CSI 3370 Tic Tac Toe Game

https://github.com/Ejtunison/CSI_3370_Tic_Tac_Toe

Database Team

Team Objectives and Technical Approach

- Responsible for building the board and providing the required confirmation of the results for each players move.
- The database contains a record of each players move for the duration of the game.
- Retain the final positions of each player for each game
- Each method was assigned to a programming pair to complete
- Extensive communication with middleware was needed to make sure methods worked between the two classes

Challenges

- Figuring out how to have cells swap Xs and Os with dashes instead of numbers was challenging
- Team members had to learn new software, such as git
- Team members had different styles of coding in Java, and it was difficult to come together as one cohesive unit

Lessons Learned

- Communication is key. Working on a project with many different people and multiple moving parts, it is important to stay well informed
- The whole class working as a team helped garner confidence because you know someone has always got your back
- Working in a team has its pros and con, allowing for creative minds to work together, but very difficult to coordinate
- Learning to use new software such as Git and GitHub
- Working with a team and distributing tasks evenly.

Middleware Team

Team Objectives and Technical Approach

- Create board logic
- Check if input is valid
- Check for wins and draws
- Write to board
- Ensure smooth implementation of middleware methods with database and display
- Using the skeleton code as a basis, the methods were split between team members for implementation
- Coordination between each team was needed to make sure that everyone understood what each individual team needed in methods from other teams

Challenges

- Communication was difficult because being in the middle required communicating on both ends of the project
- Separating middleware tasks from display/database tasks was difficult
- Keeping track of the tasks everyone was doing and what still needed to be done

Lessons Learned

- Working within a group and in conjunction with other groups while trying to keep work divided equally
- Using new tools, such as git, takes more time than one would think
- Communication is one of the most important things within the SCRUM model

Display Team

Team Objectives And Technical Approach

- Provide a seamless UI/UX to the player: the player should always be presented with what occurred on the last turn and understand what is asked of them for their next move
- Design an easy-to-read game board: the board should be clean and visually appealing, with well-defined board coordinates for clear decision making
- Correctly interface with middleware for processing and control flow checks: using their methods for checking for a win or draw, writing to and reading from the board, etc.

Technical Approach

- Set up initial welcome screen and prompts
- Design user prompts through play experience
- Dynamically update the board status using a text-based display
- Receiving the user mark selection and accurately passing that information to middleware
- Passing messages to and from middleware for win/draw conditions
- The above tasks were identified and self-assigned by team members as per the SCRUM philosophy

Challenges

- Primary coding tasks surrounded user input and interaction with middleware, which resulted in the expected challenges of formatting user prompts and managing messages between display and middleware
- Display and middleware teams needed to work closely together to ensure that all of the method names, arguments, and return values were in sync
- A unique challenge was determining which coding responsibilities resided with display versus the manager class because of overlapping of gameflow

Lessons Learned

- Communication is extremely important
- In any team, one person’s strength can compensate for another’s weakness, and this should not be resented
- The faster you get code done, the faster you know it doesn’t work
- Planning is good, but it’s important to know when you’ve gone too far

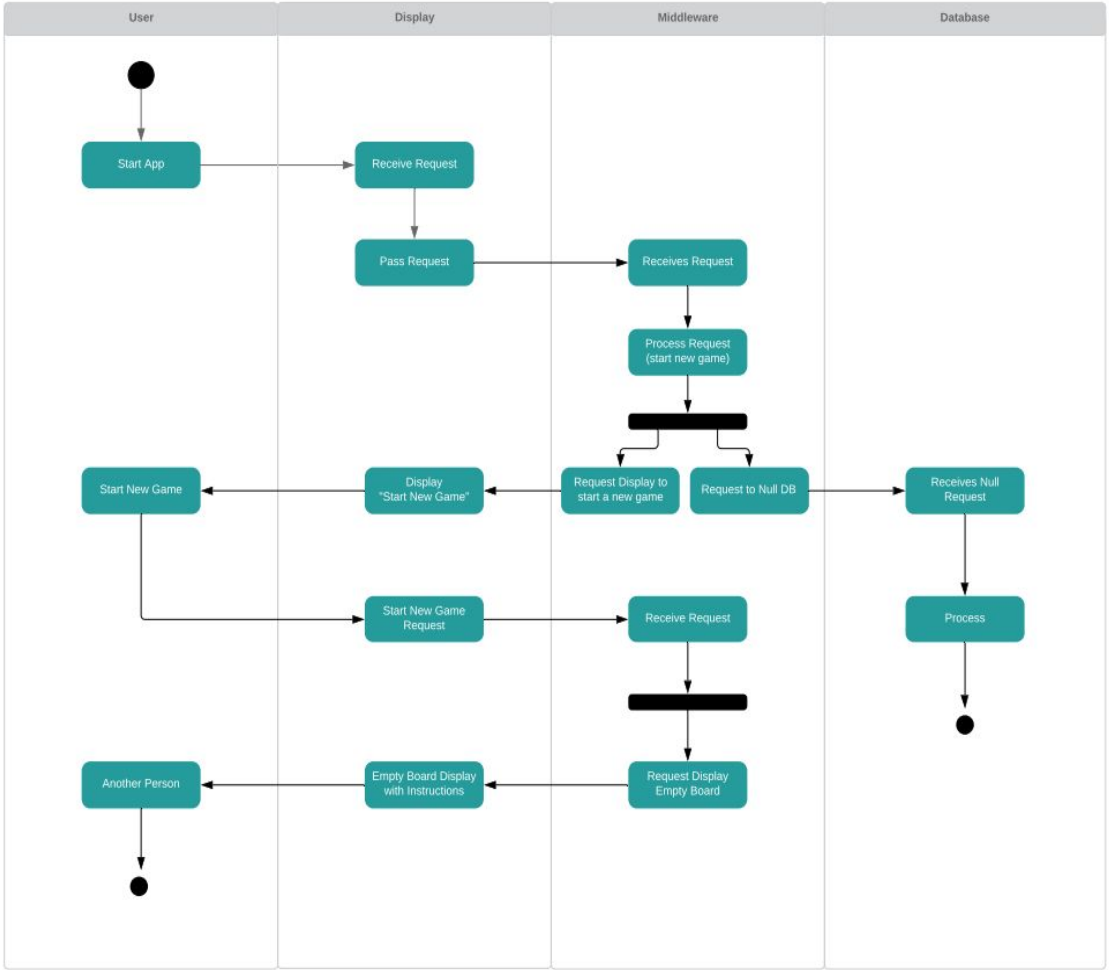
LSI Team

Overall Objectives

- Create a functioning, visually compelling tic-tac-toe game that will allow two players to interact with each other
- Determine the rules of the game and what constitutes win/loss/draw
- Be able to store each player’s move so that a game can actually be completed

Technical Approach

- Sit down with each team and make sure that everyone knows what they are responsible for.



Communication

- Communication between 20 people can be difficult but using Slack helped everyone stay in touch.
- We experienced no issues with getting ahold of people
- The SCRUM stand up meetings each class were crucial to the project, without these meetings it would have been hard to coordinate with each team.

Lessons Learned

- Sticking to a schedule is a lot harder than it seems
- The vision you have at the beginning is almost never what ends up coming out at the end
- The process is a constantly developing entity and one needs to expect and be prepared for it to change
- It’s never as simple as you think or hope it’s going to be when multiple groups are involved
  - Communication has to be constant
  - Once work actually start, each group is going to have their own ideas of how things should work
  - You constantly have to come to middle ground and compromise