**Name Varun Agarwal Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_**

**Journal Entry Hour 2**

Begin building a program for a project you brainstormed. Monitor whether you will finish enough of your project in time

**\* Designing an App – Need help with your storyboard refer back to** [**https://studio.code.org/s/csp3-2024/lessons/3/levels/1**](https://studio.code.org/s/csp3-2024/lessons/3/levels/1)

**You’ll create your app here -** [**https://studio.code.org/s/csp9-2024/lessons/3/levels/2**](https://studio.code.org/s/csp9-2024/lessons/3/levels/2)

**Highlight what resources you used today: (Use can use the highlighter tool under the Home Tab)**

* **Survival Guide**
* **The internet**
* **A specific website**
* **A peer in class**
* **Previous assignment in code.org**
* **App Lab**

**As you think about your app idea, answer the following questions using complete sentence:**

* **The inputs of my app are**……
  + buttons, drop down option, radio button, check box, text input from a keyboard, slider bar, microphone, touch screen, movement, camera - a user clicks, selects, or types into. Code may include onEvent, getText, getColumn - blocks to interact with screen inputs
  + *OnEvents are created for all required inputs – click, change, slider, textbox*

***Examples in red font***

|  |  |  |  |
| --- | --- | --- | --- |
| **Input** | **Action** | **Result** | **Type** |
| quoteInput | input - texbox | The text on the screen appears one character at a time as it is typed | string |
| fontFamilyInput | button - change | The quote is updated to be written in the chose front based on what the user selects from the dropdown menu | string |
| colorInput | button - change | The background color changes to the selected color based on what the user selects from the dropdown menu | string |
| fontSizeINput | button - change | The quote is updated to be written in the chose front size based on what the user selects from the slider | number |
| searchDogBreed | button - dropdown | Searches for the name of the dog breed | string |
| mostNutritionButton | button - click | Changes the screen to findMost Screen |  |
| ChallengeInput | Input-textbox | Text is shown as it is typed | String |
| backButton | Button - click | The screen is updated when button Is clicked | String |
| setTimerButton | Button – click | Screen updated when button is clicked | String |
| hoursInput | Input – textbox | Text is shown as it is typed | String |
| minutesInput | Input – textbox | Text is shown as it is typed | String |
| secondsInput | Input - textbox | Text is shown as it is typed | String |
| addChallenge | Button - click | A new Challenge is added to the list when the button is clicked | String |

* **The variables and lists I will need for my inputs are...**
  + Type in the variable name, type and what the variable stores (Lists – table, column, what is stored)
  + *The Variables have a starting value and lists are created and appropriately used for all pieces of information used in the app – ex: likes, comments, day, age, price, ticketText of the ticket, quote, fontFamily, color, fontSize, category – getColumn – table and column*

***Examples in red font***

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Type** | **What the Variable Stores** |
| likes | number | The current number of likes for an image |
| comment | string | The string of all comments added by the user |
| input | string | The nutrition category the user wants to find in the cereal with the most or the least of |
| max | number | The greatest value in the list category |
| day | string | The day from the dropdown menu |
| age | number | The agre from the dropdown menu |
| discountCode | string | The code the user enters in the text box |
| textTicket | string | The text of the ticket information that is displayed to the user |
| fontSize | number | The font size of the text from the user based on the slider number |
| fontFamily | string | The font family the user selects from the dropdown |
| challenges | List | List of all the challenges |
| timeSet | Number | The amount of time inputted in the timer |
| currentTime | Number | The current time of day |
| randomChallenge | String | A random challenge selected from the user created list. |
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| --- | --- | --- |
| **Column** | **Name of List** | **What the List Stores** |
| city | cityList | A list of cities |
| lowTemperature | lowList | List of low temperatures |
| icon | imagesList | List of weather images |
| catetory |  | A list with the values of the column of the selected category |
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* **The outputs of my app are** ….
  + any element that displays information to the user – labels, screens, images, sound, tactile, audible, visual – something moving or text changing, textual. Code may include setScreen, setText, or setProperty to interact with screen output elements)
  + *The output of the screen displays the correct – ex: ticketOutput - day, age, price of the ticket based on the user input, colorOutput, quoteOuput, feedbackOutput change based on the user input, buttons change color and change their icon, as well as icon location based on the user input*

***Examples in red font***

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| --- | --- | --- |
| **Output** | **Type** | **Result** |
| URL of the image | string | Image address |
| leastOutput | text area | Where the name of the cereal with the least of a certain nutrition category will be printed |
| timerSeconds | String | The amount of time left in the timer in seconds |
| timerMinutes | String | The amount of time left in the timer in minutes |
| timerHours | String | The amount of time left in the timer in hours |
| randomChallenge | String | A randomly chosen challenge |
|  |  |  |

* **The way my app works is**… (if/else statement (mathematical, logical concepts (conditional logic or loops)) – what are a few options the user can choose or how do they make a decision and then how it impacts outcome)

