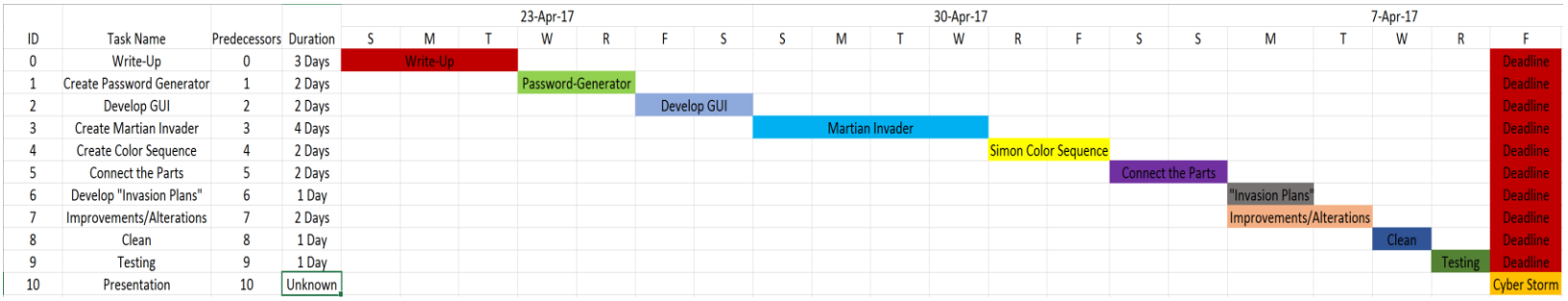
For the final project of the CSC 130 series we have decided, as a group, to develop a program called Martian Armada. We will attempt to tie this years “constellation” theme directly to our project by making the program based on space and aliens. The code consists of a random password generator, a chess style puzzle, a randomized Simon color sequence, and a prompt to input the password once it is retrieved. The password generator will choose from a list of predetermined words to ease the amount of time it will take to input the password at the end of the game. The player can attempt to solve the password before attempting the rest of the program, but this holds negative consequences and can result in loss. The rules for loss are covered later but they consist of both a time and a life counter. The puzzle consists of a chessboard shaped GUI (normal chessboard dimensions). The goal of the puzzle is to place the “Martian Invaders” on the board in a sequence in which none of the ships’ “guns” are aiming at fellow ships, and that entire board is completely covered as to create the most “efficient armada”. The ships will behave exactly like a queen piece on a chessboard to add relevance and give players the ability to solve the puzzle quickly and efficiently. Once the ship puzzle has been solved the player will be redirected to a Simon like color sequence that they must memorize and complete. The “Simon” color sequence will be solved using the raspberry pi GPIO and GUI, much like a real Simon game, and a sequence can only be failed up to three times. Buttons will be used on a breadboard to simulate the color sequence inputs, much like the Simon game project that was assigned earlier this year. Once solved the password will be displayed for the player, and the player must input the password. Once the password is correctly inputted a file will be displayed for the player that will contain a folder with “Mission Details” for the Armada. However, if the password were to be entered wrong, the entire program will reset, causing a new password to be generated and forcing the player to replay through all the games and color sequences (unless they just wish to guess and fail the program). If the player fails to input the password correctly three times, the game ends resulting in “Invasion Failure” and destruction of your home world. The game will have a 5-10-minute time limit to add strain onto the player. The game will also have a scoring mechanism. If a player manages to complete the Armada Puzzle, they will be granted five points, which will be stored and displayed at the end of the game. If a player completes the game completely they will be awarded 5 more points for a grand total of 10 points. By the time this project is completed the game will hopefully be a fast-paced puzzle game that will challenge the critical thinking and memorization skills of Cyber Storm participants. This program is meant to be played by one Cyber Storm participant at a time without the assistance of the rest of his/her team.

The following is an updated Gantt Chart to show the projected project results. The deadline is based on Cyber Storm's opening day in hopes that our project will be functional and good enough to be used in the event. If the project is not chosen it shall be further cleaned, altered, and tested thoroughly until the in-class presentation.



ID	Task Name	Predecessors	Duration
0	Write-Up	0	3 Days
1	Create Password Generator	1	2 Days
2	Develop GUI	2	2 Days
3	Create Martian Invader	3	4 Days
4	Create Color Sequence	4	2 Days
5	Connect the Parts	5	2 Days
6	Develop "Invasion Plans"	6	1 Day
7	Improvements/Alterations	7	2 Days
8	Clean	8	1 Day
9	Testing	9	1 Day
10	Presentation	10	Unknown