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ASCII Farmer MINI
1 Player Experience
├ 1.1 Goal: Reach 10,000 Coins as fast as possible
├ 1.2 What if TRON was a farming game?
2 Story, Art, & Sound
├ 2.1 The Japanese Stock Exchange needs more Yen symbols for their systems. How fast can you make 10,000 coins growing these crops?
3 Mechanics
├ 3.1 System Mechanics
├ 3.1.1 On Page Load
├ 3.1.1.1 Check for save game
├ 3.1.1.1.1 If only one save game is present, load game state from the save game and Pause the game
├ 3.1.1.1.2 If multiple save games are present, pop up the Select Save Game Load Prompt Message
├ 3.1.1.1.3 Else, proceed with initial conditions
├ 3.1.1.2 Load Game World
├ 3.1.1.3 Load Welcome Message
├ 3.1.2 Messaging Mechanics
├ The game communicates information with the player via Modal Messages
├ 3.1.2.1 Welcome Message
├ This message appears when the page loads from its initial conditions.
├ 3.1.2.1.1 Triggered By
├ 3.1.2.1.2 Static Content:
├ 3.1.2.1.2.1 Welcome Text
├ 3.1.2.1.2.2 Instructions for Play
├ 3.1.2.1.3 Interactive Content
├ 3.1.2.1.3.1 Player Name Field
├ CONSIDER REMOVING
├ 3.1.2.1.3.1.1 Input - Text Field
├ Max character length 12 characters Limit to letters, no special symbols.
├ Take more steps to sanitize this input, theoretically this should be the only one.
├ 3.1.2.1.3.1.1.1 Input stored as a variable called Player Name
├ 3.1.2.1.3.2 Start Button
├ 3.1.2.2 Milestone Messages
├ These messages appear as pop up windows stating the players most recent achievement.
├ NB: this modal message DOES NOT STOP the game timer.
├ 3.1.2.2.1 Triggered By
├ 3.1.2.2.2 Static Content
├ 3.1.2.2.2.1 Congratulations Text
├ 3.1.2.2.3 Dynamic Content
├ 3.1.2.2.3.1 Info: Milestone Type
├ 3.1.2.2.3.2 Info: Milestone Amount
├ 3.1.2.2.3.3 Flavor Text
├ Pull from random list of quotes?
├ 3.1.2.2.4 Interactive Content
├ 3.1.2.2.4.1 Close Button
├ 3.1.2.2.4.1.1 Closes the window
├ 3.1.2.2.4.1.2 Keyboard Shortcuts
├ 3.1.2.2.4.1.2.1 ESC
├ 3.1.2.2.4.1.2.1.1 Closes the window
├ ONLY WHEN MODAL MESSAGE IS PRESENT.
├ 3.1.2.3 Win Message
├ 3.1.2.3.1 Triggered By
├ 3.1.2.3.1.1 Total Coins Earned = 10,000
├ 3.1.2.3.2 When Triggered
├ 3.1.2.3.2.1 Stop Game Timer
├ 3.1.2.3.2.2 Gray background
├ 3.1.2.3.2.3 Disable Game World
├ 3.1.2.3.3 Static Content
├ 3.1.2.3.3.1 Win Message Text
├ 3.1.2.3.4 Dynamic Content
├ 3.1.2.3.4.1 Player Name
├ 3.1.2.3.4.2 Final Time Length
├ 3.1.2.3.5 Interactive Content
├ 3.1.2.3.5.1 Share Button
├ 3.1.2.3.5.1.1 Takes a screenshot of the current game window and copies it to the players clipboard.
