CS174A Term Project Proposal

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- We will be implementing “Fries-Man”, a 3D adaptation of Pac-Man, similar to below picture:

- Basic gameplay is similar to original Pac-Man. The user controls Fries-Man using keyboard inputs through a map, eating “ketchup-dots”. Four enemies tries to catch Fries-Man. If an enemy touches Fries-Man, a life is lost and the Fries-Man loses a life. The game ends when all lives have been lost.
- The game supports 3 different view position: (**camera position changes**)
    a. A bird-eye view,
    b. “Slightly above [Fries-Man] looking down at a 30-degree angle”,
    c. First-person point-of-view
- There will be an ambient light as well as several point light sources throughout the map to demonstrate **lighting** techniques.

- We will use **texture mapping** to draw the floor of the map.
- 3 advanced topics:
    1. **Collision detection**: to detect when an enemy touches Fries-Man and to detect when Fries-Man eats a ketchup-dot
    2. **Bump mapping**: to draw the characters
    3. **Blending**: when Fries-Man eats a power-pellet, it can temporarily eat the enemies. When an enemy is eaten and returns to the center box, it turns translucent (using blending)
- Other additional topics (tentative)
    - Culling