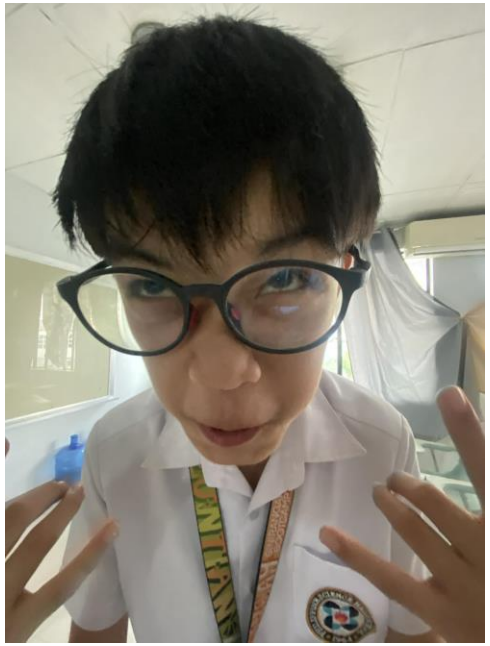
Puzzling Out Intelligence

8-Sampaguita

Members:



Cuddy Esmeres

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Problem Statement

PSHS's rigorous academic environment often leads students to compare test scores, causing stress, discouragement, and unnecessary competition. **Puzzling Out Intelligence** aims to reduce this pressure by using puzzles that highlight **Gardner's Multiple Intelligences**, showing students that intelligence is diverse and not limited to academic grades.

Objectives:

1. To identify the user's strengths across the 8 Multiple Intelligences.

2. To reduce academic-grade pressure by showing that intelligence comes in many forms

3. To allow users to see which intelligences they can improve

4. To provide a simple, user-friendly puzzle test

5. To show that being "smart" is not just about grade, to make students feel more confident by letting them see their strengths, and to lessen stress, and pressure among them.

Why?

According to Howard Gardner (1983, as cited in Cherry, 2025), intelligence is not a one-size-fits-all concept. Gardner explained that people have multiple intelligences, meaning individuals solve problems and learn in different ways, not just through logic, math, or traditional academic skills.

This idea connects well with the PSHS STEM curriculum because students are expected to use different kinds of thinking. They analyze problems, think creatively, design experiments, communicate ideas, collaborate with others, and apply knowledge to real situations. Different students are strong in different areas, and PSHS encourages growth in all of these skills.

