Software Design: A Simple Program

CSC 414 Software Design

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1.0

This software aims to provide an interface where a user is notified that they have won a prize (vacation). Upon starting the program, the output is a notification that the user has won, and they are instructed to press any key in order to find out where their destination will be. After finding out their specific destination, they are inquired as to how many people they would like to invite on their vacation. The user is told that they can only have up to four guests. A loop is implemented that ensures the user will not be able to continue until a valid number is entered. If they do not wish to bring anyone, ‘1’ is a valid entry. The user is then notified of the retail value of their price as well as a few details of inclusions. As the user is only given one prize, they will automatically exit from the program after this.

2.0

Black, Sally. *How Much Does A Disney World Vacation Cost?*, www.vacationkids.com/vacations-with-kids/vacations-with-kids/bid/273282/how-much-does-a-disney-world-vacation-cost.

Budget Your Trip. “Hawaii Travel Cost - Average Price of a Vacation to Hawaii: Food & Meal Budget, Daily & Weekly Expenses.” *Budget Your Trip*, Budget Your Trip, 17 Nov. 2020, www.budgetyourtrip.com/budgetreportadv.php?geonameid=5855797.

Reservations.com. “Checkout - Reservations.com.” *Hotel Reservations and Car Rentals from Reservations.com*, www.reservations.com/Hotel/Checkout?searchId=lp3arxzBWkig4lGLpL3rLg9.

Tomahawk. “The Myrtles Plantation: Visit St. Francisville.” *The Myrtles Plantation | Visit St. Francisville*, www.myrtlesplantation.com/.

3.0

This software requires a means of generating a randomized number for picking the prize vacation, a function that will display which destination was randomly chosen, a function that will take in the number of people going on the vacation (up to four guests plus the winner) and then display what that vacation is valued at for those people as well as a few inclusions/details of the trip.

4.0

The main function will call on the function that displays the opening message. The opening message will inform the user that what they win will randomly be chosen. A “system pause” will then be implemented to allow for some anticipation so that the user has to press a key in order to see what they have won. A variable (selection) will be created and set equal to a randomly generated number that relates to a vacation package. A function will be called that takes in that selection variable to then display the vacation package. The next function call will be to ask the user how many people will be attending. The user will have the option to bring up to four guests, if they wish. After entering that number, an if-statement dependent on the selection variable will cause the program to call on a function related to the details of value for whichever vacation package was won. That function takes in the value containing the number of people so that the specific retail value of the package will also be displayed. The program will then come to completion as the user will not be able to try for another package.

5.0

As each function is created and implemented, the program will be compiled to ensure that the proper messages are being output and that random selections are being chosen. Invalid values of the number of people going will be entered to ensure that the program does not accept these values or that the program does not crash upon doing so. Test results conclude that each potential outcome results in an appropriate response. Value that do not suit what the program desires are handled properly by forcing the user to put in the proper value.





