



# PacMan Final Presentation

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# End Points

POST /update: Update Map. (From GET -> POST)

POST /pacman: Update Pac Man. Get the keyboard control info. (From GET -> POST)

POST /ghost: Update Ghost.(From GET -> POST)

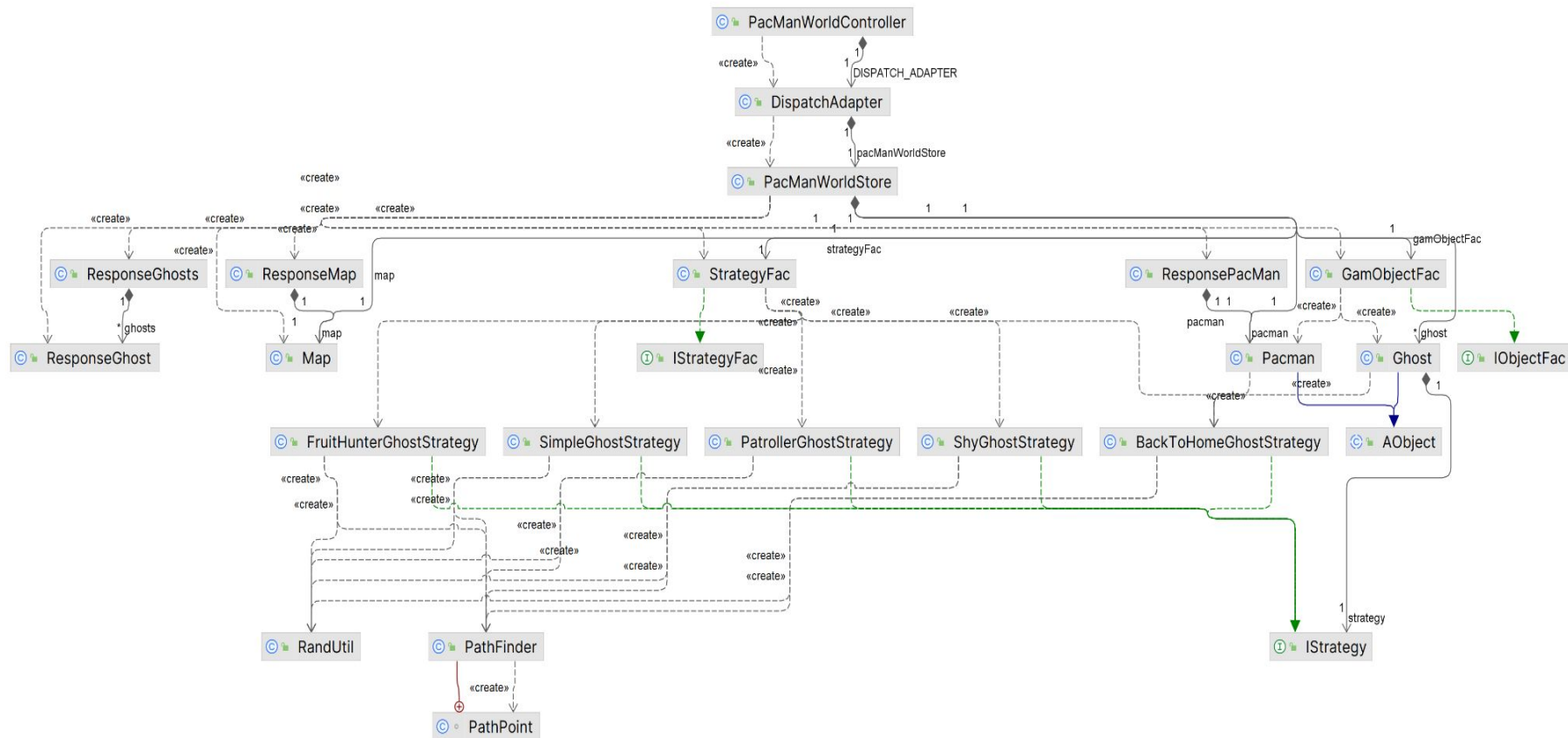
POST /set: Setting the extensible attributes.(NEW!)

GET /clear: Initialization, Restart, Clear the Playing Page.

GET /levels: Set the level for game initialization.

Unsupported: A Designed 404 Page, Back to Home button.

# UML & DESIGN



# API Design: Map

[illegible]

