Mystery Boxes Game

# Scenario

You have decided to create a fun game to raise money for charity. You will set up your computer at lunch time and players will pay to play. Here are the rules…

Users pay an initial amount at the start of the game. At the start of each round, users push a button (or hit <enter>) to buy mystery boxes. The contents of the mystery boxes are then revealed – the player’s balance is increased by the value of the prizes in the mystery boxes.

You need to make a number of decisions…

* Work out what prizes will be in the mystery boxes and how much is each prize worth
* How many boxes will be involved (should be more than two)
* How much will it cost users to play each round
* Decide on a maximum amount that can be spent in a session (to prevent users from over-spending)

Set up your game so that in the long run, users slowly lose money. They should not lose every time and there should be a \*small\* chance that they will come out ahead.

Users should have the option of quitting the game (and seeing their summary statistics) at any point. If the user loses all of their money / can’t afford to open any more boxes, the game is over. It should be possible for users to export their game statistics and the results of each round to a text file.

## Task

1. Create a diagram showing the GUI for all parts of the game
2. Create a second diagram showing what classes and functions you might need and how they are related
3. Use your diagram to decompose the task into components. These components can then be placed in a project management tool (such as Trello) that should be used to help manage the process of making the game.
4. For each component, create a brief plan and test plan. The code the component and test it using the test plan
5. Combine your components into a fully functioning game.
6. Test and debug your program to ensure that it works for expected, boundary and unexpected values
7. Ask a friend / parent to play your game. Watch them as they do this and make note of any changes that could be made to make the game easier to use
8. Make the changes identified in the previous step
9. Retest your game to ensure that it still works correctly