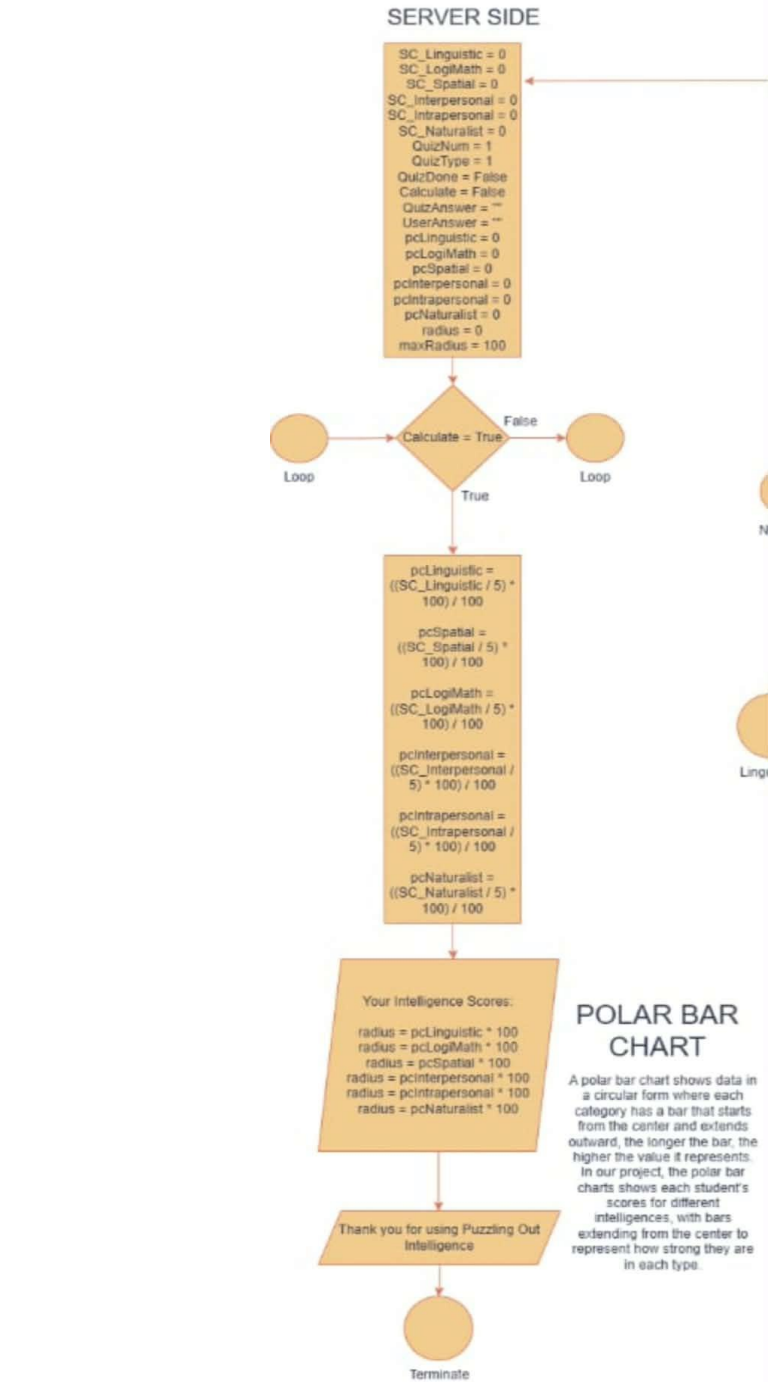
How?

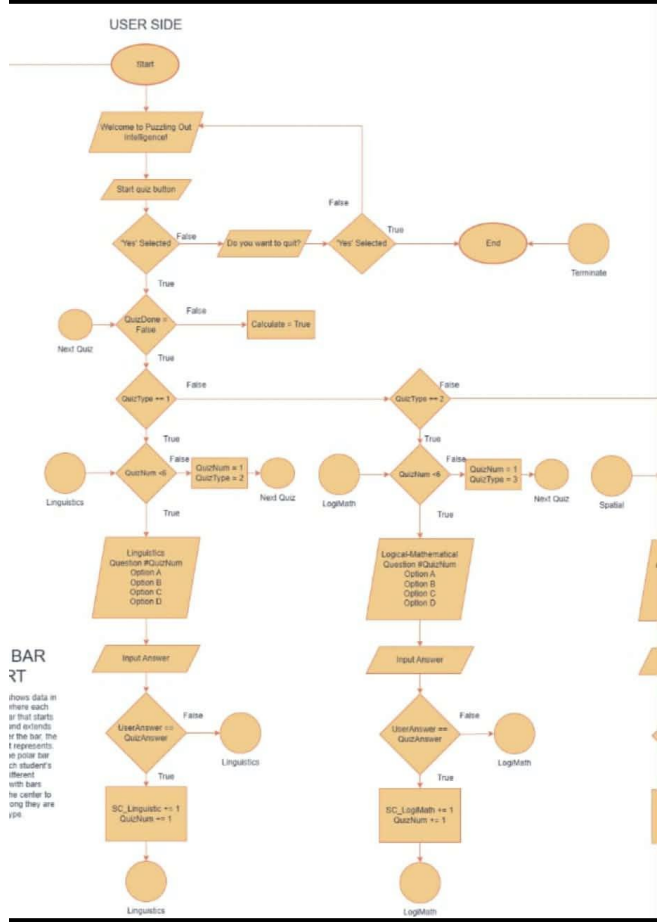
Our project will create a program where the user can take a puzzle-based test. Each puzzle is designed to measure a specific type of intelligence based on Gardner's theory. For example, logical puzzles measure logical mathematical skills, visual patterns measure spatial intelligence, word-based riddles measure linguistic intelligence, and so on.

