Unit testing of the checkout function

The objective of the checkout function is for when a user wants to checkout the products that are in the cart, resulting in the total amount of the products in the cart to be deducted from the user’s wallet. The units of the affected products should also be changed accordingly.

The checkout function takes as input a user with a name and amount in wallet, and a cart as a list. Also, the checkout function uses a list of products from the load\_products\_from\_csv function. Thus, mocks of the list of products are made to examine the behavior of the checkout function. Tests are created through adjusting the inputs (user and cart), seeking for reasonable behavior when the function is called.

The function does not have documentation that outlines the valid inputs. Therefore, the input domain was studied, resulting in the following equivalence classes (EC):

1. An empty cart
2. Insufficient wallet funds
3. Sufficient wallet funds and a product in cart
4. Sufficient wallet funds and multiple products in cart
5. Not enough available units than requested by the user
6. Negative wallet funds
7. Products in cart with negative price
8. Sufficient funds and a product in cart but with only one unit left
9. Decimal balance in the wallet funds
10. Product with no units

A test case for each equivalence class will be made. In depth information about the test cases are presented in the “checkout function testing document”.

In order to execute all of the test requirements a fixture for the cart was made to reduce repetition of initializing it.