├ 3.1.2.3.5.2 Reset Button
├ 3.1.2.4 Pause Message
├ 3.1.2.4.1 Triggered By
├ 3.1.2.4.2 Static Content
├ 3.1.2.4.2.1 Pause Message Text
├ 3.1.2.4.3 Dynamic Content
├ 3.1.2.4.3.1 Current Game Timer Count
├ 3.1.2.4.4 Interactive Content
├ 3.1.2.4.4.1 Resume Button
├ 3.1.2.5 Reset Confirmation Message
├ 3.1.2.5.1 Triggered By
├ 3.1.2.5.2 Static Content
├ 3.1.2.5.2.1 Reset Confirmation Text
├ 3.1.2.5.3 Interactive Content
├ 3.1.2.5.3.1 "Yes" Button
├ 3.1.2.5.3.1.1 Continues Reset function
├ 3.1.2.5.3.1.2 Closes Reset Confirmation Message
├ 3.1.2.5.3.1.3 Keyboard Shortcut:
├ 3.1.2.5.3.1.3.1 Enter
├ 3.1.2.5.3.1.3.1.1 Closes Reset Confirmation Message
├ 3.1.2.5.3.1.3.1.2 Continues Reset function
├ 3.1.2.5.3.2 "No" Button
├ 3.1.2.5.3.2.1 Closes Reset Confirmation Message
├ 3.1.2.5.3.2.2 Keyboard Shortcut:
├ 3.1.2.5.3.2.2.1 Esc
├ 3.1.2.5.3.2.2.1.1 Closes the window
├ ONLY WHEN MODAL MESSAGE IS PRESENT.
├ 3.1.2.6 Select Save Game Prompt Message
├ 3.1.2.6.1 Triggered By
├ 3.1.2.6.1.1 Multiple save games present on load
├ 3.1.2.6.2 Static Content
├ 3.1.2.6.2.1 Select Save Game Prompt Message text
├ 3.1.2.6.3 Interactive Content
├ 3.1.2.6.3.1 Player Name Field
├ CONSIDER REMOVING
├ 3.1.2.6.3.1.1 Input - Text Field
├ Max character length 12 characters Limit to letters, no special symbols.
├ Take more steps to sanitize this input, theoretically this should be the only one.
├ 3.1.2.6.3.1.1.1 Input stored as a variable called Player Name
├ 3.1.2.6.3.2 Load Save Button
├ 3.1.2.6.3.2.1 If the Player Name matches the name of a save game, load the game state from that save game and pause the game.
├ 3.1.2.7 New Save Game Prompt Message
├ 3.1.2.7.1 Triggered By
├ 3.1.2.7.1.1 If the Player Name Provided in the Select Save Game Prompt Message does not match any save games
├ 3.1.2.7.2 Static Content
├ 3.1.2.7.2.1 New Save Game Prompt Message Text
├ 3.1.2.7.3 Dynamic Content
├ 3.1.2.7.3.1 Player Name
├ 3.1.2.7.4 Interactive Content
├ 3.1.2.7.4.1 Try Again
├ 3.1.2.7.4.1.1 Closes the New Save Game Prompt Message
├ 3.1.2.7.4.1.2 Clears the Current Player Name value
├ 3.1.2.7.4.2 Start Button
├ 3.1.3 State Mechanics
├ 3.1.3.1 Start Button
├ 3.1.3.1.1 Button Text:
├ 3.1.3.1.1.1 START
├ 3.1.3.1.2 When Clicked:
├ Calls the Start function
├ 3.1.3.1.2.1 Dismisses the Welcome Message
├ 3.1.3.1.2.2 Activates Game Timer
├ 3.1.3.1.2.3 Activates Game World
├ 3.1.3.1.2.4 Records the Player Name Input Field as the Player Name variable
├ Tie into Input Sanitization
├ CONSIDER REMOVING
├ 3.1.3.1.2.4.1 If Player Name field left blank record player name as "Bean"
├ 3.1.3.1.2.5 Create a
├ 3.1.3.1.3 Keyboard Shortcut:
├ 3.1.3.1.3.1 Enter
├ 3.1.3.2 Pause Button
├ 3.1.3.2.1 Button Text
├ 3.1.3.2.1.1 PAUSE
├ 3.1.3.2.2 When Clicked
├ 3.1.3.2.2.1 Saves the game state
├ 3.1.3.2.2.2 Pauses the Game Timer
├ 3.1.3.2.2.3 Grays out the interface
├ 3.1.3.2.2.4 Pops Up the Pause Modal Message
├ 3.1.3.2.3 Keyboard Shortcuts
├ 3.1.3.2.3.1 P
