**Diary:**

|  |  |  |
| --- | --- | --- |
| Date | Time | Progress |
| 10/01/14 | .5h | Came up with idea for fps for the blind. Sound cues would be incredibly important, with different sounds based on proximity and object. |
| 11/01/14 | 1.5h | The screen will be completely blacked out, with no visual input. Sounds were decided:   * Target is high pitched, pitch drops as target gets further away. * Walls are low pitched, louder for closer * Standard directional game sounds, such as footsteps and gun fire.   Would like the game to be online/LAN multiplayer or against melee only bots.  Discussed idea with a group of potential target audience. Many seemed interested with the idea of giving up sight to play a video game.  Decided to program in Java. |
| 12/01/14 | 1h | Decided on not including y-axis. This should make the game Doom like, making it more achievable to create and easier/more fun to play.  Realised that to make the game Doom like, I can design a top down game similar to Bomberman, with a fps control scheme. As the screen is black, the difference in perspective doesn't matter.  Would like sighted players to play blindfolded. Despite this not being necessary as no graphics will be displayed, it would put the player into the mindset of not relying on visuals and should increase a certain amount of claustrophobia when playing the game.  *//Nothing more funny to watch the players hitting the keyboard randomly, right?* |
| 16/01/14 | 1.25h | Wrote up my Rationale in the EP lesson, discussed potential shortcomings with my teacher. Talked to Ms Caldicott about getting in contact with blind people for their perspective on this game. She said she could get me in contact with organisations for teenagers who are blind/partially sighted. |
| 22/01/14 | 1h | Decided to go for pseudo surround sound on a stereo system instead of full surround. This would make a more even playing field for this with worse quality sound systems. Started working out algorithms for sound direction. Lots of rough notes, most didn't work.  *//The abandonment of surround should also simplify coding, as I realise I have never done sound before. Should have thought about that.*  *Notes to find the angle for sound: Appendix 3 pg.1*  *Basic vol. adjustment notes: Appendix 3 pg.2*  *More advanced vol. adjustment notes: Appendix 3 pg.3*  *Dry run for second set of notes. Seemed to work: Appendix 3 pg.4* |
| 23/01/14 | 2h | Basic timeline done. Trying to get the map and player set up. Getting NullPointerExceptions when trying to load an image. |
| 24/01/14 | 3h | Successfully fixed NullPointerExceptions, now can guide a sprite (playerOne.png) across the screen with (place-holder) WASD. Problem with the arrow flying off of screen, so added borders 50px from the window edges.  Changed ideas about target detection sound. Now a high pitched beeping sound when under cross-hair, where the time between the beeps decrease as the target approaches. The further away from the crosshair, the lower pitch the beep is (played through the correct ear) up to (place-holder) 30'.    *playerOne.png //Marvel at the graphics*  **I have decided to strip the game down to single player against automated enemies, as setting up multiplayer is too advanced ambitious at this point in time.** |
| 25/01/14 | 3h | Spent ages trying to get mouse mapping to work. No success. Working on moving the player relative to his angle facing (changed with place-holder JK). Problems with the trigonometric functions in setting how much the player should move forward at each angle.  Fixed the trigonometric movement for forwards and backwards at the expense of my collision box code, worth it. |
| 26/01/14 | 2.5h | Allowed trigonometric movement for left and right in addition to forward and backwards. Rebuilt basic collision boxes. Made the program full screen.  *//Ridiculously proud of that movement code. It is beautiful.*  Removed basic collision boxes, they were too primitive to be useful and just got in the way. Added imgs of walls and corresponding co-ords. Optimised code by replacing different variables of walls with an array.  *Notes for movement code: Appendix 3 pg.5* |
| 28/01/14 | 1.5h | Attempted to get advanced collision code to work in correspondence with walls. Not working yet, problem with detection when the player is over the wall. |
| 02/02/14 | 1.5h | Spent ages trying to get mouse movement to work again. Decided against it, and am sticking to j,k for foreseeable future  *//Stupid mouse. Pretty sure a two year old could have got it working by now* |
