**IPO Analysis**  
(A *static* investigation of variable change and fluctuation of values)  
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| --- | --- | --- |
| **Input** | **Process** | **Output** |
| User changes location | Change the current location to the user’s choice. Update the available shops. | Show available shops in the location. |
| User changes shop | Set shopUserControl’s shop to view to the shop that the user wishes to view. | Shop interface is updated to contain the shop that the user wishes to visit. |
| User presses buy button | Decrease user’s money by the cost of all the selected items in the shop.  Place items in user’s inventory. | User’s inventory updated with the new items that he/she bought. User’s money “stack” is decreased. |
| User presses sell button | Increase user’s money by the selling price of all the selected items. | User’s money “stack” is increased. User’s inventory does not contain as many items. |
| User presses drop button | Destroy all the user’s selected items. | User’s inventory does not contain as many items. |

**Deskcheck**(A *run-time* data sheet documenting variable change and fluctuation of values)

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Input** | **Cash amount** | **Location** | **Shop** | **Output** |
| Selected a lemon, increased amount to 2, and pressed the buy button | $50,000.00 | The Moon | Lunar Mart | A message box appeared confirming whether to press yes or no. Asking whether I would like to purchase the lemons for $580.00 |
| Yes was pressed on the message box that appeared previously | $49,420.00 | “” | “” | The cash stack decreased. |
| Switched location Mars | “” | “” | “” | A message box showed up saying that I entered the lottery, OK was pressed.  Lost $24,710.00 |
| Selected a diamond, increased amount to 1. | $24,710.00 | Mars | Big Martian | A message box appeared asking whether I would like to confirm the purchase of the diamond for $418.00. |
| Selected yes on the message box | “” | “” | “” | Another message box appeared, an error that says: “you cannot hold the items that you wish to purchase!” |

Start program

Initialize the inbetweeners game

Load the game settings, from a file.

Yes

Quit Application

User wishes to quit?

Switch shop to user’s choice

No

User has no health or no money?

Yes

No

No

No

User wishes to switch location?

User wishes to switch shop?

Yes

Yes

Reset game

Switch location to user’s choice

2

Random variable value is equal to?

Generate a random variable with three possibilities

3

1

User wishes to fight bandits?

1

3

Play lottery

Yes

50% chance user will kill bandits, if he/she does, win money, otherwise lose money

75% chance user will lose money

No

Display Error Message

No

Yes

Yes

Buy selected items

User can afford items?

No

User wishes to buy item?

Sell selected items to shop

Yes

Yes

Drop selected items

No

User wishes to drop items?

User wishes to sell items to shop?