Pocket Gods

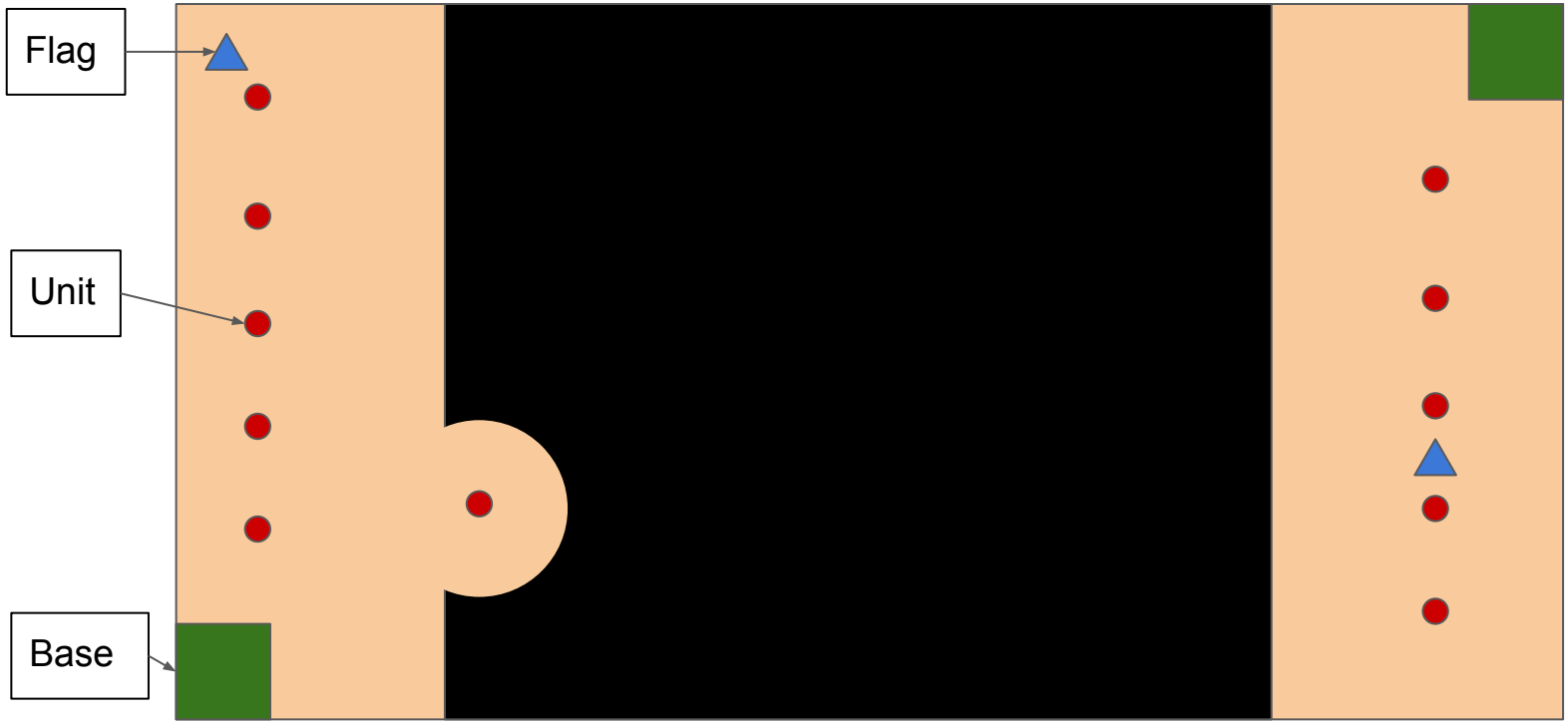
Connor Novak, Sophia Nielsen, Colvin Chapman,
Emily Lepert, Anika Payano

- A better idea of which AI to use
- How the user interacts with the project

Gameplay

- Capture the flag inspired
- Unknown section of the field that nobody can see
- Players can “discover” the field by sending units to explore
- Units have a radius of visibility around it that determines how far it can see
- Base generates units at a set rate of time.
    - Teeny Unit: Low speed, low strength, low attack, low health -> 5s production time
    - Brute Unit: Low speed, high strength, low attack, high health -> 10s production time

