Project Log

Date	Targets	Execution	Notes
02/05/16	I was introduced to the idea that I would have to do a project. I decided that some research and preparation before I start will be useful.	-Firstly, I looked up pre-existing projects of all different levels, this not only helped with ideas, it also helps to get an idea of the level of different tasks, as in what is considered hard or easy within computational context. -I am very familiar with procedural programming. I decided it may be an investment to try getting familiar with object oriented programming. I have done some online research of some examples of Java programs and obtained a book for programming in Java	
09/05/16	E-mailed potential client in order to plan an interview.	The e-mail was sent and the client has replied, He is free for an hour on Wednesday and Friday	
11/05/16	From what little information my client gave me, before I have an interview, I want to make a mind map of the components of a more impressive project.	I made a brainstorm of audio-visual programs; I feel that this will help me at a later stage.	Why I didn't bring it up in the interview, it has become increasingly clear that my client will probably have the most positive reaction if faced with a more graphical solution. These differently take a lot of time and practice for me to meet these demands.
11/05/16	I have to explain how my solution is related to the computational approach and why I have chosen that approach and the best solution for my client's problem.	Rather than making one huge document, I decided to split the questions into two sections. The first focused on giving my own personal definition of what the computational approach is.	I will start the second section tomorrow.
12/05/2016	Finish of the second section of the analysis of my problem and the computational method.	While there is still some uncertainty to the exact nature of my solution (I want to do some more research on both ideas first), I have analysed both possible ideas from the view point of the computational method.	After the completing the design section, I have gone back and edited this document to include an extract from my design introduction, as it explains my solution much better than before.
13/05/16	At 10am, I began my interview with client.	The notes have been written down and digital recording is underway.	During the interview, it has been made apparent that he lacks in depth knowledge of computers and programming. He has a clear direction of what he wants, but isn't quite sure how he wants it converted. It seems that for this client, rapid application development may prove ready useful to ensure that the client is fully aware and happy about the choices I am presented him.
13/05/16	Finish making digital notes of my client interview.	I had to stay back until 4.00pm to get this done, this took a lot longer than expected and has shifted some work back.	It turns out that I was ill that day. The illness only got worst and made me unable to make any progress over the weekend.
16/05/16	Finish my client brief, this should address both the problem and client in detail.	I am still ill; this affected my ability to execute this task. It was finished, but not to a standard I feel represents my abilities.	I would really appreciate more time to work on it, but I hit the deadline and have to accept that as I hand it in. On a positive note, the research I did will not only make it easier to sell my point to my client, it has also given me a deeper insight to the scope of the lack of fun in education.

16/05/16	Plan the format of my E-portfolio.	I started and finished the basic plan for the layout of my E-portfolio. I have chosen to map it to the component content rather than the mark scheme, as the breakdown within the content made more sense of order work in.	
19/05/16	Start to build up a physical folder to match my E-portfolio.	Today I handed in physical evidence.	There were some issues with the format of my interview, this will be solved soon.
19/05/16	Client interview analysis should be complete with a minimum of one to one and a half pages of content.	I finished the analysis has been finished, its final length is one page.	I'm still not too sure about the length of the analysis as well as the content covered, I may save this file as a first draft and review it more harshly at a later date as so to edit it with a vastly different view.
19/05/16	While the format for my website has been planned, I will spend half an hour to produce buttons and a colour scheme prototype.	The images for the buttons have been made, but their function as buttons will be held off until I make some more pages. I used a simple complementing colour scheme- it was after I used it that I noticed it was the colour scheme of a pancake.	I tried to colour the border of the tables. Sadly, for the life of me I just couldn't find a way to. I will probably leave the border as white until I can find a method. I'll probably seek for human help this time.
19/05/16	There was an issue with the format for my interview; I will spend 10 minutes adding in a format to clearly show that the questions are in sections.	Titles were added to make it clear that the interview was in three sections. Each question was then given a number in relation to the order they were asked in each question.	The content of the interview itself was untouched.
20/05/16	Digital evidence of my interview questions will be produced; this will be done before the end of the day.	The questions were made to mimic how they would appear in the real survey. I have made up my mind that the survey will be a single one with two parts rather than two small surveys.	This draft mimics the actual survey more than I expected. It appears to be more of a prototype than a list of the questions and answer formats that were requested.