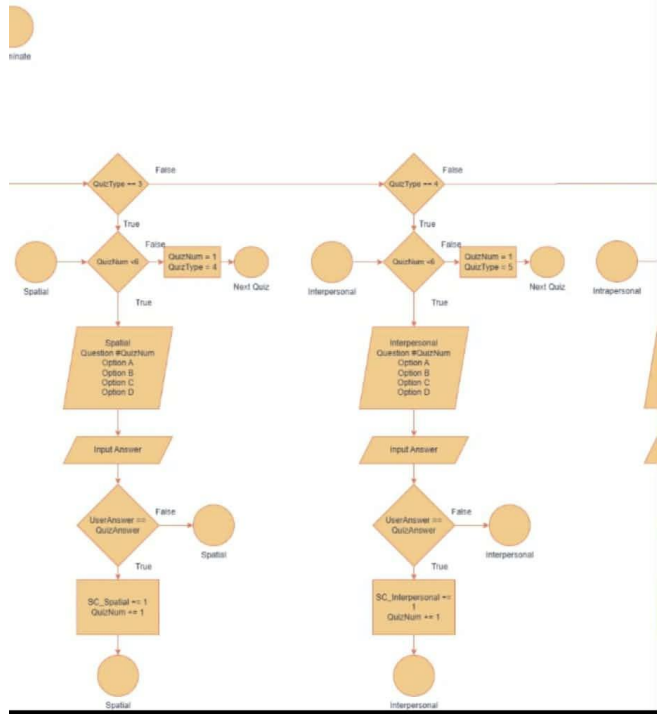
As the user answers each puzzle, the system records their performance. After the session, the program calculates the user's scores across all the different intelligences. This allows the system to identify which areas are the person's strongest and which areas may need improvement.

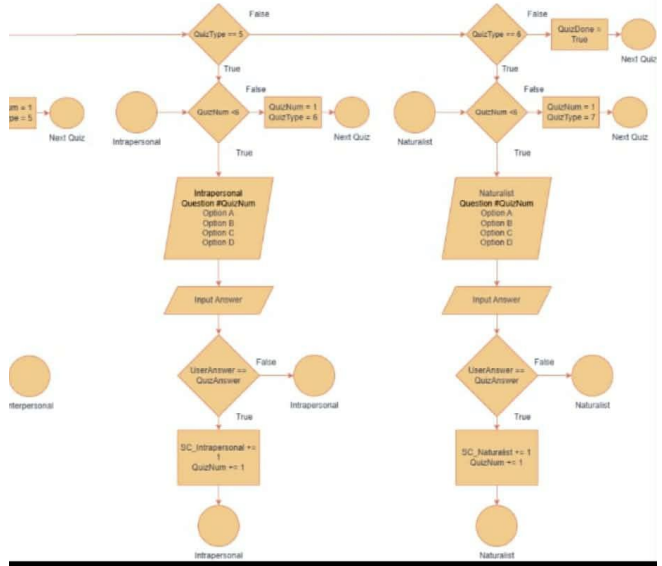
The goal is to give students a clearer picture of their abilities, showing that their strengths may appear in many forms and are not limited to traditional academic scores.

Flowchart:


SERVER SIDE
SC_Linguistic = 0
SC_LogiMath = 0
SC_Spatial = 0
SC_Interpersonal = 0
SC_Intrapersonal = 0
SC_Naturalist = 0
QuizNum = 1
QuizType = 1
QuizDone = False
Calculate = False
QuizAnswer = ""
UserAnswer = ""
pcLinguistic = 0
pcLogiMath = 0
pcSpatial = 0
pcInterpersonal = 0
pcIntrapersonal = 0
pcNaturalist = 0
radius = 0
maxRadius = 100
Calculate = True
False
True
Loop
Loop
pcLinguistic = ((SC_Linguistic / 5) * 100) / 100
pcSpatial = ((SC_Spatial / 5) * 100) / 100
pcLogiMath = ((SC_LogiMath / 5) * 100) / 100
pcInterpersonal = ((SC_Interpersonal / 5) * 100) / 100
pcIntrapersonal = ((SC_Intrapersonal / 5) * 100) / 100
pcNaturalist = ((SC_Naturalist / 5) * 100) / 100
Your Intelligence Scores:
radius = pcLinguistic * 100
radius = pcLogiMath * 100
radius = pcSpatial * 100
radius = pcInterpersonal * 100
radius = pcIntrapersonal * 100
radius = pcNaturalist * 100
Thank you for using Puzzling Out Intelligence
Terminate
POLAR BAR CHART
A polar bar chart shows data in a circular form where each category has a bar that starts from the center and extends outward, the longer the bar, the higher the value it represents. In our project, the polar bar charts shows each student's scores for different intelligences, with bars extending from the center to represent how strong they are in each type.