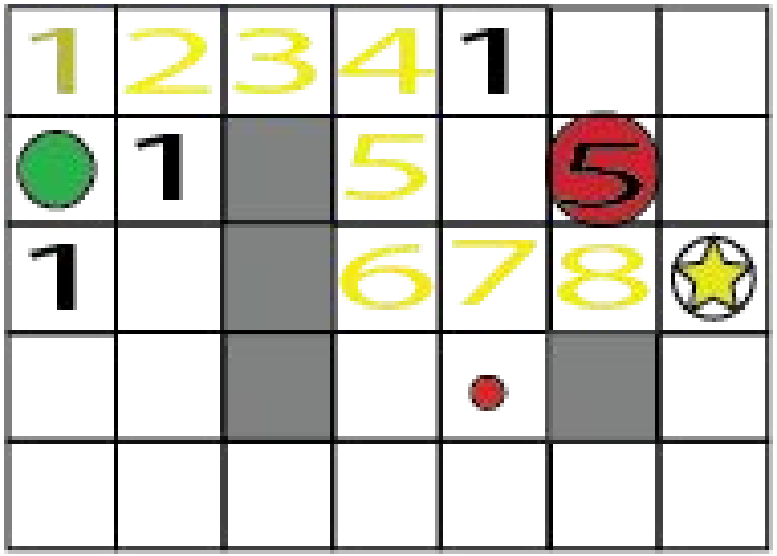
Gameplay: Screen prototype

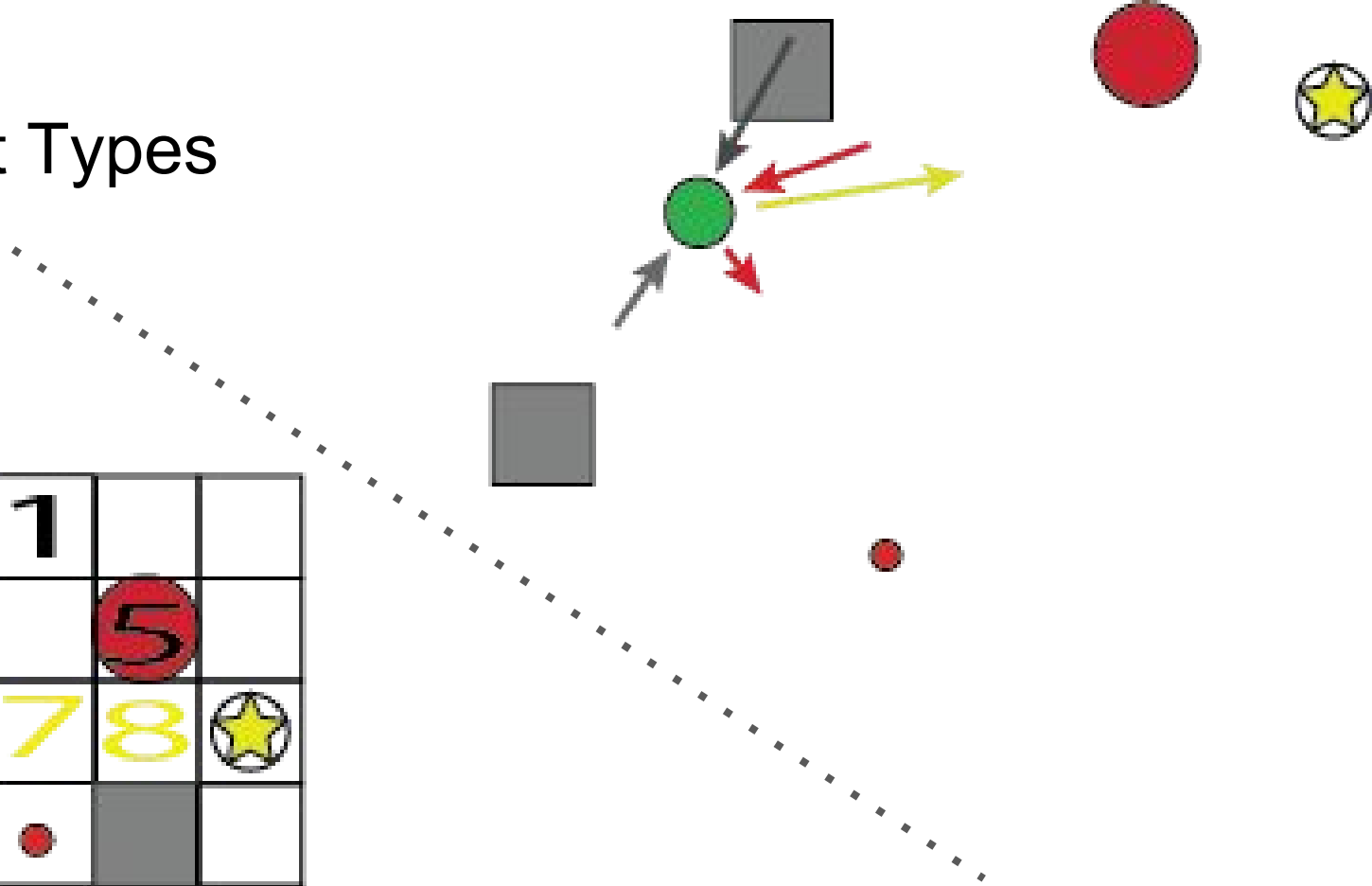


Evolution

- Start with randomly generated AI's (populated with random values)
  - Values are weights or forces the AI uses to make decisions
- Choose AI's based on a fit function
  - First for how well they play the game
  - Next for different playing styles (ie. aggressive vs. defensive)
- Mutate and mate AI's by changing and crossing over values

AI: Different Types





Pros and Cons between the AI

Path Finding

+ (Possibly) easier to conceptualize
  + No buffers needed for collisions
+ More documentation
+ Example code
- Less visually stimulating
- Less simple
  - Track every tile per unit

Force AI

+ More fluid
+ More simple
  + (at lower numbers of objects)
  + Track every object per unit
+ Fits Capture the flag better
- (Possibly) harder to conceptualize
- Less support material

Question:

Our system will have the capacity to represent multiple different AIs able to play a capture the flag game. How, as a user, would you want to interact with this system?