Decide My Meal

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*Decide My Meal* is a program that provides a healthy meal suggestion for individuals based on factors such as their personal taste, hunger level, nutritional needs and metabolism type (the appropriate ratio of proteins, fats and carbohydrates).

Meal Possibilities

There are eight meal possibilities;

*All dishes are free of any processed products, added sugars, grains and gluten.*

* Herb Roasted Lamb Leg with a Cabbage and Kale Coleslaw
* Roast Beef on a bed of Sprout and Arugula Salad
* “Eggza Focaccia”(an omelette based pizza with grilled vegetables, salami and cheese)
* Cream of Parsnip Soup
* Hummus and Vegetable slices with Cheese
* Jungle Cabbage Salad
* Jungle Kale Salad
* Fruits and Nuts

Each meal varies in its nutrition, caloric intake, ratio of proteins to fats to carbohydrates and flavor profiles, providing possibilities for a variety of people’s needs and personal tastes.

Using Decide My Meal

**User Application Procedure**

* The user begins by clicking on the button with the text “*Click here for your next ideal meal idea!*”
* The button instantly disappears and a group box containing the first question and five radio buttons with the answer options appear
* There are ten questions in total. The user selects the radio button with the most appropriate answer option and clicks on the button labeled “*Next*” to view the next question and set of answers
* Once all ten questions are completed, a message box informs the user that a meal has been chosen. After clicking “*OK*”, the group box containing the question and answer options and the “*Next*” button disappear
* The user is presented with a description and a picture of the meal

If the user decides to restart the questionnaire at any time, they may click on “*Restart*”, which brings the user back to the first question.

If the user takes more than 15 seconds on any one question, a message box appears to inform them that they have taken a long time and must select the most appropriate answer to the question.

Development and Testing Analysis

**Meal Selection Process**

The meal selection process is done through a point system. The point system allocates points to each of the eight meals every time the user selects an answer through checking its corresponding radio button and clicking “*Next*”. The points allocated to meals depend on the selected radio box. Each individual radio box allocates a unique combination of points to each possible meal every time it is checked, and the amount of points allocated to each meal stays constant for each question. The answer options are arranged so that they correspond with the way in which points are distributed. Once all questions are completed, the meal with the most overall points is presented as the ideal meal option.

**Arrays**

Arrays are used to store the questions and their answer options. All the questions are stored in one array and displayed in a textbox within the group box. Five other separate arrays were used, each one storing ten answer options to display in each radio box. The “*Next*” button was used to display the next set of questions and answers by switching to the next slot of each the array.

Testing Scenarios

The program was tested through the following scenarios.

1. A single checkbox was selected for all ten questions to assure that the meal corresponding most with the checkbox is selected. This process was done five times for each checkbox. The success of these scenarios verified that the point system functioned accurately.
2. The “*Restart”* button was tested during the questionnaire and after the questionnaire when the results are presented to assure it functions in both possible cases.
3. Trials were conducted by various students to test the accuracy of the meal suggestion and overall functionality of the whole program.