# Individual Diary of Abanob Tawfik

# Z5075490

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What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
NOTHING PROJECT WISE Worked on Assignment 2	NOTHING PROJECT WISE  Finish up my code for a* and work on the heuristic	Assignment 2

# 14 April 2018

What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
Starting thinking of design features for the project	Since I have no group members as I can't attend the tutorial due to my surgery I will try to at least pre-think of a design structure	Assignment 2

# 16 April 2018

What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
NOTHING PROJECT WISE  Worked all on assignment 2 very close to finishing have very few touch-ups and it should be good	NOTHING PROJECT WISE  Try to finish up more of my A* have to fix my heuristic to give best path cost	Assignment 2

### 16 April 2018

What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
Finished Assignment 2 WOOO, that was a long hard hurdle (NOTHING PROJECT WISE)	Look up more on algorithms that allow generation for grids, thinking up more on design I have a few ideas	Other immediate deadlines but I am dedicating time for this project

What Did I Do Yesterday?

What will I Do Today?

Is anything in my way?

Still recovering from surgery (2) (2) but I thought up of a few design ideas I will expand on

Draw out how I want this game to work, try to visualise it before I code it, think of features to add, I have a few ideas I'm thinking of how I want to implement including, sounds on hitting a obstacle or making invalid move, a score system based on time taken to complete scaled on the difficulty, a algorithm to generate boards based on user difficulties, I want to also make the user choose their car if possible but this is all predesign will vary greatly when I go to implement it

Recovery from surgery and immediate deadlines still no group as I could not attend the tutorial due to my recovery but hopefully I get one soon

### 19 April 2018

What Did I Do Yesterday?

What will I Do Today?

Is anything in my way?

Got assigned into my group found my group mates!!! Created a group repository and a Facebook group and got to know my group. Started talking about project, nothing major just asked how everyone is going with the course and assignment 2 progress

#### NOTHING PROJECT WISE

immediate deadlines for my other courses I can't currently commit time and I have a problem with assignment 2 I am putting full attention to finishing Recovery from surgery and assignment 2 might need a complete recoding

#### 22 April 2018

What Did I Do Yesterday?

What will I Do Today?

Is anything in my way?

#### NOTHING PROJECT WISE

I was planning to put full focus on the project because I thought I finished assignment 2 and had nothing in the way but I need to do major revamping to assignment 2

### NOTHING PROJECT WISE

I have to remake my assignment 2 design completely as I did not follow A\* algorithm and I did a greedy search based on a non-admissible heuristic and after a lot of reading decided to revamp entire assignment

Recovery from surgery and assignment 2 need to code the A\* properly and think of an admissible heuristic

# 24 April 2018

Z4 Apri	1 2018		
	What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
	NOTHING PROJECT WISE this redesign of assignment 2 has me stressing out and looking at screens too long causing eye pains, I'm trying to finish assignment 2 and understand the A* algorithm and lecture notes better	NOTHING PROJECT WISE  I hope I can finish assignment 2 A* search working even without a heuristic just giving me the optimal path, but I'm having a bit of trouble understanding the lecture notes and the <n', p+e=""> stuff it's very hard to wrap my head around especially since my brain is still working with the old algorithm</n',>	Recovery from surgery and assignment 2 need to code the A* properly and making this algorithm work without infinitely looping
26 Apri	l 2018		
	What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
	NOTHING PROJECT WISE I FINALLY FINISHED MY A* IT WORKS AND GIVES ME THE BEST PATH, NO HEURISTIC BUT IT WORKS PRAISE THE LAWD, finally understand A* search which is a great relief as it is a very useful algorithm to know	NOTHING PROJECT WISE  Making a heuristic so my costs for the path aren't over-estimated and my nodes expanded aren't a ridiculously high number something admissible and optimal.	Assignment 2 but after this and my COMP2121 work, I will put all my focus into this project I have a design structure I want to work on
27 Apri	l 2018		
	What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
	NOTHING PROJECT WISE documenting for assignment 2	NOTHING PROJECT WISE documenting for assignment 2	documenting for assignment 2
28 Apri	l 2018		
	What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
	NOTHING PROJECT WISE	Discussing with group how we are going to assign roles for the project	Assignment 2 documenting