├ 3.1.3.2.3.2 Pause
├ 3.1.3.3 Resume Button
├ 3.1.3.3.1 Button Text
├ 3.1.3.3.1.1 RESUME
├ 3.1.3.3.2 When Clicked
├ 3.1.3.3.2.1 Dismisses Pause Message
├ 3.1.3.3.2.2 Returns Interface to normal
├ 3.1.3.3.2.3 Resumes the Game Timer
├ 3.1.3.3.3 Keyboard Shortcut
├ 3.1.3.3.3.1 ESC
├ 3.1.3.4 Reset Button
├ 3.1.3.4.1 Pops up the Confirmation Message
├ 3.1.3.4.1.1 Break here, only return if Yes is clicked
├ 3.1.3.4.2 Closes the Win Message Window
├ (If present)
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- 3.1.3.4.3 Resets the Game World to initial conditions
 - 3.1.3.4.4 Resets the Game Timer to 0
 - 3.1.3.4.5 Keyboard Shortcuts:
 - 3.1.3.4.5.1 R
- 3.1.3.5 Load Save Button
 - 3.1.3.5.1 Only used in the specific case of multiple save games present on load
 - 3.1.3.5.1.1 If the Player Name matches the name of a save game, load the game state from that save game and pause the game.
- 3.1.3.6 Save Game Mechanics
 - 3.1.3.6.1 Records information in the Game State array variable
 - 3.1.3.6.2 Uninstantiated until the Start Button is run
 - 3.1.3.6.2.1 Each instantiation of a save game has the associated player name appended to the front of the the save game.
 - 3.1.3.6.2.1.1 Player Name + "save game"
 - 3.1.3.6.3 Tracked System Elements
 - 3.1.3.6.3.1 Player Name
 - 3.1.3.6.3.2 Current Game Time Value
 - 3.1.3.6.3.3 Save Game Name
 - 3.1.3.6.4 Tracked Game Elements
- 3.1.4 Game Timer Mechanics
 - 3.1.4.1 Start Timer
 - 3.1.4.1.1 Count upwards by 1 for every millisecond that passes
 - 3.1.4.2 Pause Timer
 - 3.1.4.2.1 Stops the timer at its current value
 - 3.1.4.3 Stop Timer
 - 3.1.4.3.1 Stops the timer at its current value
 - 3.1.4.3.2 Record the current value of the timer as Final Game Time
 - 3.1.4.4 Reset Timer
 - 3.1.4.4.1 Reset the game timer value to 0
 - 3.1.4.5 Read Timer
 - 3.1.4.5.1 Convert the raw game timer number to human readable time
- 3.2 Game Mechanics, Design & Logic
 - 3.2.1 Game World Info
 - 3.2.1.1 Quick Design Brief: A simple grayscale interface reminiscent of the old Macintosh System 7 user interface. Each section of the game world is represented in its own "window". There are 4 Game Section Windows: "Inventory", "Tools & Upgrades", "The Field", & "The Store"
 - 3.2.1.2 Game Window Layout & General Mechanics
 - 3.2.1.2.1 The different game section windows are displayed in a vertical stack, centered in the screen.
 - 3.2.1.2.2 Each game section window is styled after the Macintosh System 7 finder window.
 - 3.2.1.2.2.1 Window Contents
 - 3.2.1.2.2.1.1 Top Bar
 - 3.2.1.2.2.1.1.1 Title: the title of each window is displayed in the center of the Top Bar
 - 3.2.1.2.2.1.1.2 Close Button: Square game window close button to the left side of the bar offset from the edge.
 - 3.2.1.2.2.1.1.2.1 This button minimizes the associated main window and all sub windows but leaves the bar visible. If clicked again the main window and all sub windows expand back out.
