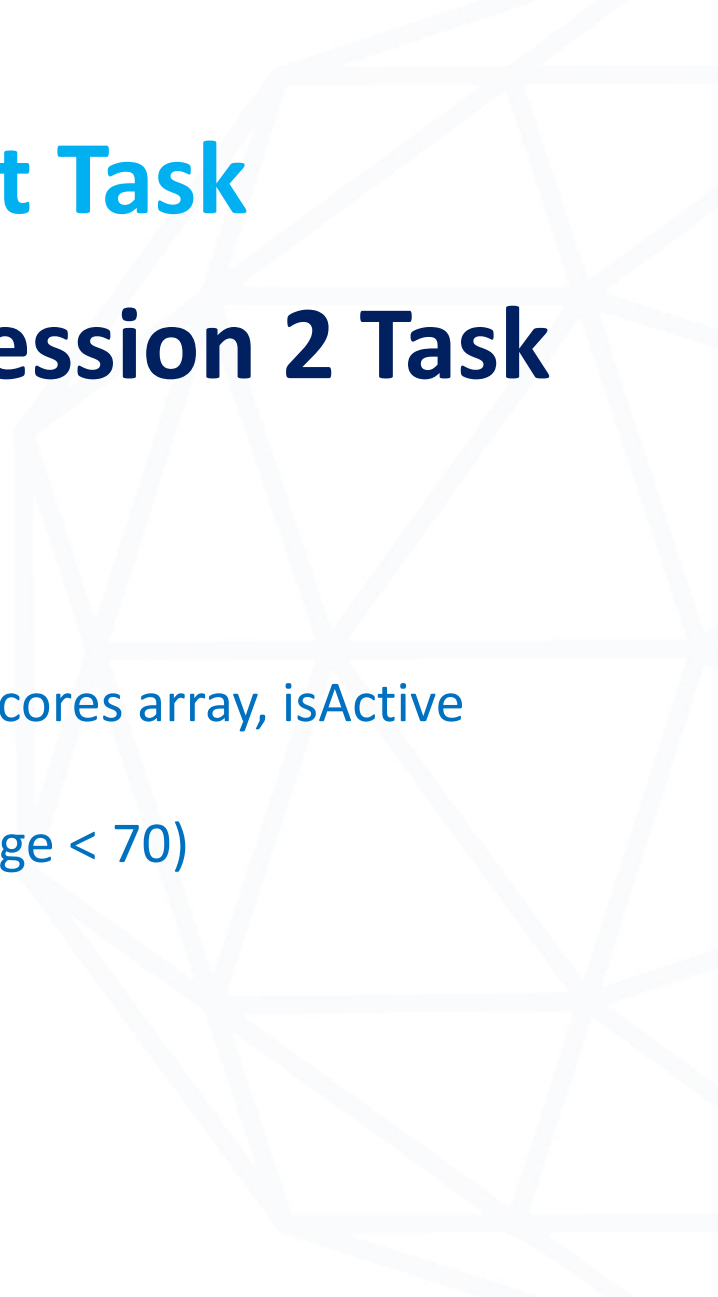
- Master conditional statements using if/else and switch for decision-making logic
- Apply comparison operators (===, !==, >, <) and logical operators (&&, ||, !) effectively
- Implement different loop types: for, while, do...while, for...of, and for...in
- Combine conditionals and loops to solve real programming problems
- Create a complete grade management system using all learned concept



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Step 1 – Create Student Data and Basic Conditionals

- Create an array of at least 4 student objects with properties: name, scores array, isActive
 - Use if/else statements to check if student is active before processing
 - Add conditional logic to determine if student needs extra help (average < 70)
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Step 2 – Implement Grade Calculation with Switch

- Use a for...of loop to iterate through students array
- Calculate average score using a for loop on the scores array
- Use switch statement to assign letter grades based on average:
- A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: below 60

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Step 3 – Add Interactive Features with While Loop