USER SIDE
Start
Welcome to Puzzling Out Intelligence!
Start quiz button
'Yes' Selected
False
Do you want to quit?
'Yes' Selected
True
End
Terminate
True
QuizDone = False
False
Calculate = True
Next Quiz
True
QuizType == 1
False
QuizType == 2
False
True
QuizNum <6
False
QuizNum = 1
QuizType = 2
Next Quiz
Linguistics
LogiMath
QuizNum <6
False
QuizNum = 1
QuizType = 3
Next Quiz
Spatial
True
Linguistics
Question #QuizNum
Option A
Option B
Option C
Option D
Logical-Mathematical
Question #QuizNum
Option A
Option B
Option C
Option D
Input Answer
Input Answer
UserAnswer == QuizAnswer
False
Linguistics
True
SC_Linguistic += 1
QuizNum += 1
Linguistics
UserAnswer == QuizAnswer
False
LogiMath
True
SC_LogiMath += 1
QuizNum += 1
LogiMath
BAR
RT


ninate
QuizType == 1
False
True
Spatial
QuizNum <6
False
QuizNum = 1
QuizType = 4
Next Quiz
True
Spatial
Question #QuizNum
Option A
Option B
Option C
Option D
Input Answer
UserAnswer ==
QuizAnswer
False
Spatial
True
SC_Spatial += 1
QuizNum += 1
Spatial
QuizType == 4
False
True
Interpersonal
QuizNum <6
False
QuizNum = 1
QuizType = 5
Next Quiz
Intrapersonal
True
Interpersonal
Question #QuizNum
Option A
Option B
Option C
Option D
Input Answer
UserAnswer ==
QuizAnswer
False
Interpersonal
True
SC_Interpersonal +=
1
QuizNum += 1
Interpersonal


False
QuizType == 5
True
False
QuizNum <6
QuizNum = 1
QuizType = 6
Next Quiz
Intrapersonal
True
Intrapersonal
Question #QuizNum
Option A
Option B
Option C
Option D
Input Answer
UserAnswer ==
QuizAnswer
False
Intrapersonal
True
SC_Intrapersonal +=
1
QuizNum += 1
Intrapersonal
False
QuizType == 6
QuizDone =
True
Next Quiz
True
False
QuizNum <6
QuizNum = 1
QuizType = 7
Next Quiz
Naturalist
True
Naturalist
Question #QuizNum
Option A
Option B
Option C
Option D
Input Answer
UserAnswer ==
QuizAnswer
False
Naturalist
True
SC_Naturalist += 1
QuizNum += 1
Naturalist

Example flow:

Title: Puzzling Out Intelligence
Username: Cuddy Esmeres
Date(MM/DD/YYYY): 11/26/2025

Puzzle 1 – Bodily-Kinesthetic Intelligence

Question: Which activity requires the most coordination? (A. Typing, B. Dancing, C. Sitting)
User Input: B
Correct!

...

Example Output:

Summary:
User: Cuddy Esmeres
Date: 11/26/2025

Results:
Logical-Mathematical Intelligence: 7/10
Linguistic Intelligence: 6/10
Spatial Intelligence: 9/10
Musical Intelligence: 4/10
Bodily-Kinesthetic Intelligence: 8/10
Interpersonal Intelligence: 5/10
Intrapersonal Intelligence: 6/10
Naturalistic Intelligence: 3/10

Thank you!

Sources:

Cherry, K. (2025). *Gardner's Theory of Multiple Intelligences*. Verywell Mind.
Retrieved from: https://www.verywellmind.com/gardners-theory-of-multiple-intelligences-2795161

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