| 20/02/14 | 2h | Started work on projectile code for shooting. Decided on 3 types of guns; assault rifle: low rof, high damage and accuracy, smg: high rof, low damage and accuracy, and shotgun; low rof, high damage and spread, potential very useful as you can't see your target. |
| 24/02/14 | 1.5h | Removed walls for collision code, as interacting with imgs was not worth it. Remade collision code which works correctly, easily customisable. Then optimised collision code into a function so it can be used for projectiles and other entities. |
| 26/02/14 | 2h | Started work on projectile coding trying to use an array list  *//This should work, start to the most complicated way possible right?* |
| 27/02/14 | 1h | Replaced projectile code with an array of Points, am having more success however keep getting a null-pointer exception despite importing the correct files this time. |
| 02/03/14 | 2h | Scrapped previous projectiles. Instead replaced it with two arrays of x and y coordinates. Did not throw any errors. Just need to map the bullets with sprites for bug testing. |
| 05/03/14 | 1h | Mapped the sprites, seems the projectiles weren’t following previously thought system. Instead not travelling at all.  *//Note to self. Don't be happy about something without testing it first.* |
| 07/03/14 | N/A | Laptop on which I was working on the EP has died. Serious problem, forgot to keep backups of the EP. Will cause a stop to development and maybe cause a restart of the project.  *//Note to self, backups are good. Do not underestimate them* |
| 09/03/14 |  | After ages, managed to get the data off of the hard drive. The EP is recovered; however do not have access to a computer to work on it. |
| 19/03/14 |  | I believe I have fixed the problem with my laptop, and should be able to continue work on the EP the next day. |
| 20/03/14 | 3h | Researched into already created audiogames. One of the most notable is Shades of Doom. This follows an inspiration similar to mine so I decided to give it a go. There are a few things I learnt from this, one of which is the fact I am terrible at audio games. Firstly, the need for enemy radar is a dire one. Many times will playing SoD I found though I knew that an enemy was there, I couldn’t find it. Secondly, there needs to be an obvious warning to when you are approaching a wall and which side it is one. I am happy that these features are needed as they were already included in my original plan.  *//I mean like really bad. Most of my play time was less then two minutes.* |
| 927/03/14 | 1h | Was writing up my PPR and started on the mid project review. |
| 30/03/14 |  | Laptop died again. I believe this time it is a serious hardware fault and have sent it back to the shop to be repaired.  *//They drop like really expensive flies* |
| 03/04/14 | 1h | Finished my mid project review. Found out about the audiogame “Swamp” which is a co-operative online zombie game. Will give it a go when computer constraints go away |
| 10/04/14 | 1h | Posted a forum thread describing the idea of my game and asking for feedback. The link can be found here: http://forum.audiogames.net/viewtopic.php?id=12982 |
| 17/06/14 | 5h | Finished exams the day before. Also have access to my computer (the RAM in it had broken and had to be replaced) Started work on the projectile code again. Fed up with the bullet system and sprites.  Interviewed Jason Mashinchi about using projectiles or vectors, he suggested vectors for a variety of reasons. Decided to scrap projectiles completely and started working on vectors. No errors (nor warnings!) appeared and so seems to be a success. |
| 18/06/14 | 3h  2h | Added in a lone target. Right now runs off of the same sprite as the player. Set it up that bullets can hit it, need to hit the precise coords of the targets origin though. It has 10 points of health and each bullet removes 1. If it dies it disappears from the screen.  Spent ages adding a collision box for enemy due to simple logic error which I overlooked. Works now. Also tried to set up sound when shooting. Lots of bad errors. Will look at it later.  *//Note to self, remember to bug test for stupidity* |
