

# Project Pitch

**Group 82**

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# Overview

Tamagotchis will be configured and controlled from the command line. Our program will be tailored to children, preferably ages 8 and up, since many aspects of the game require high levels of responsibility. Upon starting the program, the user will be prompted to list their name. From there, users will have the option to create a tamagotchi. When creating a tamagotchi, the user will input the name and type of the tamagotchi. The user cannot make duplicated names. The different types of tamagotchis to select from is: Cat, Dog, or Bunny. Additionally, each tamagotchi type has its own favorite food. Once a specific tamagotchi is selected, its lifecycle will be started and its meters will become live. Each tamagotchi has the following meters: Food Level, Happiness, Cleanliness, Energy, and Discipline. The meters are out of 10, with levels 3-9 being "Normal". A level of 10 = "High", 2 = "Low", and 0 = "Death." When any meter reaches a level of 0, the tamagotchi will die. For the current tamagotchi being played, each meter will decrease by 1 notch every 1 minute. In order to raise their tamagotchis levels, the user can make commands for the tamagotchi. The user will have the ability to switch between their tamagotchis if they created multiple. When the user switches from one tamagotchi to another, the new tamagotchi's meters will become live while the previous tamagotchi's meters will be paused for that character. When a tamagotchi is selected, the user will have the opportunity to take care of their tamagotchi and keep track of their vitals. When the entire program is exited, all tamagotchi's and their data will be erased.

When playing with a tamagotchi, there will be different commands that a user can call that will have different effects on the tamagotchi's life. The user will also be able to play a minigame with their tamagotchi in order to raise their energy and happiness. It will be the users responsibility to ensure that all of a tamagotchis meters stay at a "Normal" state. Failing to do so may result in the death of a tamagotchi.

# Functional Features

ID	Short Name	Description	Champion
F1	Game Initiation and Termination	When the user opens the program, they will be prompted to input their name, and create a tamagotchi by creating their tamagotchi's name and choosing an animal type. The user cannot make duplicated names. Types include: Cat, Bunny, or Dog. Once you've selected the tamagotchi you'd like to take care of, its vital meters will go live, each initializing at a level of 5. Users will have the option to create additional tamagotchis throughout the game, and switch the tamagotchi they're caring for which will pause the vitals of the previous tamagotchi. Once the program is exited, all data is erased.	Nick Cannone
F2	Favorite Food	Each animal type additionally has its own favorite food (Cat = "Fish", Bunny = "Carrot", and Dog = "Chicken"). When the user commands to feed their tamagotchi, they will be prompted to choose which food they would like to feed their tamagotchi. Be aware that if the user chooses to feed their tamagotchi a food that's not their favorite, the user will be prompted to pick again.	Casey Goldberg
F3	Meter Levels	The meters are initialized to 5 when the game begins. The meters will be out of ten and they will decrease one notch every one minute. Each tamagotchi will have the following vitals that will be monitored and looked after as the program runs: food level, cleanliness, discipline, happiness, and energy. It is necessary for these vitals to be looked after and kept stable while the tamagotchi is live. If the level = 10, this is considered "High", while a 2 is considered "Low" and 0 is considered "Death". Therefore, a "Normal" level is levels 3-9.	Jeannie Milmerstadt
F4	Notifications	Our program will communicate with the user via a command line interface. Once the user has selected the tamagotchi they would like to take care of, its meters will become live and its vitals will start being tracked. Out of the 10 levels in a meter, if your tamagotchi reaches level 10 ("High"), level 2 ("Low"), or level 0 ("Death"), the user will be notified via the terminal that its tamagotchi requires care. Once the user calls a command, the user will be notified the new level of that specific vital. Additionally, if the user over feeds or overscolds the tamagotchi (goes above level 10), the user will be notified to stop. For over feeding and over scolding, this will be followed with a decrease of 1 notch in its paired vital.	Casey Goldberg & Jeannemarie Milmerstadt