23/05/16	After the interview and analysis, the next step is to write up a detailed proposal for the client problem.	I decided to take my time on this task and decided to do research on writing client proposal.	While the research took the whole session, I feel that it has paid off. I feel that this knowledge will allow me to avoid potently up to two drafts that would have been of an unacceptable quality.
24/05/16	Now that I have done ample research about proposals, the logical next step is to try writing one.	I started but did not finish, the time I planned for editing will now have to be spent finishing off the proposal.	The fact I have never written a proposal really showed during this process, even the research could only give me a skeleton on what to do.
25/05/16	I will spare 30-45 minutes to reading over my client proposal and edit if necessary. This is just a simple investment of time to try insuring a high quality of work.	A first draft of the proposal is finished. While the ideas explained and volume of the proposal is impressive, in later drafts I would go over it and review the order of the work.	Even now, I'm not too sure about how valid it is as a proposal, I am considering getting it reviewed before I submit it, but getting someone with experience to review this act such short notice may be impossible.
25/05/16	Write up a detailed statement explaining why the client problem can be solved by computational methods.	The report was finished on time, at 1285 words, it is longer than I originally expected.	It features more information than I planned, but I feel that it is important to make sure that all the background information was included to insure that anyone reading the report fully understood the other options and what they entitled.
28/05/16	I have selected a range of materials to research. This includes static webpages, games and physical books.	I managed to analyse both the static and dynamic sections of the Teach ICT website and questionably educational game, Electric Box 2.	
28/05/16	I brought my selected books in for home (as it would be easier to take my time and research them if I owned each book, luckily I have a personal library at this point).	None of the books scanned very well (with the exception of a single guide), I will take to take pictures using a camera, although I am aware this will come at the cost of quality to the image.	

29/05/16	Continuing my analysis of my selected research materials.	Today I managed to look at the nom-educational point and click game Little Wheel and the KS2 educational point and click game Questionaut.	I picked BBC Bitesize for their educational games because I remember them being very good while I was in primary school. Annoyingly, I could find anything I would call a game for secondary students.
29/05/16	Take pictures of the selected sections of the books I researched.	Some pictures are better than others. None are beyond use as I'm not analysing the text itself, just the design and layouts.	I may have to use a combination of the partial scans and the photos.
30/05/16	Continuing my analysis of my selected research materials.	This time I looked at the static and dynamic parts of the BBC Bitesize website (not the dedicated games for simulations) and my primary example of a puzzle platformer- The Company of Myself.	It may be because I only used Bitesize for GCSE Computing, but the science section was very disappointing.
31/05/16	Start analysing books. This should be shorter than the others sections due to the limited use of the computation method that can be gained from books.	I stayed back late, allowing me to analyse three books today: -Questions and Answers- Earth and Space -The Illustrated Encyclopedia of Animals -Uncover Cobra	Like I expected, it is much harder to analyse a book then it is a game or website.
01/06/16	Finish the analysing the final books, this should finish the research other solutions section of Analysis	With only two books left, I finished the analysis section. It may be because I was drained, but I feel like the analysis on the last two books may be weaker than the rest, I should review them later.	
02/06/16	The mention of the computational method may not be clear enough in each analysis. I need to solve that.	There were two options to solve this issue. The first would be to go back and place in some key words and suggestive sentences to help boost the presence of the computational method. The other was to make some type of summary or review document that tries to highlight the existing information on each task. As I personally don't want to have to edit each task- I made a review document.	I personally dislike this document. While I finished it and have saved it for now, I may go back and use that document to edit each analysis document.
09/06/16	Make a version two of your survey. While the first one hid the purpose that it was only interested in science for the sake of getting unbiased results- the lack of precision becomes clear. Therefore, questions three and four of the first sections will be changed to only focus on science and its subjects.	Due to both environmental and distribution issues, I decided that it would be for the best to use an online service to make my survey. This led to the new survey being made on Survey Monkey	Due to being limited to the free version of Survey Monkey; I was limited to only 10 questions. While this hasn't impacted the general information I was trying to obtain, so information that would have been help to analyse has been lost.