 - 3.2.1.2.2.1.1.3 6 decorative horizontal lines in a vertical stack at the top with breaks for the close button on the left and the window title at the center.
 - 3.2.1.2.2.1.2 Main Window
 - 3.2.1.2.2.1.2.1 The container for all content held below the top bar. A simple rectangular window that expands downward as sub windows are opened and closed.
 - 3.2.1.2.2.1.3 Sub Windows
 - 3.2.1.2.2.1.3.1 Sub window top bar
 - 3.2.1.2.2.1.3.1.1 Sub Window title
 - 3.2.1.2.2.1.3.1.1.1 Sub Window Info
 - 3.2.1.2.2.1.3.1.2 Sub Window Close button
 - 3.2.1.2.2.1.3.1.2.1 This button minimizes the associated sub window but leaves the sub window bar visible. If clicked again the sub window expand back out.
 - 3.2.1.2.2.1.3.2 Sub Window Content
 - 3.2.1.2.2.1.3.2.1 This content varies from main window to main window and sub window to sub window. But it will always contain at least one of the following.
 - 3.2.1.2.2.1.3.2.1.1 Text
 - 3.2.1.2.2.1.3.2.1.2 Buttons
 - 3.2.1.2.2.1.3.2.1.3 Toggle Switches
 - 3.2.1.2.2.1.3.2.1.4 Static Text
 - 3.2.1.2.2.1.3.2.1.5 Dynamic Text
 - 3.2.1.3 Page & Window Layout Order

The following descriptions of each game window section describe them in their initial conditions and should be used as the start point of every game.
 - 3.2.1.3.1 Title: ASCII Farmer MINI
 - 3.2.1.3.1.1 Reference Image
 - 3.2.1.3.2 Game Section Windows
 - 3.2.1.3.2.1 Inventory Window
 - 3.2.1.3.2.1.1 Reference Image - Inventory Window
 - 3.2.1.3.2.1.2 Top Bar Title
 - 3.2.1.3.2.1.2.1 "Inventory"
 - 3.2.1.3.2.1.3 Inventory Close button
 - 3.2.1.3.2.1.4 Sub Window:
 - 3.2.1.3.2.1.4.1 Sub Window Bar:
 - 3.2.1.3.2.1.4.1.1 Player Name Variable
 - 3.2.1.3.2.1.4.1.1.1 Left Justified Text
 - 3.2.1.3.2.1.4.1.2 "Game Timer - " Game Timer Current Value
 - 3.2.1.3.2.1.4.1.2.1 Right Justified Text
 - 3.2.1.3.2.1.4.2 Sub Window Content:
 - 3.2.1.3.2.1.4.2.1 This sub window is divided into 4 columns and 3 rows. The content is listed below by column, with the first item in each list being in the top row and the last in the bottom row of each respective column
 - 3.2.1.3.2.1.4.2.1.1 "g", "Coins", player coins variable = 1
 - 3.2.1.3.2.1.4.2.1.2 "s", "Seeds", player seeds variable = 1
 - 3.2.1.3.2.1.4.2.1.3 "s", "Water", player water variable = 10
 - 3.2.1.3.2.1.4.2.1.4 "w", "Crops", player crops variable = 0
 - 3.2.1.3.2.2 Tools & Upgrades Window
 - 3.2.1.3.2.2.1 Reference Image - Tools & Upgrades Section Window
 - 3.2.1.3.2.2.2 Top Bar Title:
 - 3.2.1.3.2.2.2.1 "Tools & Upgrades"
 - 3.2.1.3.2.2.3 Tools & Upgrades Close Button
 - 3.2.1.3.2.2.4 Sub Window - Tools
 - 3.2.1.3.2.2.4.1 Sub Window Bar Text
 - 3.2.1.3.2.2.4.1.1 "Tools"
 - 3.2.1.3.2.2.4.1.1.1 Center Justified Text
 - 3.2.1.3.2.2.4.2 Sub Window Content:
 - 3.2.1.3.2.2.4.2.1 First Subdivision, taking up the left most third of the sub window.
