CS134 Lecture 25: Tic Tac Toe: Game Logic
Announcements & Logistics

• **HW 8** due Mon @ 10 pm

• Preregistration Info Session today
  • 2.35 pm in Wege Auditorium
  • Come find out more about CS major requirements and fall courses
  • There will be cookies!

• **Lab 9 Boggle**: two-week lab
  • **Part 1** due next Wed/Thur 10 pm
  • Will run our tests on these and return automated feedback: you are allowed to revise it afterwards without penalty!
  • **Part 2** due May 1/2

Do You Have Any Questions?
Last Time: Board class

- Basic features of our game board:
  - Text areas: above, below, right of grid
  - Grid of squares of set size: rows x cols
  - Reset and Exit buttons
  - React to mouse clicks (we'll discuss this)
- These are all **graphical** (GUI) components
  - Used graphics package to create rectangles/window/text
- `object.draw(win)` draws object on graphical window `win`
Today: Text-Based TTT

- Explore inheritance through “grid-based word games”
Code in Notebook
tic-tac-toe-2.ipynb
TTT Game Logic

• Let’s create a TTT flowchart to help us think through the state of the game at various stages


Let’s think about the “common” case: a valid move in the middle of the game
Finally… TTT Game Logic

- Let’s create a TTT flowchart to help us think through the state of the game at various stages


Now let’s consider the case an invalid move
Finally… TTT Game Logic

- Let’s create a TTT flowchart to help us think through the state of the game at various stages

Now let’s consider the case of a win or draw
Finally…TTT Game Logic

• Let’s create a TTT flowchart to help us think through the state of the game at various stages

Start
→ Ask player for row & column
→ Valid?
→ Place Letter
→ Win?
→ Draw?
→ Change players

Y
→ Reset state
→ Reset?
→ Reset state

N
→ N
→ Y
→ Reset state
→ Reset state

Now’s let suppose a player chooses reset
Finally…TTT Game Logic

- Let’s create a TTT flowchart to help us think through the state of the game at various stages

Now’s let suppose a player chooses exit
Finally… TTT Game Logic

- Let’s create a TTT flowchart to help us think through the state of the game at various stages

- Finally, let’s handle choosing not to exit
Finally… TTT Game Logic

- Let’s create a TTT flowchart to help us think through the state of the game at various stages.