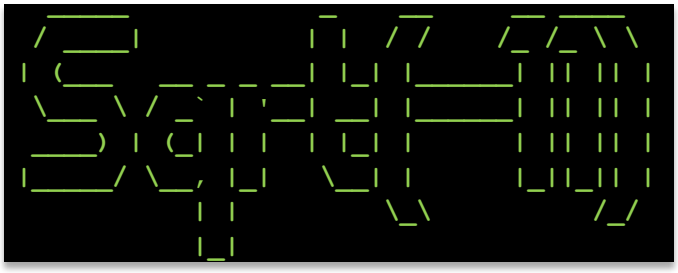
Team Name: Sqrt(-11)
Team Logo:



Abstract:

This team is being assembled to produce an application that satisfies the requirements of the “Clue-Less” game described in *Appendix A.1.* The following text describes the design intent of this application:

> “This game is a simplified version of the popular board game, Clue®. The main simplification is in the navigation of the game board. In Clue-Less there are the same nine rooms, six weapons, and six people as in the board game. The rules are pretty much the same except for moving from room to room.”
>
> - Johns Hopkins University Engineering for Professionals

The team will complete this project by establishing areas of expertise for each team member and integrating with one another on a weekly cadence to satisfy the project objectives. They will decide amongst themselves how to best organize and communicate with one another so that they are aligned on tasks and overall intent. Following on in this document, a bio has been given for each team member, as well as what their specialty is. The team has also provided details on what relevant subsystems have been identified, what high-level deliverables the team will be producing, and how they have agreed to produce presentations, make decisions, and manage conflict.

Team Members:

Nicholas Blair - Project Manager

Nic graduated from Johns Hopkins University in 2015, majoring in Biomedical Engineering, with a focus in computational biology. As a student, Nic helped researchers write custom scripts to analyze large fMRI data sets to investigate neurodegenerative diseases. Nic has spent the past 5 years as an officer in the Army, at first as an infantry officer with assignments in Colorado and Georgia, and then transitioning to the cyber branch in the greater Washington D.C Area. Throughout this time Nic has gained a ton of experience in organizational leadership and project management. As a computer-hobbyist Nic has continued to program in Python, Java, and C++ on various challenges or personal projects, and maintains a server and networking hardware that provide various services. In his spare time, Nic likes to work out, run, swim, bike, and hike.

Leslie Golden - Lead Architect

Leslie graduated from Georgia Southern University in 2015, majoring in Information Technology with a focus in Computer Engineering and a minor in Web and Multimedia. Leslie has worked in the IT industry for over 6 years in a variety of different roles ranging from corporate IT helpdesk analyst to computer support engineer for a small managed service provider firm. As a helpdesk analyst, Leslie was in charge of receiving, prioritizing, documenting, and actively resolving daily end-user help requests. While working as a computer support engineer, she honed her skills in the areas of networking, server installation and maintenance, and computer hardware repair. She also has 3+ years' experience in the web and multimedia arena including extensive experience with both iOS and Android application development.

Leslie also has experience with using programming languages such as Java, C++, and SQL. Leslie is currently seeking to further her education by obtaining her Master's degree in Information Systems Engineering at Johns Hopkins University. Since starting her Master's curriculum in August of 2020, she has been able to take part in several different types of Java programming assignments and projects as part of her coursework. She also feels that in her short time at the university, she has learned so much about working on team projects such as how to manage multiple tasks at once, while being able to meet tight deadlines and satisfying project requirements. For the last two years, Leslie has devoted her time to being a full-time stay-at-home wife and mom (her favorite job by far), as well as a full-time graduate student. In her free time, she enjoys motorcycle riding, competitive shooting, cooking, painting, and spending time with her family.

David Cheng - Verification Lead

David graduated from the University of Maryland, College Park in 2018 with a B.S. in Mechanical Engineering and a minor in International Engineering. His programming experience includes working with embedded Systems programming (Arduino, Raspberry Pi) for several small projects such as LiDAR sensor-based 3D mapping and timer actuated stove controls. He has experience working with both Java and Python languages. Additionally, he has attended a few hackathons, most notably creating a music-based rhythm game in Python with a small team in 48 hours. David's professional experience includes 2.5 years working experience as a Systems Engineer, working closely with Software Engineers in an agile environment. He has expertise with writing systems-level/derived requirements and documenting software design through white paper, as well as with creating test cases and test tools for requirements-based testing. David is a longtime Maryland resident who enjoys traveling to new places (but not flying). In his free time, he enjoys basketball, Ultimate Frisbee, and climbing

Kit Kindred - Co-lead Programmer / Change Management

Kit graduated from UMBC in 2019 with a degree in computer science. During his time at UMBC, he completed a number of projects ranging from Linux kernel modifications to question and language classifiers. He has also studied a variety of different programming languages, including C++, Java, and Python. Since graduating from UMBC, Kit has worked primarily writing embedded software for airborne radar systems. The majority of this development has been in C++. He has also been involved in writing radar test software in C#. Kit has worked in several Scrum teams and has experience using git in a larger team environment. Kit started his master's degree in the spring of 2020 and is looking forward to finishing his last foundation course. Kit currently lives in Maryland and enjoys playing the bass guitar, skiing, and studying foreign languages in his free time.