# 29 April 2018

	What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
	Discussing with group how we are going to assign roles for the project	NOTHING PROJECT WISE  Assignment 2 documentation still need to do my project design	Assignment 2 documentation
30 Apri	l 2018		
	What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
	NOTHING PROJECT WISE Assignment 2 documentation almost finished	Start project source, classes and begin coding for assignment 2	Assignment 2 documentation want to create tests
1 May 2	2018		
	What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
	I started a source folder for the project, added grid class, car class, and began a skeleton construction of the project	NOTHING PROJECT WISE  Assignment 2 documentation, need to fix up Javadoc	Assignment 2 documentation, need to fix up Javadoc
2 May 2	2018		
,	What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
	NOTHING PROJECT WISE ASSIGNMENT 2 IS OFFICIALLY COMPLETE AND SUBMITTED FINALLY	Begin familiarising myself with the javaFX library to try get the grid done today	COMP2121 project + labs and other course work
3 May 2	2018		
J Way 2	What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
	Yesterday I began learning the javaFX library essentials such as grid pane, buttons, scene, stages and launching applications	I will try to get the 2d grid displaying the 6x6 game board as required. Try to also program the cars onto the grid if I can	Nothing in my way related to the project

# 4 May 2018

What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
I created a 6x6 grid with line separators that appears when program runs, created a scene with a grid pane.	Program the cars on top of the grid pane keep it simplistic with just rectangle	Nothing in my way related to the project

## 5 May 2018

What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
I tried to get the cars onto the grid pane on top, with layering, but that didn't seem to work, trying to redesign	I'm going to try and use two grid panes in one pane and program both the grid and car in one pane.	Understand javafx programming in layers, can't seem to get the cars on top of the grid I created

# 6 May 2018

What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
I got the cars onto the grid pane but they are not placed where I want them to be placed, I'm going to try to properly get my grid correct with cars	Fix the car position on the grid so the cars aren't placed off the board or in random places.	Nothing in my way related to the project

# 7 May 2018

What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?	
I got the cars on the board in the right position using translate, but I don't think translate is good, I will reconsider re-doing it with relocate Instead of two grid panes in a canvas, I used a group and a grid pane, and the group were the vehicles.	Try to get the cars to move on click and drag	COMP2121 lab and project	

# 8 May 2018

What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
I got the cars to move on the grid based on click and drag, but they aren't sticking to a column and row on release and are able to collide	I'm going to try and get car collision sorted, and also try to get the cars to snap to a grid position on release quite a lot but don't think I can get it all done today	Nothing in my way related to the project

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	What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
	I got the cars to snap into a grid position on release, but I can't seem to get the collisions to work properly,	I'm going to try and get the blocks to not collide together, but I am almost certain I need to redesign the car movement	Using translation to move the car rather than relocation made it complicated to keep track of the car position on the grid
10 May	2018		
	What Did I Do Yesterday?	What will I Do Today?	Is anything in my way?
	Complete overhaul, redesigned movement with relocate, simplified the move function to only move it.  With a much-simplified move function it made checking collisions simple. It also made snapping more intuitive.  The drag function now checks the last valid x and y coordinate the block can move in, and on release snaps to that coordinate  To check for collisions, I have a list of x and y coordinates stored for each block showing where they are on the grid, and when the block is attempted to move if there is a obstruction in the way, the last valid x and y coordinate are the ones before that block. This means it will not jump back to where it was initially dragged allowing for collisions to visually make more sense, I also used a flag to make sure that once the initial collision is detected, the block cannot move, as this stops the bug over dragging over the blocks. Instead of offset to simplify it I used a variable to keep track of the initial click position, to work out offset in one variable much simpler.	Comment on the code and add documentation	Need currently to finish  - Victory screen (medium)  - Menu (medium)  - Level generator (hard)  - Sound on collision (easy)  - Score system (easy)  Easy medium hard refer to priority, easy being lowest priority and hard being highest.