**Software Major Project Walkthrough**

* Can show game on laptop that was created and the IDE’s that I have downloaded such as visual studio code and also the Sololearn on iPad
* On google chrome, there is a bookmark folder full of sites that have already been used and a bibliography can be easily created
* Team Gannt and Notion acting as reminders and goals to be set
  + <https://prod.teamgantt.com/gantt/schedule/?ids=2468354#ids=2468354&user=&custom=&company=&hide_completed=false&date_filter=&color_filter=>
  + Notion is app on phone

**Ideas:**

1. Unity Platformer based 3D game with multiplayer

* Two players are able to compete with one another to complete the course first
* This course may consist of animated objects that move and with a platformer nature
* A central sphere which acts as the player and will move around the course
* Both players will be presented with their own sphere and course and they will try to win by beating the other person to the final area

1. Unity Maze game where a single player is placed within a maze

* This maze will include mini challenges across the path to the exit where the player will have to complete
* These mini challenges may include small retro games such as pong and may include teleports to differing areas of the map
* Could add multiplayer though does not seem too feasible as this will be a harder to make game
* May also include 3D modelling to create cool structures

1. iPhone app that is able to store your passwords and username for different sites and apps and has other extra features

* The other features can include face-id authentication, other features such as note taking ability on the side and productivity helpers
* Can also include an area for reminders so it acts as a productivity tool while also being able to store passwords on a server
* The issue solved for the above projects would be either solving a client’s boredom with normal computer games that support playing with friends or how a client would like to have a better manager and productivity booster for their lives
* Other ideas could include things such as planners for events and mini games such as chess though these did not appeal to me as much as the above did due to my personal interests
* Also, there were ideas of creating a messaging app on the iPhone in such as Facebooks messenger or WeChat though within our daily lives, it does not seem too useful due to the plethora of messaging apps that already exist

**Coding and preparation**

* Going to use unity engine using the c sharp coding language to create the game paired with visual studio code to write scripts for the game
* If iPhone app is going to be made, the swift coding language will be used through the XCode IDE
* Familiar with both as I have learnt both during the holidays and performed various tests during the time
* Taken preparation for making the game by creating a small project on unity that has delved into animation, movement of characters, sounds and other aspects for a game
  + Also took a course on c sharp which will allow me to be much more familiar with the language
* For the iPhone app, I have undertaken YouTube tutorials online on how to program in swift and using XCode to create a user interface on the iPhone

**Timeline and Feasibility**

* Using online software called TeamGannt to create a Gannt chart which will be updated as I go along planning the solution
* The overall nature of the program should be relatively feasible as I have obtained a good amount of knowledge in utilising the Unity Engine and the coding language C sharp and also in Swift and XCode
  + Although this is the case, further research has pointed out that a 3D game may take a significant amount of time if it is to have high detail
  + Due to this, I have decided that a high level of detail is not required, but fun and intuitive level designs will take a higher priority
* The multiplayer may be a harder aspect to include within the game though due to the vast number of tutorials, I should be able to achieve it
* If time is running out, I am able to shorten the level design for the game and the features within the app so as to fit the timeline though I will try to plan everything out with the Gannt Chart so as not to lose track of progress and timing

**Documentation and resources**

* Logbook has been started along with the Gannt chart and its contents though will need to be updated regularly
* Resources can be found from a variety of places such as:
  + YouTube
  + GitHub
  + Code Stack Exchange
  + Other various websites providing information on code
  + Textbook (Davis HSC)
  + External help from parents

**Potential problems and what to do next**

* Potential problems may include
  + finishing aspects by the due date as computer programs will have unexpected bugs and complications
  + Unknown bugs that are hard to solve which will take a long time
  + Integrating a wide variety of aspects within the game in time
* The problems present should be able to be dealt with in a sufficient manner through further work upon the issues and redesigning things
* After walkthrough is completed and the project that I want to undertake is accepted, I will begin the process of preparing for check 1
  + This includes social ethical considerations, diagrams and other required components such as Gannt Chart
  + Could start on Gannt Chart first so everything is planned out

**Other comments**

* 3D modelling tools could be used for my game as I would be able to create specific objects
  + This is only if time permits as there is a lot to create and do
  + If there is no time, I can find objects from online repositories such as Git Hub