| 19/06/14 | 1.5h  3h | Enlisted the help of Jason Mashinchi again, he offered advice about the sound errors, and helped me fix it. Sound now plays when the gun is fired, however the sound glitches as it doesn't play from the beginning if you fire again before the file has ended.  Fixed wall collision bug where you can escape along the x axis at the corners  The target now has a separate image (droid.png) and moves towards the player when it is alive. Reduced target health from 10 down to 5. Increased collision box from (-5;5) to (-10;10).  Made the player sprite able to rotate due to a suggestion from EP teacher. //*Took far longer than it should.*    *Droid.png //The height of art* |
| 20/06/14 | 1.5h | Tried to get the mouse to work again. I have no idea why this is causing me so much trouble.  *//This is getting seriously ridiculous.* |
| 22/06/14 | 2h | Significantly revamped movement code for the droid. Went from incredibly basic movement in which it moved at a set pace either vertically or horizontally, to advanced trig movement to find quickest path:  //vx/vy removed and replaced with a standard velocity of v, which is independently changeable |
| 3/07/14 | 3h | Added in an array of enemies. Have a problem where they all seem to follow the same path and have the same coordinates. Not sure where that is.  If the droid is on the same coords as that as the player it reduces the player health by one. The player has 20 health. It also respawns the enemy at a random coord. |
| 4/07/14 | 2h | When the player runs out of the health the game ends, and tells you how many enemies you have killed. When you kill an enemy it respawns in a random location and speeds up. |
| 5/07/14 | 3h | Fixed the bug where the enemies no longer follow the same path. A new bug came up though that you could only kill one of them.  Fixed the trouble killing the enemies. They now work as intended. |
| 7/07/14 | 1h | Put up display during game that it shows you your current score and health. When you die it also shows you how many shots you hit. |
| 10/07/14 | 1h | Reduced droid health down to 2. Reduced player health down to 10. The droids no longer need to occupy the precise coords of the player to do damage. |
| 10/07/14 | 1h | Thought about a different sound for radar relying purely on the volume of sound through each ear. Found it incredibly hard to tell the difference even at 100%.  *Idea for tracks needed for new system.*  *This system was abandoned: Appendix 3 pg. 7* |
| 19/07/14 | 6h | Completely rewrote sound code. No longer having a unified class on which functions are called to play sounds, each individual sound is enclosed in only the class that needs it and loads whenever used. This fixed the bug of the files not playing form the beginning and made it easier to add in new sounds.  I also added in sounds when damage is taken and a sound when the hit is successful.  Edited it so the number of droids can be changed in the options class file. |
| 20/07/14 | 2h | Generated using Audacity: 21 different sounds for the radar. |
| 21/07/14 | 2h | Wrote psuedocode to work out how the radar to work: *Appendix 3 pg. 9*  Also wrote the psuedocode for working out the angle between the player and the droids: *Appendix 3 pg.10* |
| 22/04/14 | 2.5h | The code for finding the angle has been implemented: *Appendix 3 pg.11*  There is however a flaw with this which I realised while testing it. I was for some reason using which angel the droid was facing (droidAngle). This is not the angle which shows where the droid is in relation to the player. |
| 23/04/14 | 8h | Spent most of the waking day on the EP today. Most successful day so far, got a lot done. I have completely implemented the radar and it is working successfully. This was an extremely complicated task. To start with I had to properly find the playerToDroidAngle. Instead of getting droidAngle, I got the position of the droid and Player. I worked out the x and y distance between the player and the droid, and then used tan-1 to work out the angle from the player along the x axis. I then had to modify this into a bearing. The code looks like:  I then used the new droidAnlge in the algorithm I worked on yesterday to get the correct angle for playerToDroidAngle. Next I had to write an algorithm for rounding the playerToDroidAngle to the nearest five, this took longer than I expected as the int() function in java only rounds down. I had the write my own code for this. I started off by hand.  *Psuedocode: Appendix 3 pg. 12*  Then I had to convert the integer number to the file directory to enable the program to find the sound file to be able to play it.  Finally I created a timer based on the proximity of the Player to the droid. This involved getting the absolute distance from the player to the droid, and using that to set a timer. Every tick the timer would be reduced and when it runs out it beeps and resets.  