21/07/16	Analysis of the results of my survey two weeks in, this is more a number based analysis rather than context.	I have gotten 30 responses. This is out of a total target audience of 565. As this survey has received only a five percent reply rate, it has become clear that not only will I have to send out this survey again (probably during the next academic year, as I believe that as the year is finishing students feel less inclined to complete the survey). The best course of action would be to create a situation where the students are forced to take the survey; this can only be created by getting them to do it in either an ICT/Computing lesion or in adversary. With the change of the year groups, I feel like I will have to remove the to-be year 10s as I feel that it would be too long a time to have their opinions have useful value. It is also worth note that the to-be ear 7s cannot be included (by may be perfect candidates for an entirely different survey). This leaves only year 8s and year 9s. For year 9s, I should get in contact with the ICT department and see if I can get them to make their students do the survey in lesion- this would ensure a turnover of easily over 90%, as all year 8s have to do computing. Year 9s on the other hand now have a choice of	192, 184, 189

		subjects- this means that by contacting the ICT department I would only get results from students that picked Computing and Creative iMedia (this would lead to a rather low turnout of results). Therefore, I would have to contact the head of year 9 (although I will have to wait until the next academic year to find out who that is) and persuade them to send it out as a task for year 9 advisory.	
25/08/16	Analysis of the results of my survey.	After contacting the ICT department, I managed to get my number of replies above 100. Unfortunately, this makes my survey only available to year 7 and 8 students- but as they are my target audience, the results are still very valid. Statistically, any population above 30 can start to be treated as continuous data, therefore while 100 is a lower percentage of the population (at around 25%) I can comfortability perform statistical analysis on this information.	
27/06/16	With the platformer chosen as my solution, I need to explore the limitations of this solution.		
28/06/16	Come up with a success criteria for the proposed solution.		
02/07/16	Review the system and hardware requirements I will need for the project.	This was delayed due to further research taking place to ensure this was as accurate as possible.	
15/08/16	With the start of the design section, to ensure that what I am designing is clear, I decided to do a little analysis first, now that I have cemented my ideas more than when I was doing analysis.	A two-page analysis breaking down my design into sections and a short explanation and some reasoning for my designs have been recorded.	The opening section covers analysis better than my analysis section. I have decided to go back and add it as an extract.
16/08/16	A quick explanation and exploration of the development of the concepts behind my game for any final designs are made.	The plot points were explored in this document. While it is less than I expected to be in that document, it is still a very important concept that was explored.	
18/08/16	Research on main characters before I start to design my own.	When exploring designs, I feel it is important to analyse the designs of others and consider the reasons and basis on their designs. I separated the document to represent different parts of the robot.	There are some questions about the images I used in this section. While I argue that it comes under educational fair use, I will have to review these images.
18/08/16	The main character's design will be broken down into section. I will start by designing the main characters head.	There is a pause between the physical design process and digitalisation of my notes. The process started on the 18th and the documented was finished on the 19th.	While the design process was finished late in the night on the 18th, the process of scanning in these images and actually making the document takes an additional two days to compete.

20/08/16	Design the main character's arms.	Both arm designs were complete in the middle of the day on the 21st, the rest of the day was spent digitalising the notes.	
22/08/16	Design the main character's legs and feet.	Originally this task was supposed to be quick, as the lower limbs should have been based on the upper limbs. I didn't like how this turned out and design ended up taking two days, with a late night of digitalisation finishing it on the same day.	
24/08/16	Put the designed parts together into one model- the body will be designed to fit them.	The full body drawing took longer than expected, but due to a lack of text in the process, digitalisation was fast, helping to compensate for that time.	Art isn't my strong point. While it is enough to get my point across, I worry about the quality of my solution as I'm doing to be the one to produce all the assets- digital and audio included.
17/09/16	Start the designs of the levels in my game.	Mimicking the start of my player introduction, I decided to start with an introduction page. While it didn't go as planned, as a shorter document, it explores the reasoning behind the reasoning behind level designs.	
17/09/16	Although optional, while I was doing the introduction to design I made some notes and diagrams on how a platformer works. I feel like now would be a good time to use them.	I spent the day digitalising used notes made almost a month ago.	
18/09/16	Design, draw and define the physics levels.	My day after school was spent designing, drawing and explaining the features of the level, the next day was spent digitalising those notes.	
19/09/16	Design, draw and define the biology levels.	My day after school was spent designing, drawing and explaining the features of the level, the next day was spent digitalising those notes.	