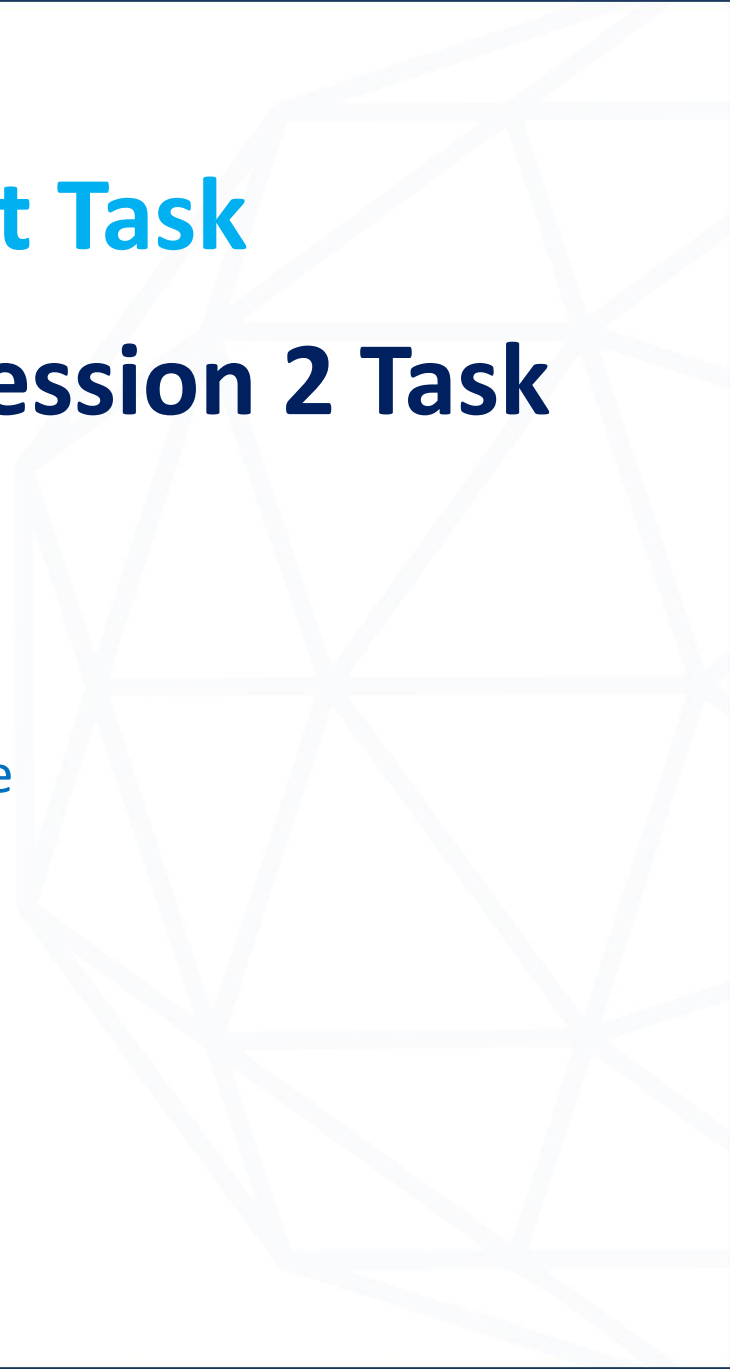
- Create a simple menu system using while loop and switch
- Menu options: "show grades", "add student", "show statistics", "exit"
- Use do...while for input validation (simulate user choices)
- Apply logical operators to validate menu selections



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Step 4 – Generate Statistics Report

- Use for...in to display student properties in formatted way
 - Calculate class statistics: total students, average class grade, pass rate
 - Use comparison operators to count students by grade levels
 - Display results with conditional formatting based on performance
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Requirements

Tools:

- Text editor (VS Code recommended)
 - Node.js installed for running JavaScript
 - Web browser with developer console (alternative)
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Reminder

- Use === for strict equality comparisons, avoid ==
- Always include break statements in switch cases
- Prevent infinite loops by ensuring loop conditions eventually become false
- Use for...of for arrays, for...in for objects
- Combine multiple operators: if (age >= 18 && hasPermission)
- Add comments explaining your conditional logic and loop purposes

THANK YOU

ADAEGY

