Computer Science Challenge - Creating a Digital Pet

Welcome to this Computer Science Challenge! Your task is to bring a digital pet to life (either by coding a simple interactive program, Track A, or by designing its concept and user experience, Track B). Your pet should track core attributes like hunger, happiness, and energy, and enable basic interactions (feeding, playing, resting).

Learning Objectives

- Apply programming or design principles to create or conceptualize an interactive digital pet.
- Demonstrate problem-solving by tracking and updating key pet attributes (e.g., hunger, happiness, energy).
- Enhance creative thinking through unique pet features, visuals, or interactions.
- Develop communication skills by clearly presenting and explaining your digital pet concept or implementation.

Track A (Programmers):

Create a simple text-based or basic graphical program that simulates a digital pet

Key features to implement:

- Pet status (hunger, happiness, energy)
- Basic interactions (feed, play, rest)
- Simple text interface or basic graphics

Track B (Non-programmers):

Design the pet concept and user experience
Create detailed mock-ups/drawings of:

- Pet appearance and animations
- Interface layout
- Feature descriptions
- User interaction flowchart

Judging Criteria (equal weight for both tracks):

Creativity and originality

Completeness of solution

User-friendliness

Presentation of work

Digital Pet Challenge Rubric

Criteria	3 Points: Exceeding Expectations	2 Points: Meeting Expectations	1 Point: Approaching Expectations
Creativity & Originality	- Project demonstrates a highly innovative idea or unique implementation. - Pet's design and/or features are distinct from typical digital pets.	- Project uses a creative concept with some unique elements but may draw on common ideas. - Pet's design and/or features are interesting, though not entirely new.	- Project is somewhat generic or lacks distinct creative touches. - Pet's design and features are minimal or follow a very basic template.
Completeness of Solution	- All required features (pet status indicators, interactions, etc.) are fully implemented and functional. - Code or design mock-ups show depth and attention to detail.	- Most required features are implemented and functional. - Minor details or enhancements may be missing, but the overall solution works.	- Some required features are missing or incomplete. - The solution lacks thoroughness and leaves major gaps in functionality.
User-Friendliness	- Interaction with the pet is intuitive and smooth (clear instructions, logical flow). - Users can easily perform core actions (feed, play, rest).	- Interaction is generally straightforward. - Some areas might be slightly unclear, but the user can still navigate the core functions.	- Interface or instructions are confusing or incomplete. - Users may struggle to understand or perform key interactions.
Presentation of Work	- Work is communicated in a polished, engaging manner (clear visuals, well-structured explanations). - Demonstration (track A) or design mockups (track B) are professional and concise.	- Work is presented in a coherent, mostly organized manner. - Visuals or explanations could be more detailed or clearer, but overall message is understandable.	- Presentation lacks clarity or organization. - Visual elements, explanations, or demonstrations are missing or confusing.

Scoring Guidance:

- Each of the four criteria is given equal weight.
- You can sum up the individual scores for a final total. For example, with 4 criteria × 3 points each, the maximum score is 12.