**Function Specifications**

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| **Function Name** | **Description** | **Input Parameter** | **Return Data** |
| **inputCheck** | Checks if the user has already filled-up the required fields in the Meal Planner | **aChoice** – array for storing the input values of the user for the food selection.  **aGrams** – array for storing the input values of the user for the amount of grams. | Gets the total of the values stored in the array for input storage.  Returns an integer 1 if the total sum is zero.  Returns an integer 0 if the sum is any value greater than zero. |
| **arrCheck** | Checks if there is any value stored in a particular array | **aArray** – any array to be checked.  **nNum** – number of values stored a particular array. Number of loops to be performed when checking the values stored in the array | Gets the total of the values stored in the array.  Returns an integer 1 if the total sum is zero.  Returns an integer 0 if the sum is any value greater than zero. |
| **displayLines** | Displays a series of lines | **nNum** – number of times a line should be displayed. | Displays a series of lines |
| **displaySpace** | Displays a series of spaces/tabs | **nNum** – number of time a space should be displayed. | Displays a series of spaces/tabs |
| **displayTable** | Displays a total of 10 Fruits and Vegetables with their corresponding nutrient information per 100g of the food in table format. | **aFood** – string array of the list of Fruits and Vegetables.  **aNutrient** – string array of the list of Nutrients.  **aSpinach** – float array of the nutrient values of Spinach.  **aRomaineLettuce** - float array of the nutrient values of Romaine Lettuce.  **aMustardGreen** - float array of the nutrient values of Mustard Greens.  **aCarrot** - float array of the nutrient values of Carrots.  **aPotato** - float array of the nutrient values of Potatoes.  **aYam** - float array of the nutrient values of Yams.  **aAsparagus** - float array of the nutrient values of Asparagus.  **aBroccoli** - float array of the nutrient values of Broccoli.  **aMelon** - float array of the nutrient values of Melons.  **aStrawberry** - float array of the nutrient values of Strawberries. | Displays a total of 10 Fruits and Vegetables with their corresponding nutrient information per 100g of the food in table format. |
| **getServing** | Computes for the number of servings of a given amount and initial serving size. | **fAmt** – amount of the food to be served in grams.  **fServing** – initial serving size of a particular food. | Returns a float **fServings** after dividing the given amount (**fAmt**) with the initial serving size of a particular food (**fServing**). |
| **computeServing** | Displays a list of 10 fruits and vegetables then asks the user to select one in which she wants to compute the servings for. Then displays the number of servings. | **aFood** – string array of the list of Fruits and Vegetables.  **aServing** – float array of the initial serving sizes of the Fruits and Vegetables. | Displays a list of 10 fruits and vegetables then asks the user to select one in which she wants to compute the servings for. Then displays the number of servings. |
| **getCooked** | Computes for the converted nutrient values a Fruit/Vegetable will have when cooked. | **fGrams** – amount of food to be served in grams.  **fServing** – initial serving size of a particular food.  **fNutrient** – the value of the nutrient to be converted.  **fNutriLost** – the percentage of what the initial nutrient will lose when cooked. | Returns a float **fNutrients** after multiplying the number of servings (**fGrams**/**fServing**) with the product of the values of the nutrient to be converted (**fNutrient**) and the amount lost (**fNutriLost**). |
| **getRaw** | Computes for the converted nutrient values a Fruit/Vegetable will have when served raw. | **fGrams** – amount of food to be served in grams.  **fServing** – initial serving size of a particular food.  **fNutrient** – the value of the nutrient to be converted. | Returns a float **fNutrients** after multiplying the number of servings (**fGrams**/**fServing**) with the initial value of the nutrient (**fNutrient**). |
| **getNutriBase** | Computes for the total base nutrients of the selected Fruits/Vegetables regardless of being cooked or not. | **aSpinach** – float array of the nutrient values of Spinach.  **aRomaineLettuce** - float array of the nutrient values of Romaine Lettuce.  **aMustardGreen** - float array of the nutrient values of Mustard Greens.  **aCarrot** - float array of the nutrient values of Carrots.  **aPotato** - float array of the nutrient values of Potatoes.  **aYam** - float array of the nutrient values of Yams.  **aAsparagus** - float array of the nutrient values of Asparagus.  **aBroccoli** - float array of the nutrient values of Broccoli.  **aMelon** - float array of the nutrient values of Melons.  **aStrawberry** - float array of the nutrient values of Strawberries.  **aChoice** – integer array for storing the selected food choice of the user.  **aGrams** – float array for storing the amounts of the selected Fruits/Vegetables in grams.  **aTotalBase** - float array for song the total base nutrients of the selected Fruits/Vegetables. | Returns a float array **aTotalBase** containing the total base nutrient values of the selected Fruits/Vegetables. |