**Ex**. Mathematical - formula to calculate speed

**Ex.** Conditional Logic - If statement to determine message logic.

***Examples in red font***

|  |  |
| --- | --- |
| **Conditional(s)** | |
| **Boolean Expression** | **Notes** |
| If dog size is great then 15, append to a list | Inside a for loop that traverses the dogSize list |
| If the current nutritional value is more than my current max, set max to the current nutritional value | Inside the loop that traverses the category |
| timerHours = timerMinutes / 60 |  |
| timerMinutes = timerSeconds / 60 |  |
| If starting time – current time > setTime, continue counting down, else stop the timer | Inside a function called during a while loop |
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Ex. Processing Lists – The program correctly processes the lists for all user interface elements

Are you getting items from a list, having users input the elements in the list or copying from a database where elements are separated out by spaces, commas, or something else

* Maximum: Find the maximum value in a list
* Minimum: Find the minimum value in a list
* Average: Find the average value in a list
* Count: Count how many times a given value appears in a list
* Combine: Join two lists together in one longer, larger list
* Filter Numbers: Keep numbers in a list greater than or less than a provided value
* Filter Letters: Keep strings in a list that begin with a given letter
* Numbered List: Turn a list into a string with each item numbered and appearing on a different line
* Top 3: Return the three biggest numbers in a list, in sorted order (This can be a little tricky)
* Unique: Return a list of each unique item that appears in (This can be a little tricky)
* Sort: Return the list in sorted order (This can be a little tricky)
* Anything else you'd want to do with a list

Ex. Loops – The program correctly uses loops for all buttons to generate the expected output.

***Examples in red font***

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| --- | --- |
| **Loop(s)** | |
| **ForLoop** | **Notes** |
| for(var i = 0; i< dogSize, length: i++) | Traverses digSize list |
| For(var i = 0; i< category.length; i++) | Traverses the category list |
| For(var I = 0; I < challenges.length; i++) {} | Traverses the challenges list. |
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Ex. Function – A function is used which correctly updates all output elements. The function is called in the appropriate onEvents.

***Examples in red font***

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| --- | --- | --- | --- |
| **Function Name** | **What does it use:**  **Loop, if-statement, Parameter, Return** | **Purpose - Description, Parameters, Return**    **Write the comments for the function** | **How it Works** |
| find(list, word) |  | //Grabs the first word from a list of words  //list[list] - the list of words  //return - the word in the list |  |
| findMost |  | //Prints the cereal with the most amount of a category input by the user | Reduces the numbers in the list “category” to find the index of the maximum number and then uses that index to assign a string from the list “names” to the variable “mostName” |
| updateScreen |  | Updates what appears on the screen after the user selects a dog | Filters the lists and displays the images and names of dogs on the screen |
| CheckTime | If statement returns true or false | Parameters – current time, start time, there to check if the timer is over | Finds if the current time – start time is more or less then the set time |
| updateScreen |  | Called whenever the screen needs to be updated | Updates all elements such as timer and challenges |
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* **Coding Comments**
  + *Comments are used to correctly explain the purpose and function of all onEvent(event handlers), conditional logic, functionality of the functions.*
* **Acknowledgements**
  + *Images, sound – identify were you downloaded it from, lists from code.org or another source comment where you got it from, used code from a previous unit’s assignment – identify what you have changed or improved in the code in an obvious way and include comments noting how you did so, got any ideas from AI.*

**Explain any code written today.**

**What does it do? Be specific using what lines of code you wrote.**

**It changes the screen by using an onevent. Each time a button is clicked, there is an onevent changing the screen.**

**Did anything go wrong? This might be something small or a bigger problem/bug you found. Explain your issue “difficulty” in detail.**

When I first started this app I found a difficulty which ...

To resolve this first I tried …

Finally, I resolved it by…

Later in the development process I discovered an opportunity to…

I created a…

Now I can…..

* + - **Difficulty** - Moment where you encountered a problem.
* **N/A**

**Did anything you find a way to use a past project or something you found online or from a friend? Explain your “opportunity” in detail. Cite where you got it from here, so you will have an easier time when you need to add it to your code later.**

When I first started this app I found an opportunity by ...

First I thought about …  (past projects, an app I’ve use..) ....

Next, I … (went and looked at the code from..., tried to breakdown the app by...) ...

Then I created …

* + - **Opportunity** - Moment where you found a way to make the program better.

**I was able to use the first app we created, and the way we were able to switch screens to remember how to do the same thing in this program. The program was from unit 3. Additionally, I found a website online where it showed how to set a timer.**

**https://forum.code.org/t/how-to-design-and-code-a-timer-in-applab/7452**

**How did I solve any difficulties or bugs you had today - did someone help me solve it?**

**Circle or highlight the strategy you used and explain it below - Testing** **Feedback** **Reflecting on my Code**

**In detail explain how you used the strategy above to solve the difficulty or bug.**

* If you were testing – what were you testing for?

**[Type in this area here]**

* If it was feedback – who was giving you feedback, did their feedback work, if so what happened, if not what happened?

**I was able to get feedback from some of my friends about the app design. They suggested different colors for different fonts and backgrounds. This feedback made my app look better.**

* If it was reflection, was it a past assignment that you got an idea from or from another person you were working with?

**[Type in this area here]**

**Take a screen shot/picture of your work today in code.org – paste the image below (the code or the design of the app)**

**A screenshot of a timer

AI-generated content may be incorrect.**