19/09/16	Design, draw and define the chemistry levels.	My day after school was spent designing, drawing and explaining the features of the level, the next day was spent digitalising those notes.	
20/09/16	Show that I have designed accompanying algorithms to my designed solution.	I spent a very late night defining every aspect of the game using a state based pseudo code. The next day was spent going through older work applying the pseudo code to the defined aspects of the level and the character.	
26/09/16	Show my client the designs for the first time and record his feedback for further edits.	The meeting was on the 27th, while he was happy with most of my designs, there are three parts I need to edit: -Firstly, in the B1 level, he wants it to be clearer that the first obstacle is a microscope. I will have to make some design changes to solve that issue. -Secondly, in the C2 level, he would like the alkali explosion to break a wall, this means that either I make a new reactive object, or I just change the visuals. -Finally, he really couldn't decide on what avatar to pick for the main character. As he picked up my small experiment with the gender biased designs, he asked me to see if I could make a character select option.	

27/09/16	Plan the structure of my solution.	I have created a modular map for the whole project. While I have left some spaces for any changes, most of the map should be accurate.	I am hesitant to use the name 'object' as a class in Java. I think that object is a key phase that they would not let be assigned to class or variable. If I am correct, I will change the name of the class to obstacle.
29/09/16	Practise with Java. More specifically, figure out if I want to use Eclipse or NetBeans for development and work out how to use my chosen IDE.	After some playing around, while NetBeans was easier to set up projects with and allowed greater freedom, Eclipse has a clear approach and while it takes a while to set up a project (even that is no longer an issue after you configure set-up), I can see the benefit of using Eclipse for a long project like this.	More time was spent trying to work the IDEs than practising Java. Eclipse was especially hard to set up, but I find it easier to navigate after and it has been recommended to me by someone who has just finished their computer science degree. During some coding practice Eclipse has managed to prove the capabilities of their debugging tools.
03/10/16	Start the programming aspect of the project: Create an interface.	Luckily, setting up a window for an application (as I have now learnt this is what the project will take form as- a Java application), is a well-defined problem and plenty of books about game creation cover it early on. With this complete, I can start to test out parts of the project later.	While the code to make a window is easy- especially as I have made the game "Snake" in Python many times before, saving my end result to Eclipse and getting back to it the next day took some time to learn.
06/10/16	Start the programming aspect of the project: Player mechanics: Moving	While I know how to move an object on a 2-dimensional array in Python, I'm quite should how well that translates onto Java. While I am certain a library or API exists for this, there is a problem of gravity that I have never had to think about before.	Finding a solid API, it works similar to my pseudo code, except it changes frames of the character's graphics to allow animation. I still haven't managed to figure out how to jump.
10/10/16	Player mechanics: Jumping	By using a jump counter, I am able to split the jump into two aspects of moving up on the Y-axis and moving down on the Y-axis. This action is bound to the space key instead of the up key as I included in my plan.	
14/10/16	Level Mechanics: The level		
19/10/16	Level Mechanics: The Platforms	Due to the boundingBox on my character, I can apply logic to the Robot class to move it away from a tile if their bounding boxes intersect. This happens between the visual refresh rates of the game, so it looks like the tiles are solid.	
24/10/16	Level Mechanics: Tiles	I need to create a variety of tiles and 'blocks' that will make much the basic layout of the level. These tiles will have their own layer and will act as the platforms in my pseudocode.	
27/10/16	Player mechanics: Avatar 1 (Sherbet)	With the movement logic sorted out, I finally digitalised my first character and provide frames for movement animations. Due to it being such a small size (as I didn't want to lose quality via image transformations) it leans towards a pixel art style.	The animations got saved in the wrong order, while it does nothing wrong mechanically I need to reorder them at some point. While this doesn't sound like too big of a problem, I accidentally saved over my master animation file. To attempt to create any new animations from that file I have saved will produce increasingly distorted images. I may have to reproduce a master file again.
09/11/16	Level Mechanics: Backgrounds	I was having trouble sleeping last night and made a simple background in the early hours. Using the GET logic via my API, I can quickly create as many levels as I want as long as I can provide a background. Therefore, if anything, I have a testing background.	