Steve Nilla - Co-lead Programmer / Editor

Steve graduated from the University of Connecticut in 2017, majoring in mechanical engineering with a focus in aerospace engineering and a minor in mathematics. Despite coming from an engineering background, Steve has worked for 4 years on aerospace and defense projects that incorporate software engineering methods and algorithm development. These projects span areas such as predictive analytics, big data analysis, data visualization, and physics modeling, and he has used primarily Python and SQL to satisfy the project

requirements. Since starting his Master's curriculum in the spring of 2020, he has also gotten involved in Java application development to complete his coursework. Working as an aerospace systems engineer, Steve has over 2 years of experience leading fleet deployment and integration of company proprietary software with the Marine Core, Navy, and Air Force. This has been done primarily using the Scaled Agile Framework as a process model, which has yielded favorable results for the uncertain environment that his business operates in. In these agile teams, Steve has worked as both a scrum master and product owner at different times. He currently resides in Hartford, Connecticut with his girlfriend and dog, and in his free time, he enjoys hiking, skiing, traveling, motorcycle rides, eating, drinking, and watching sports.

Subsystems

The following subsystems have been identified as pertinent to the design of this application, and 2 team members have been assigned as technical focals for each subsystem.

Subsystem	**Technical Focals**
Server Game Logic	Steve Nilla Kit Kindred
Client Game Logic	Steve Nilla Leslie Golden
Graphics	Nic Blair Leslie Golden
Server Networking	Kit Kindred David Cheng
Client Networking	Nic Blair David Cheng

Deliverables

Deliverable	**Due Date**	**Team Meeting Date**
Team Charter	09 February	08 February
Project Plan	23 February	18 February
Vision Document	09 March	04 March
Software Requirements Specification	16 March	11 March
Skeletal System Increment	23 March	18 March
Software Design Document	06 April	26 March, 02 April
Minimal System Increment	13 April	08 April
Target System Increment Project Demo	11 May	15, 29 April, 06 May

Presentations

The team will work on documentation/deliverables together, where each team member will document the details of their project contribution. The team Editor, Steve, will be in charge of editing the presentation before submission to maintain a consistent style. Demonstrations will be collaboratively driven by the entire team. Each team member will go over their respective parts based on their roles and assigned subsystems. This “tag-team” approach will be the primary strategy for presentations throughout the project lifecycle.

Communication Process

The team communicates on a slack channel. All members are responsible for checking the slack at least once every 24 hours and responding to any comments where they are explicitly tagged with an @member. Team members will tag any members whom they require input from to make a decision and refrain from using @member when a member’s input or attention is not needed. In addition to judicious use of @member, team members are encouraged to use #channels to segment discussions not germane to the entire group. However, when in doubt members are reminded to default to a wider audience to share information with any party who could be affected. For example, when asking for input from Team A about feature X, if the decision could be of interest to Team B, post in #general but only @TeamAmembers.

In addition to the slack, the team meets every Thursday at 7:00 PM via Zoom. Video is not required but all members are expected to attend unless they provide notice to the group before noon on that Thursday and coordinate any of their responsibilities. Topics discussed will vary based on upcoming due dates, and members are allowed to bring up topics that need to be discussed as they see fit.

Decision Making Strategy and Conflict Resolution

All decisions will be made by voting either in slack polls or through Zoom calls. Before voting, any member of the team with relevant experience can inform the rest of the group of their experiences. Then group members who have a specific interest in the result of the vote can voice their opinions. Any member of the group can elect to abstain from a vote, however, members who have abstained may be required to vote for tiebreaking purposes. If new information comes available, or circumstances change, all members of the team have the right to bring a decision that has already been decided back up for a new vote.

All major deadlines (i.e. deliverable or major project module) will be agreed upon and announced during the weekly Zoom meetings, at least 5 days before the deadline. Minor deadlines (smaller pieces of deliverables) can be arranged 'point-to-point' via slack with at least 48 hours notice or an agreement from both parties.

Disputes can be resolved either directly, indirectly, or publicly. It is preferred that disputes are resolved directly (i.e. Team Member A direct messages Team Member B if they have a problem that they would like to address.) If a Team Member feels uncomfortable using the direct approach, they can contact the Project Manager (Nick) and voice their complaint. The Project Manager will remain unbiased and resolve the conflict by informing the other teammate of the complaint, mediating a solution, or taking other action as necessary. In the case that any team member has a complaint with Nick, they can contact the Lead Architect (Leslie) or the Editor (Steve). Finally, if a group member feels that multiple parties are involved and it is warranted, they can state their problem in a public space (Slack or Zoom) for the entire team to hear.

Appendix

A.1 - Project Description

https://blackboard.jhu.edu/webapps/blackboard/execute/content/file?cmd=view&content_id=_9218633_1&course_id=_226928_1