ID	Short Name	Description	Champion
F5	Commands	<p>The following commands are actions that the user will have access to when taking care of their Tamagotchi. Except for the sleep command which takes 20 seconds, the following commands are immediately effective in raising the users current tamagotchis vitals. Calling these commands will affect ONLY THE CURRENT TAMAGOTCHI the user is playing with.</p> <ul style="list-style-type: none"><li>- <b>0 (= quit)</b> : Quits the program.Quitting the program will cause the user to lose all their data. Upon reopening, the user will be prompted to create a new tamagotchi.</li><li>- <b>1 (=select new)</b> : Allows the user to select a new tamagotchi to play with out of their list of pets currently owned. Keep in mind that once a new tamagotchi is selected, the previous tamagotchis meters levels will be saved, but they will now be paused. Therefore, no action can be done to that tamagotchi until the user decides to switch back, and it's meters will not decrease every minute.</li><li>- <b>2 (= create new)</b>: Allows the user to create a new tamagotchi, where they will then be prompted to enter a name and select a type for their new tamagotchi character. The new tamagotchi will start all their meters at level 5 out of 10.</li><li>- <b>3 (= clean current tamagotchi)</b> - Increase your tamagotchi's cleanliness 1 notch by offering it a bath.</li><li>- <b>4 (= discipline current tamagotchi)</b> - The higher the discipline, the more well behaved your tamagotchi is. If it's discipline levels need to be raised, you can choose to scold your tamagotchi and select from 3 different scolding choices: 1.shouting, 2.electrocution, 3.belt. These scolding options have the same effect in raising the tamagotchi's discipline levels 1 notch. Though, if you over-scold your tamagotchi (going above level 10), this will additionally lead to a decrease in happiness by 1 notch.</li><li>- <b>5 (= put current tamagotchi to sleep)</b>: If your tamagotchi's energy levels are low, you can command it to sleep in order to increase its energy 1 notch. Your tamagotchi will sleep for 20 seconds, and any other command during this time will be rejected. Meters still have the potential to decrease in this time, and the user will be able to tend to their tamagotchi once their sleep is finished. No commands will be able to be performed during the 20 seconds the tamagotchi is sleeping.</li><li>- <b>6 (= feed current tamagotchi)</b>- Increase your tamagotchi's food level 1 notch by feeding your tamagotchi its favorite food. Each tamagotchi type comes with a favorite food. If you feed a tamagotchi a food that's not their favorite, it will be rejected, and the user will have to make a new choice. Overfeeding the tamagotchi (going above level 10) will lead to a decrease in energy by 1 notch.</li></ul> <p>Reminder that if the user commands their tamagotchi to sleep in order to increase its energy, they will not be able to perform any of the above commands during the time the tamagotchi is sleeping. This will only be a 20 second period.</p>	Jeannie Milmerstadt & Casey Goldberg

## (Functional Features Cont)

ID	Short name	Description	Champion
F6	Minigame	<ul style="list-style-type: none"><li>- <b>7 (= play minigame)</b>- This mini game increases your tamagotchi's energy and happiness levels by allowing your tamagotchi to play a game of switcheroo</li><li>- Initialize a list of integers 1 through 5 and shuffle so they're random</li><li>- Prompt tamagotchi/user to switch any two blocks and display resulting order</li><li>- Repeat until integers are in numerical order</li><li>- Once game is complete, energy levels will increase by 1 notch</li></ul>	Peter Kai Schulman

## (Functional Features Cont)

ID	Short Name	Description	Champion
F7	Running Statistics	<p>Different meters will keep track of their specified 'meters':</p> <ul style="list-style-type: none"><li>- <b>Hunger</b></li><li>- <b>Cleanliness</b></li><li>- <b>Discipline</b></li><li>- <b>Happiness</b></li><li>- <b>Energy</b></li></ul> <p>'Meters' will be kept track of throughout the duration of the entire program. Each meter will be an integer from 0 to 10. The meters will all be initialized to 5 and if they drop to 0, the tamagotchi will die (see F6). Reaching above a 10 on the meter will alert the user that they are doing too much care in that area. If the food level or discipline level go above level 10, this will result in a decrease by 1 notch of the energy or happiness meters respectively. On the other hand, a meter level of 10 is considered high, a level of 2 is considered low, and a level of 0 for any meter is considered death. The user will be notified of these statuses. Different commands will have different impacts on each of the meters. The meters will be used to determine the state of a Tamagotchi and will tell the user what the tamagotchi needs at that time. All meters of the selected tamagotchi will decrease at the same rate (decrease 1 notch every 1 minute), regardless of the type of animal your selected tamagotchi is. Meters for the selected tamagotchi will run for the entire time it is selected. Once the the user quits the program, meters will stop and all tamagotchis will be erased. If the user switches tamagotchi's as the program is running, their progress will be saved and the meters for the previous tamagotchi will pause.</p>	Nick Cannone
F8	Death	<ul style="list-style-type: none"><li>- A tamagotchi will die if any of its meters go to 0. There is no coming back from death. The tamagotchi will be deleted. The user will be prompted to switch to a different tamagotchi pet, or to create a new tamagotchi pet if there are no other tamagotchis to choose from, or to exit the game.</li></ul>	Casey Goldberg

# Quality Requirements

ID	Short name	Quality attribute	Description
QR1	Sanity Checks	Reliability	When the player issues a command, the syntax of the command shall always get validated against the format specified in F2.
QR2	Vital level influence	Performance	Many vitals have influence on other vitals. If the tamagotchi feed levels go above level 10 upon using the feed command, this overfeeding will additionally cause the tamagotchi's energy levels to decrease by 1 notch. Also, if the tamagotchis discipline levels go above level 10 upon calling the scold command, this will additionally cause the tamagotchi's happiness level to decrease by 1 notch.
QR3	Constant update of conditions	Performance	A function will run to make sure that each of the tamagotchi's meters are lowered by 1 notch every 1 minute.
QR4	Extensible number of unique tamagotchis	Maintainability	Can continuously add more tamagotchis, as long as they all are unique names
QR5	Reasonable meter management timer	Performance	User should have to issue a command at least every two minutes to keep all of their pets alive and should have at least a minute after a low meter level alert to save their tamagatchi