Battleships

by Pixelfleet

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Live Gameplay Demo

Key points:

- Architecture: Server & Client
- Server can handle multiple clients
- Linux, macOS, Windows support
- Lobby to wait for opponents (First come, first serve principle)
- Two game phases: Preparation & Battle

Implementation Details

Libraries and frameworks:

- Frontend (client):
    - Custom SDL library
- Backend (server):
    - TCP library: sockpp
    - JSON library: JSON for Modern C++ (nlohmann)
- Unit testing:
    - Google Test

Challenges

- Differing experience levels across team members with git, C++ and tools…
- Unjustified overconfidence or pessimism
- Work left behind by departing team members :(
- Bad time estimations
- Miscommunication or lacking communication
    - regarding workloads / tasks
    - regarding interfacing classes and functions

Takeaways

- Double your time estimations
- Trust, but verify!
- Write unit tests (properly)
- Write integration tests to test the backend
- A CI/CD pipeline prevents "but it works on my machine"

Thank you for listening!

Questions