## 0 = Small Points

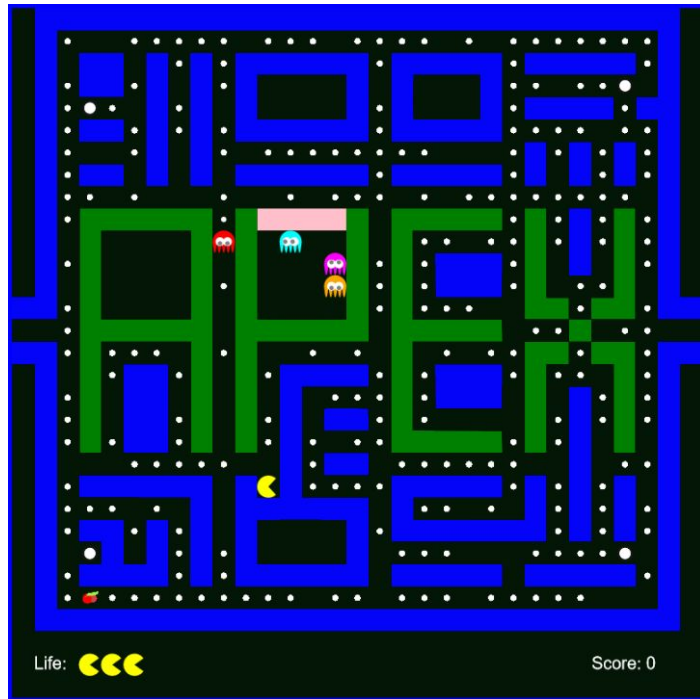
1, 7 = Walls

## 2 = Flash Points

### 3 = Fruit

-1 = Blanks Can have Fruit

Others = Blanks



# API Design: Design Patterns

- Factory Pattern
  - Creating Pacman, Ghost
  - Creating strategies
- Strategy Pattern
  - Different Ghost strategies
- Singleton Pattern
  - Map
  - PacManWorldStore

# Game Design Details

- Customizable Game Elements
  - Number of dots, ghosts, lives
- Multiple Levels
  - Three difficulty settings based on ghost speed
- Different Ghost Chasing Strategies
  - Basic
  - Fruit Hunter
  - Shy
  - Patroller
- Pause, Restart, Background Music, ...

# GUI Demo



<https://pacman-final-team-apex-aa5d13f4d324.herokuapp.com/>

# Future Improvement

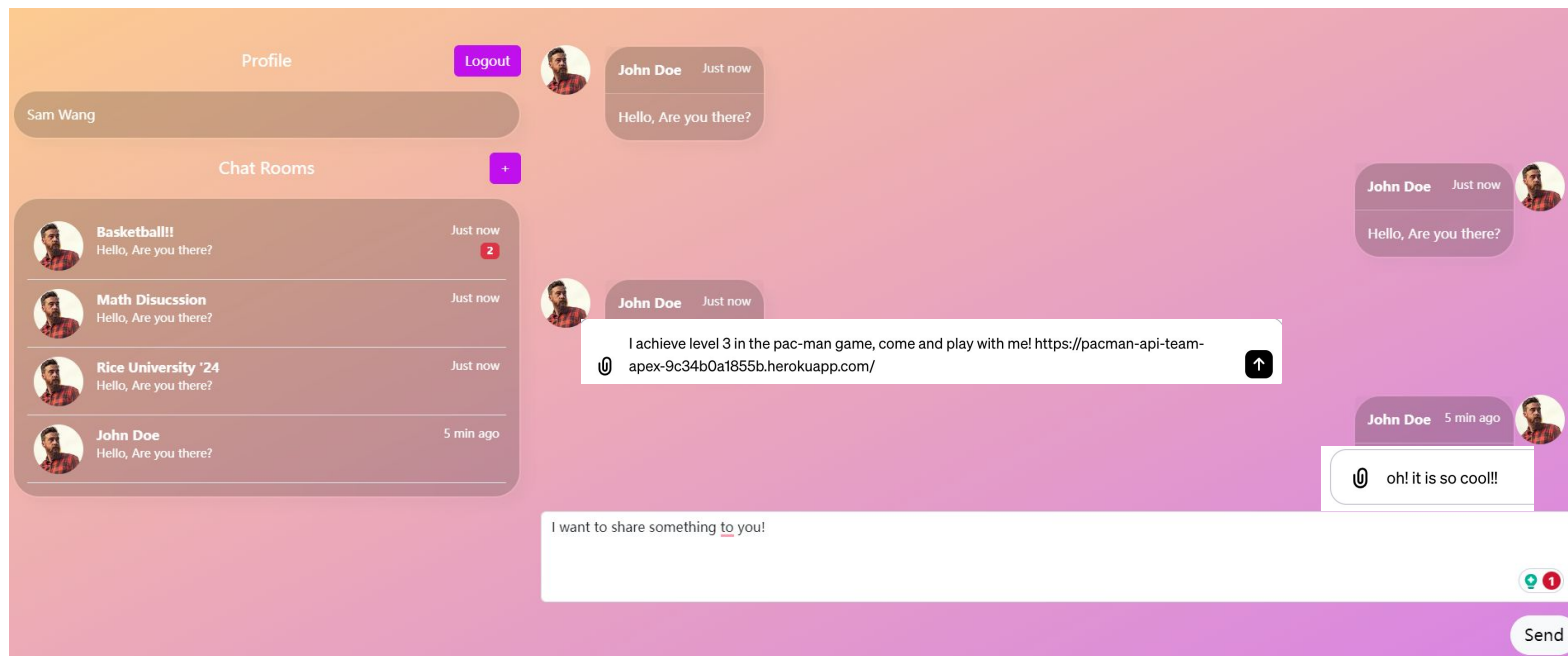
**Different Game Modes:** In addition to the classic mode, new versions have added time challenge mode, adventure mode, and more.

**Character Customization:** Players can customize the appearance of Pac-Man and the ghosts.

**Online Features:** Introduction of online leaderboards, multiplayer online gaming, and more.

**Social Media Integration:** Integration with social media accounts to share achievements and scores.





Q&A