**Mini Project Week 4**

Now that we've learned how to work with two-dimensional data, let's refactor our app to use dictionaries for both product and courier.

Building upon our use of a courier index within our order, let's create a list of product indexes now for order items.

We'll also need to refactor our storage layer to use .csv files rather than .txt to bring back our persistence functionality.

To show that our code works, we will also need to write unit tests to prove that our app works correctly.

**Goals**

As a user I want to:

* create a product, courier, or order dictionary and add it to a list
* view all products, couriers, or orders
* update the status of an order
* persist my data
* *STRETCH* update or delete a product, order, or courier
* *BONUS* list orders by status or courier

**Spec**

* A product should be a dict, i.e:

{

"name": "Coke Zero",

"price": 0.8 // Float

}

* A courier should be a dict, i.e:

{

"name": "Bob",

"phone": "0789887889"

}

* An order should be a dict, i.e:

{

"customer\_name": "John",

"customer\_address": "Unit 2, 12 Main Street, LONDON, WH1 2ER",

"customer\_phone": "0789887334",

"courier": 2, // Courier index

"status": "preparing",

"items": "1, 3, 4" // Product index

}

* Data should be persisted to a .csv file on a new line for each courier, order, or product, ie:

# ORDER

John,"Unit 2, 12 Main Street, LONDON, WH1 2ER",2,preparing,"1,3,4"

**Pseudo Code**

LOAD products from products.csv

LOAD couriers from couriers.csv

LOAD orders from orders.csv

CREATE order status list

PRINT main menu options

GET user input for main menu option

IF user input is 0:

SAVE products list to products.csv

SAVE couriers list to couriers.csv

SAVE orders list to order.csv

EXIT app

# products menu

ELSE IF user input is 1:

PRINT product menu options

GET user input for product menu option

IF user inputs 0:

RETURN to main menu

ELSE IF user input is 1:

PRINT products list

# WEEK 4 UPDATE

ELSE IF user input is 2:

# CREATE new product

GET user input for product name

GET user input for product price

CREATE new product dictionary with above properties

APPEND product dictionary to products list

# WEEK 4 UPDATE

ELSE IF user input is 3:

# STRETCH GOAL - UPDATE existing product

PRINT products with their index values

GET user input for product index value

# iterate over the (key: value) pairs in the selected dictionary

FOR EACH key-value pair in selected product dictionary:

GET user input for updated property

IF user input is blank:

do not update this property and skip

ELSE:

update the property value with user input

ELSE IF user input is 4:

# STRETCH GOAL - DELETE product

PRINT products list

GET user input for product index value

DELETE product dictionary at index in products list

# couriers menu

ELSE IF user input is 2:

PRINT courier menu options

GET user input for courier menu option

IF user inputs 0:

RETURN to main menu

ELIF user inputs 1:

PRINT couriers list

# WEEK 4 UPDATE

ELSE IF user input is 2:

# CREATE new courier

GET user input for courier name

GET user input for courier phone number

CREATE new courier dictionary with above properties

APPEND courier dictionary to courier list

# WEEK 4 UPDATE

ELSE IF user input is 3:

# STRETCH GOAL - UPDATE existing courier

PRINT courier with their index values

GET user input for courier index value

# iterate over the (key: value) pairs in the selected dictionary

FOR EACH key-value pair in selected courier dictionary:

GET user input for updated property

IF user input is blank:

do not update this property and skip

ELSE:

update the property value with user input

ELSE IF user input is 4:

# STRETCH GOAL - DELETE courier

PRINT courier list

GET user input for courier index value

DELETE courier dictionary at index in courier list

# orders menu

ELSE IF user input is 3:

IF user input is 0:

RETURN to main menu

ELSE IF user input is 1:

PRINT orders list

# WEEK 4 UPDATE

ELSE IF user input is 2:

GET user input for customer name

GET user input for customer address

GET user input for customer phone number

PRINT products list with its index values

GET user inputs for comma-separated list of product index values

CONVERT above user input to a string e.g. "2,1,3"

PRINT couriers list with index value for each courier

GET user input for courier index

SET order status to be 'PREPARING'

CREATE new order dictionary with above properties

APPEND order dictionary to orders list

ELSE IF user input is 3:

# UPDATE existing order status

PRINT orders list with its index values

GET user input for order index value

PRINT order status list with index values

GET user input for order status index value

UPDATE status for order

ELSE IF user input is 4:

# STRETCH - UPDATE existing order

PRINT orders list with its index values

GET user input for order index value

# iterate over the (key: value) pairs in the selected dictionary

FOR EACH key-value pair in selected order dictionary:

GET user input for updated property

IF user input is blank:

do not update this property

ELSE:

update the property value with user input

ELSE IF user input is 5:

# STRETCH GOAL - DELETE order

PRINT orders list

GET user input for order index value

DELETE order at index in order list