 - 3.2.1.3.2.2.4.2.1.1 "Water Capacity"
 - 3.2.1.3.2.2.4.2.1.2 Current Water Capacity Variable = 10
 - 3.2.1.3.2.2.4.2.2 Second Subdivision, taking up the remaining two thirds of the sub window. This section is further sub divided into thirds, each third containing a tool button. These buttons indicate which tool the player currently has selected. When one Tool is selected the other two are grayed out.
 - 3.2.1.3.2.2.4.2.2.1 Plow Button
 - 3.2.1.3.2.2.4.2.2.2 Watering Can Button
 - 3.2.1.3.2.2.4.2.2.3 Scythe Button
 - 3.2.1.3.2.2.5 Sub Window - Expanded Click Upgrade
 - 3.2.1.3.2.2.5.1 Sub Window Bar Text
 - 3.2.1.3.2.2.5.1.1 "Expanded Click Upgrade"
 - 3.2.1.3.2.2.5.1.1.1 Center Justified Text
 - 3.2.1.3.2.2.5.2 Sub Window Content:
 - 3.2.1.3.2.2.5.2.1 This sub window is divided into thirds with each third containing a labeled area ("Mk. 1", "Mk. 2", & "Mk. 3") and a toggle switch.
 - 3.2.1.3.2.2.5.2.2 These toggle switches control the on/off state of the Expanded Click Upgrades. Each one controls its respective upgrade Mk.
 - 3.2.1.3.2.3 The Field
 - 3.2.1.3.2.3.1 Reference Image
 - 3.2.1.3.2.3.2 Top Bar Title
 - 3.2.1.3.2.3.2.1 "The Field"
 - 3.2.1.3.2.3.3 Sub Window:
 - 3.2.1.3.2.3.3.1 Sub Window Content:
 - 3.2.1.3.2.3.3.1.1 This sub window contains the primary area of gameplay. The Field consists of nine Plots in a 3 by 3 grid. Each plot goes through several stages repeatedly throughout the game as the player clicks on them. Each of these stages is represented by a different symbol. These stages and their accompanying symbols are described later. At the start of the game only the top left Plot (1,1) is unlocked.
 - 3.2.1.3.2.4 The Store
 - 3.2.1.3.2.4.1 Reference Image - Store Game Section Window
 - 3.2.1.3.2.4.2 Top Bar Title
 - 3.2.1.3.2.4.2.1 "The Store"
 - 3.2.1.3.2.4.3 Sub Window - Supplies
 - 3.2.1.3.2.4.3.1 Sub Window Bar Contents
 - 3.2.1.3.2.4.3.1.1 Sub Window Bar Title
 - 3.2.1.3.2.4.3.1.1.1 "Supplies"
 - 3.2.1.3.2.4.3.1.2 Supplies Sub Window Close Button
 - 3.2.1.3.2.4.3.2 Sub Window Content:
 - 3.2.1.3.2.4.3.2.1 This Sub Window is further subdivided into two halves for the seeds and water refill purchasing sections.
 - 3.2.1.3.2.4.3.3 Sub Window - Seeds
 - 3.2.1.3.2.4.3.3.1 Sub Window Bar Contents
 - 3.2.1.3.2.4.3.3.1.1 Sub Window Bar Title
 - 3.2.1.3.2.4.3.3.1.1.1 "Buy Seeds (s)"
 - 3.2.1.3.2.4.3.3.2 Sub Window Content:
 - 3.2.1.3.2.4.3.3.2.1 3 Buttons for the "1x", "3x", & "9x" seed purchasing options.
 - 3.2.1.3.2.4.3.4 Sub Window - Water Refills
 - 3.2.1.3.2.4.3.4.1 Sub Window Bar Text
 - 3.2.1.3.2.4.3.4.1.1 "Buy Water (s)"
 - 3.2.1.3.2.4.3.4.2 Sub Window Content:
 - 3.2.1.3.2.4.3.4.2.1 3 Buttons for the "10x", "30x", & "90x" Water refill purchasing options. At the start of the game only the "10x" button is active.