| **getPlan** | Asks the user for 4 food items from the Market Selection that she will use for today's meals, their corresponding amount in grams, and their mode of preparation. | **aSpinach** – float array of the nutrient values of Spinach.  **aRomaineLettuce** - float array of the nutrient values of Romaine Lettuce.  **aMustardGreen** - float array of the nutrient values of Mustard Greens.  **aCarrot** - float array of the nutrient values of Carrots.  **aPotato** - float array of the nutrient values of Potatoes.  **aYam** - float array of the nutrient values of Yams.  **aAsparagus** - float array of the nutrient values of Asparagus.  **aBroccoli** - float array of the nutrient values of Broccoli.  **aMelon** - float array of the nutrient values of Melons.  **aStrawberry** - float array of the nutrient values of Strawberries.  **aChoice** – integer array for storing the selected food choice of the user.  **aGrams** – float array for storing the amounts of the selected Fruits/Vegetables in grams.  **aYesNo** – character array for storing the selected modes of preparation.  **aTotalBase** - float array for storing the total base nutrients of the selected Fruits/Vegetables.  **fTotalGrams** – stores the total amount of grams of the selected Fruits/Vegetables. | Asks the user for 4 food items from the Market Selection that she will use for today's meals, their corresponding amount in grams, and their mode of preparation. It then stores the total amount of grams of the selected Fruits/Vegetables and then computes for their total base nutrient values. |
| **getNutriLost** | Computes for the total nutrients lost due to the selected modes of preparation. | **aTotal** – the total of the nutrient values of the selected Fruits/Vegetables with their respective modes of preparation.  **aTotalBase** - the total base values of the nutrients of the selected Fruits/Vegetables regardless of being cooked.  **aTotalLost** - float array for storing the total values of the nutrients lost. | Returns a float array **fTotalLost** containing the total amounts of the nutrients lost based on the selected modes of preparation. |
| **computeNutrients** | Computes for the total calculated and converted nutrient values of the fruits and vegetables the user has indicated in the Meal Planner. | **aFood** – string array of the list of Fruits and Vegetables.  **aNutrient** – string array of the list of nutrients.  **aSpinach** – float array of the nutrient values of Spinach.  **aRomaineLettuce** - float array of the nutrient values of Romaine Lettuce.  **aMustardGreen** - float array of the nutrient values of Mustard Greens.  **aCarrot** - float array of the nutrient values of Carrots.  **aPotato** - float array of the nutrient values of Potatoes.  **aYam** - float array of the nutrient values of Yams.  **aAsparagus** - float array of the nutrient values of Asparagus.  **aBroccoli** - float array of the nutrient values of Broccoli.  **aMelon** - float array of the nutrient values of Melons.  **aStrawberry** - float array of the nutrient values of Strawberries.  **aChoice** – integer array for storing the selected food choice of the user.  **aGrams** – float array for storing the amounts of the selected Fruits/Vegetables in grams.  **aYesNo** – character array for storing the selected modes of preparation.  **aTotal** – the total of the nutrient values of the selected Fruits/Vegetables with their respective modes of preparation.  **aTotalBase** - the total base values of the nutrients of the selected Fruits/Vegetables regardless of being cooked.  **aTotalLost** - float array for storing the total values of the nutrients lost.  **fTotalGrams** – stores the total amount of grams of the selected Fruits/Vegetables. | Displays a table containing the total calculated and converted nutrient values of the fruits and vegetables the user has indicated in the Meal Planner. It then displays the total amounts of each nutrient value and then computes for the total nutrients lost based on the selected modes of preparation. |
| **displayLess** | Displays messages saying that you should lessen the intake of a particular nutrient. | **nNum** – Indicates which nutrient whose dosage needs to be decreased. | Displays messages saying that you should lessen the intake of a particular nutrient. |
| **displayMore** | Displays messages saying that you should increase the intake of a particular nutrient. | **nNum** - Indicates which nutrient whose dosage needs to be increased. | Displays messages saying that you should increase the intake of a particular nutrient. |
| **computeFeedback** | Displays messages completely dependent on whether the recommended quantity of minerals and vitamins are met, exceeded, or lacking. | **aFood** – string array of the list of Fruits and Vegetables.  **aNutrient** – string array of the list of Nutrients.  **aServing** – float array of the initial serving sizes of the Fruits and Vegetables.  **aChoice** – integer array for storing the selected food choice of the user.  **aGrams** – float array for storing the amounts of the selected Fruits/Vegetables in grams.  **aYesNo** – character array for storing the selected modes of preparation.  **aTotal** – the total of the nutrient values of the selected Fruits/Vegetables with their respective modes of preparation.  **aTotalLost** - float array for storing the total values of the nutrients lost. | Displays the selected Fruits/Vegetables, their mode of preparation, quantities, and serving sizes in table format.  Displays the total amount of nutrients lost based on the selected modes of preparation.  Displays messages completely dependent on whether the recommended quantity of minerals and vitamins are met, exceeded, or lacking, and corresponding tips/advices on how to meet them. |
| **NewDay** | Resets all the stored, computed, and altered variables/arrays. | **aChoice** – integer array for storing the selected food choice of the user.  **aGrams** – float array for storing the amounts of the selected Fruits/Vegetables in grams.  **aYesNo** – character array for storing the selected modes of preparation.  **aTotal** – the total of the nutrient values of the selected Fruits/Vegetables with their respective modes of preparation.  **aTotalBase** - the total base values of the nutrients of the selected Fruits/Vegetables regardless of being cooked.  **aTotalLost** - float array for storing the total values of the nutrients lost.  **fTotalGrams** – stores the total amount of grams of the selected Fruits/Vegetables. | Resets all the stored, computed, and altered variables/arrays to their initial values. |