

# Submission Form

Please ensure you fully complete all FOUR questions on this form before submitting your assignment.

1. Please list the programming constructs you have used.

Function(Both prototype and non-prototypes. Mostly void with a couple of ints )  
If/else statements  
Switch  
While statements  
Structs  
Pointers

2. Describe in simple language how your program works.

When it starts it will ask if you want to name the pet. If Y is selected, then you can name it whatever you want and if N is selected it will go with the default name of Mayberry.

From here it will display the pet on the screen along with its name, controls and its current status.

For the status it will display a word associated with that type and will print them in a different colour from good to bad(green, aqua, white, yellow and red) with the only exception being the Petting stat which is also associated with the happiness stat.

From here you have the option to Feed the pet(press F), Hydrate the Pet(Press H), Pet the Pet(press P), Put the pet to sleep(press S) or Euthanise the pet(press X).

For every second that passes the pet's stat's will also decrease and it will update what is displayed on screen when it's relevant

If the F,H or P Key is pressed it will increase the value of the stats. For the hunger and hydration this will increase it by a random amount. The petting value is a separate value that increases by one which is used elsewhere.

The overall happiness is calculated as  $(\text{Hunger} + \text{Hydration} + \text{Tiredness})/3 + \text{HAP}(\text{Petting value})$ .

The tiredness will tick down slowly every second that passes along with the other stats. Once this happens it will force the pet to sleep till that's back to around 50. When this happens or the pet is asleep the hydration and hunger will also tick down quicker. If the player put's the pet to sleep themselves it will make the pet less likely to pass out and will put them to sleep for a random time up to a maximum of three seconds

This will essentially keep running till the bool for the pet isDead is true, which will essentially only happen under a couple of circumstances which are

- a) If the hunger/hydration/happiness reach 0
- b) If the player chooses to euthanise the pet.

When this happens, it will tell the player that the pet has died, and it survived for X number of seconds which will exit after this when the player hit's a key

3. Please describe below any additional features that you've included in your programme, if none what would you add if you had more time?

In terms of additional features there's only a few things that were added and even then, it wasn't actually that much which was:

- Addition of the hydration stat
- A few timers of sorts
- Colour change of the text

The hydration stat is basically the same the hunger and tiredness so it's just an additional stat for the player to care for.

The timers are used in a couple of places which in most cases it's within while statements. These are mainly to repeat a piece of code until a certain amount of time has passed and will reprint the screen before setting the timer back up again. There is also technically one at the end that is used to calculate how long the pet is alive for but for the most part they are used in the sleep section or the one in the background that updates the screen every second.

The colour change one is pretty self-explanatory where the text on the console screen is changed colour. For the name/ascii art of the pet the colour is purple, for the controls it's blue. The pet status will change between (green, aqua, white, yellow and red) which has been explained above. And when the pet is dead it will make the colour red.

4. Please paste your code into the box below, ensuring it has been formatted correctly

These will be included as the additional files of Source.pdf, PetFunctions.pdf & PetStructure.pdf as it's split across three files.

5. Please include screenshots of your program running to demonstrate any features that you wish to highlight.