Testing Role-Play 3: Machine
Applied 4

Overview
You are an ice-cream machine. You can dispense ice-creams in a number of different flavours, with a selection of toppings, in either a cup or a cone.

Inputs
Users input their selection on a touch screen menu. Starting with flavours, then toppings, then receptacle, the options are displayed and users can choose between them. Users can only select one option from each menu screen, and on every menu screen there is a "cancel" button.

You have been upgraded since last use – users can now also select a desired quantity of ice-cream and topping. Any number of toppings can be added – once a topping then quantity has been selected, the toppings menu is re-displayed with the selected options greyed out. This repeats until the user selects the "no more" option.

- Flavour options: strawberry, mango, lemon
- Flavour quantities: any number up to 500mls.
- Topping options: blueberry sauce, oreos, nuts, popping pearls, no more.
- Topping quantities: a little, a normal amount, a lot
- Receptacle options: cone, cup

You might find it helpful to have paper or a text file to write notes in as you process the user's input.

Outputs
Use the pseudocode below to determine your output.

If the "Cancel" button is pressed at any point (i.e., at the second decision point), return to the start of the process.

If the pseudocode does not cover a case, invent a new bug. Try to be consistent with it so the testers have a chance of finding it!

1. declare variables for:
   - flavour
   - flavour quantity
   - toppings (a list)
   - topping quantity (a list associated with the toppings list)
   - receptacle

2. ask the user what flavour they want, store the result
3. ask the user what quantity of ice-cream they want
   - if the value is >= 250 and <= 500, store the result
   - if the value is not a whole number, give an error message and restart the entire process
   - if the value is < 250, set the flavour quantity to 1000
   - if the value is < 0, change the flavour randomly and set the quantity to 250
   - If the value is > 500, finish the process but dispense a cup of nuts and no ice cream no matter what else they select

4. declare a counter variable and initialise it to 0

5. until the user selects "no more":
   - ask the user what topping they want, store the result
   - ask the user what quantity of that topping they want, store the result

6. if the user selected all four toppings, don't dispense any

7. ask the user what receptacle they want, store the result

8. dispense the stored ice-cream in the stored quantity, with the stored toppings, in the stored receptacle, UNLESS
   - the user selected 3 toppings, only one of which they wanted "a lot" of: in this case dispense a plain vanilla ice-cream in a cone