I realised that the radar is really confusing with multiple enemies, so I have reduced the count to just one at a time.  After getting the radar working I added in a fire delay so you that you can not continuously fire. I then wrote the framework for implementing and added in two different types of guns. This gives the player a choice of three to choose from:   * The Assault Rife: medium rate of fire, medium damage * The SMG: high rate of fire, low damage * The Sniper Rifle: low rate of fire, one shots enemies   These can only be selected from changing the line in the options class.  I consolidated the droid's health variables so it can easily be changed under the options class.  I also started work on making it so that you can restart the game without having to quit it and try again. |
| 24/08/14 | 10h | It seems that yesterday while attempting to make it work I have broken the game somehow. Now it just opens and nothing works. Unfortunately, Eclipse's undo button only goes back until you opened the application. I have tried manually undoing everything done last night yet it still isn't working. I have no idea what is wrong when I was so close to completing the artefact.  I have discovered that the action listener event isn't being called. This is incredibly confusing as I have never had this problem before. The controls class, which uses key events also responds, which means that the program is not completely broken.  I have managed to fix the error, mainly through trial and error. I still don't know what originally caused it now. The fix was to manually recall the action listener each time. This seems to have made the gun run twice as fast which was a bizarre advantage, although all the other stats (player speed, gun time, etc.) had to be modified to fit with this new run speed.  I've added in the ability to restart the game upon death, and instantly quit to death screen by pressing ESC.  The number of games is now displayed on the menu/death screen.  Also given an option to start a game without graphics, the graphics mode is left still in for either viewing or debugging.  Completely revamped death and menu screen. Death screen only pops up after first game. New graphics were made in Gimp 2.0.  *Comparison of new and old graphics: Appendix 3 pg.13*  Exported the project as a Jar file to allow it to be run from any machine. Doesn't seem to play sounds though. After testing, it seems that the soundFiles were not saved in the right place. I will need to modify the sound code to make it to work. As this will be an important edit, I will make sure to make a backup.  Wow. Creating a backup somehow corrupted both the backup and the original. Almost every line of code has an error, I have no idea what caused it.  *If you want to see errors, take a look at this: Appendix 3 pg. 14*  Seems like the errors are all fatal as it was a glitch with the IDE itself, which is what I'm writing the game in. It's lucky that I created a Jar immediately before attempting to do that as I can extract all the class files back out from the Jar again  Done that now, and I've created another jar in a file with a short readme. Sent to some friends for feedback. |
| 25/08/14 | 1h | Got some great feedback from people.  My parents found it hard to tell the difference between certain sounds, so I made the hit and robotDeath sounds more recognisable. |
| 26/08/14 | 3h | Did a lot of the admin work for the EP, including updating the timeline, uploading documents, and consolidating feedback. |
| 08/09/14 | 4h | Worked on grenades. Creates a new completely new entity when thrown by pressing “G” explodes in a radius around it. Bit rough and ready. Really like it though. |
| 10/09/14 | 5h | Reduced number of grenades to two per game to reduce spam. Also added in a quick knife by pressing “E”. This instantly kills any enemy within extremely close range. |
| 11/09/14 | 4h | Added in a way to cap framerate and game tick to 60 frames per second. This is vital as it means the game runs exactly the same on all computers, as I received feedback that it runs differently depending on how good your computer is. Printed out screen shots of the game with graphics enabled and disabled. *//Appendix 3 pg. 15* |
| 12/09/14 | 2h | Recorded a load of menu and gamplay sounds. After listening to them, I decided they weren’t good enough quality and so I decided to leave them out of the final project. |