 - 3.2.1.3.2.4.4 Sub Window - Market
 - 3.2.1.3.2.4.4.1 Sub Window Bar Contents:
 - 3.2.1.3.2.4.4.1.1 Sub Window Bar Title
 - 3.2.1.3.2.4.4.1.1.1 "Market"
 - 3.2.1.3.2.4.4.1.2 Market Sub Window Close Button
 - 3.2.1.3.2.4.4.2 Sub Window Content:
 - 3.2.1.3.2.4.4.2.1 3 Buttons for the "1x", "3x", & "9x" Crop sale options. At the start of the game only the "1x" button is active.
 - 3.2.1.3.2.4.5 Sub Window - Upgrade Tokens
 - 3.2.1.3.2.4.5.1 1st Sub Window Sub Division - Expanded Click Upgrade
 - 3.2.1.3.2.4.5.1.1 Sub Window Bar Title
 - 3.2.1.3.2.4.5.1.1.1 "Expanded Click Upgrade"
 - 3.2.1.3.2.4.5.1.2 Sub Window Content:
 - 3.2.1.3.2.4.5.1.2.1 3 Buttons that represent the purchasing function for the tokens that unlock the Expanded click upgrades. There is a button for each upgrade ("Mk. 1", "Mk. 2", "Mk. 3") along with its corresponding price. At the start of the game none of the upgrade buttons are enabled.
 - 3.2.1.3.2.4.5.2 2nd Sub Window Subdivision
 - 3.2.1.3.2.4.5.2.1 Sub Window Bar Title
 - 3.2.1.3.2.4.5.2.1.1 "Supply Quantity Upgrades"
 - 3.2.1.3.2.4.5.2.2 Sub Window Content:
 - 3.2.2 Inventory Mechanics
 - 3.2.2.1 Coins
 - 3.2.2.1.1 Primary Currency, used for the costs of all shop items in the game.
 - 3.2.2.1.2 Player starting coin balance
 - 3.2.2.1.2.1 10
 - 3.2.2.2 Seeds
 - 3.2.2.2.1 Item used to satisfy a requirement to progress a plot to the 'planted' stage.
 - 3.2.2.2.2 Player starting seed balance
 - 3.2.2.2.2.1 1
 - 3.2.2.3 Water
 - 3.2.2.3.1 Item used to satisfy the requirements to progress a plot though the three growing stages.
 - 3.2.2.3.2 Inventory is capped by the Water Capacity variable
 - 3.2.2.3.2.1 Starting water capacity variable
 - 3.2.2.3.2.1.1 10
 - 3.2.2.3.3 Player starting water balance

	3.2.6.2.5.2.1.1.0 = not unlocked
	3.2.6.2.5.2.1.2.1 = Unlocked
3.2.6.2.5.2.2	Purchased
	3.2.6.2.5.2.2.1.0 = not purchased
	3.2.6.2.5.2.2.2.1 = purchased
3.2.6.2.5.3	Expanded Click Mk. 3
	3.2.6.2.5.3.1 Unlocked
	3.2.6.2.5.3.1.1.0 = not unlocked
	3.2.6.2.5.3.1.2.1 = Unlocked
3.2.6.2.5.3.2	Purchased
	3.2.6.2.5.3.2.1.0 = not purchased
	3.2.6.2.5.3.2.2.1 = purchased
3.2.6.2.5.4	Expanded Click Mk. 4
	3.2.6.2.5.4.1 Unlocked
	3.2.6.2.5.4.1.1.0 = not unlocked
	3.2.6.2.5.4.1.2.1 = Unlocked
3.2.6.2.5.4.2	Purchased
	3.2.6.2.5.4.2.1.0 = not purchased
	3.2.6.2.5.4.2.2.1 = purchased