13/11/16	Player mechanics: Avatar 2 (Henbit)	Although I not too sure how I will go about getting the option for character selection, as my client requested it, I have produced digitalised frames for the second, 'male' robot.	If I cannot find a way to make the second character playable, I will include him in the game complete screen.

17/11/16	Level Mechanics: Chemistry Background	I painstakingly created a background for the chemistry levels using no outside assets.	Due to the process nature of chemistry, I had to take a more roundabout method to represent it in a single background.
21/11/16	Level Mechanics: Biology Background	I lovingly created a background for the biology levels using no outside assets.	
24/11/16	Level Mechanics: Physics Background	I carefully created a background for the physics levels using no outside assets.	
25/11/16	Game Mechanics: Physics Objects	Unlike with movement, I want to create my object graphics first before attempting the finer programming, as each one has a degree of case specifics to them. This process is similar to that of avatar creation and animation.	I started revising for exams at this point, therefore I was starting to spend less time on the project. This lead to the object graphics taking much longer to develop than expected.
02/12/16	Game Mechanics: Biology Objects	Made PNGs and Photoshop files (for further fine-tuned animation frames) for the objects that are planned to appear in the biology levels.	At this point I was in the middle of exams, this meant I only spent a few hours a week on my project.
19/12/16	Game Mechanics: Chemistry Objects	Made PNGs and Photoshop files (because there are some complex animation frames) for the objects that are planned to appear in the chemistry levels.	Towards the end of exams, I almost completely halted my project- this lead to a delay of just over a week for the chemistry levels.
05/01/17	Game Mechanics: Object Behaviour 1) I need to find a way of placing objects into a given level.		Based on the ideas of NPCs (non-playable characters), the objects will be able to “talk” to the robot, giving additional information about the processes they undergo when the robot interacts with them.
11/01/17	Game Mechanics: Object Behaviour 2) I need to apply boundingBox logic to my given objects.		
20/01/17	Game Mechanics: Object Behaviour: 3) I need to find a way of linking object interactions to the state of other objects, without resorting to making a class for every object.	By including a reference in my object manager, I was able to link objects together by forcing them to into an interacted state by modifying the condition.	
02/02/17	Evidence of version 4.	Compiling together the notes and screenshots made/taken while creating version 4. This version introduced objects and collectables to the game, and will be mechanically similar to the final version.	
06/02/17	Implementing objects and collectables into the game to create version 5- a project that will be close to the product I present my client.	This version placed objects into the game to create themed levels.	Although I designed my game for the quick implementation of objects. The sheer volume of objects featured in the game, with edits that were made to the .png files meant that this took more time than expected.
06/02/17	Evidence of version 5	Compiling together the notes and screenshots made/taken while creating version 5.	

08/02/17	Review of all versions.	With each version complete, a review of each section as added to the evidence, after any edits made post-development.	
10/02/17	With informal feedback given from alpha-testers, I need to apply the suggestions to my version 5.	These changes were made, including some fixes I knew existed by kept on getting pushed back due to time.	Exams mean that the further work on the project will once again be delayed.
13/02/17	Formal post-development testing will be documented for my version 5.	With the testing complete and recorded, I can now use it to form the backbone of my evaluation.	
15/03/17	Formal beta testing will now commence, I need to create a form to collect feedback.	I have created and user feedback form and manual explaining how to find the beta version of the game. The forms are physical, as these test will not be too widespread.	
22/03/17	Cross reviewing my post-development testing and applying my findings to my success criteria created in analysis.	The evaluation was made to compare the games with how well the aims were met and some thoughts about each one, pointing towards an evaluation with personalised information that isn't recorded anywhere else.	This evaluation uses comments and opinions from informal alpha testing from fellow sixth form students, followed by some beta testing from students from the lower school that fell into my target audience.
23/03/17	Evaluate usability features, identifying how successful each one has been and any possible improvements that could be implemented.	After researching usability features, I listed all the one I could think of that applied to a game and proceeded to tackle the task in a table format.	I found it hard to evidence all of them, as having an image for some of them was so abstract I might as well leave it blank.
27/03/17	Consider maintenance issues and limitation of the solution, proceed to then describe how the program could be developed to improve deal with the limitations.	This task has now been spilt into two documents, one talking about maintenance of software and how it'll apply to my own program, the other exploring the limitations of my program and potential improvements/changes.	