Final Report

High level design and user-cases

The programs begin with assigning default values to objects which may be called, and cause an error message if unassigned. This is particularly necessary for the lists and Boolean objects necessary for housing data from source docs, and for condition statements to be satisfied or rejected.

A loop is then started for the process of selecting a stamp, such that the user may purchase multiple stamps in one transaction.

The user then chooses whether to send a parcel, or a letter. Depending on which option the user chooses, Boolean values help with the later calling of relevant source documents such as the letter pricing guide for letters.

```
                cart.remove(line)
                del pricelist[(int(input_delete) - 1)]
                del saleshistory[(int(input_delete) - 1)]
            else: pass
    else:
        checkout = False

writestr = "\n \n **** Invoice **** \n" + "\n Order Number:" + str(order_number) + '\n Timestamp: {:%Y-%b-%d %H:%M:%
invoicefinal = open('/Users/jilly/Downloads/rename_me/{:%Y-%b-%d %H:%M:%S}.txt'.format(datetime.datetime.now()), "w"
invoicefinal.write("\n \n **** Invoice **** \n" + "\n Order Number:" + str(order_number) + '\n Timestamp: {:%Y-%b-%d
saleslog = open('/Users/jilly/Downloads/rename_me/sales_history.csv', "a")
saleslog.write(saleshistory)
saleslog.close()
country_region.close()
let_price_guide.close()
parc_price_guide.close()

Do you wish to send a letter, or a parcel? Type 'Letter' or 'Parcel' to choose, or 'Abort' to cancel

In [213]: print(invoice)
```

```
Do you wish to send a letter, or a parcel? Type 'Letter' or 'Parcel' to choose, or 'Abort' to cancelLetter
Destination country,Zones

Arab Emirates,Zone 9

Argentina,Zone 9

Austria,Zone 8

Bahrain,Zone 9

Belgium,Zone 8

Brazil,Zone 8

Brunei Darussalam,Zone 5

Cambodia,Zone 5
```

Since the letter price guide groups zones together and then has headers with the word ‘zone’ appearing only once for each heading, followed by multiple commas for the one column, I chose to split based on the word ‘Zone’ rather than more traditional commas.

Should the user fail to enter ‘Letter’ or ‘Parcel’ correctly, or ‘Abort’ to cancel the new letter addition, a meaningful error message is given, and the user is prompted to try again.

The user is then prompted to enter destination and mail weight. Pricing and zone information is dropped prior to this so the user can view relevant prices. This information is limited to whether the user chose a letter or a parcel, to save screen space.

```
Turkey,Zone 8

Ukraine,Zone 8

United Kingdom,Zone 6

United States,Zone 4

Vanuatu,Zone 5

Vietnam,Zone 3
                  Weight  Zone 1  Zone 2,3 and 5  Zone 4, 6, 7, 8 and 9
0              Up to 50g     2.1             2.3                       3
1   Over 50g up to 250g     5.5             6.0                       9
2  Over 250g up to 500g    11.0            12.0                      18
Please refer to price guides for zones and weights for letters, and the guide to country zones above

What weight is your letter, in grams?
```

```
Vietnam,Zone 3
                  Weight  Zone 1  Zone 2,3 and 5  Zone 4, 6, 7, 8 and 9
0              Up to 50g     2.1             2.3                       3
1   Over 50g up to 250g     5.5             6.0                       9
2  Over 250g up to 500g    11.0            12.0                      18
Please refer to price guides for zones and weights for letters, and the guide to country zones above
What weight is your letter, in grams?15

What country will you send this letter?
```

The destination and weight information for the mail is then converted to numeric references used to access the relevant price for the specific parcel/letter weight and destination. These references are then used as references in the price sheets, as seen in line 213 (parcprice = parc_price_list[parcindex][parcindex1]).

Letter or Parcel returned values are then merged into mail values. The user can then choose to alter the weight of their parcel or letter. They can then confirm the addition of the stamp they have chosen to the shopping cart, having been shown the letter price given destination and weight. If there is no stamp, the user is warned via a message at confirmation of the individual stamp.

```
1   Over 50g up to 250g     5.5             6.0                       9
2  Over 250g up to 500g    11.0            12.0                      18
Please refer to price guides for zones and weights for letters, and the guide to country zones above
What weight is your letter, in grams?15
What country will you send this letter?Nigeria
A letter stamp for mail going to Nigeria will cost $ 3

Do you wish to add to cart? (Y/N) for Yes/No, A to alter item weight
```

From the shopping cart, the user can choose to delete items, choose another item, or proceed to the checkout, as seen below, where an item is altered in weight, and another deleted.

```
**** Cart ****


Item Number:1
Mail Type: letter
Mail Destination: Nigeria
Mail Price: $3

Total Price: $ 3.0

Would you like to checkout? (Y for 'Yes', N for 'add more items to basket'
 or D for 'delete item from basket'
```

```
Item Number:1
Mail Type: letter
Mail Weight: 0.05
Mail Destination: India
Mail Price: $2.3


Item Number:2
Mail Type: parcel
Mail Weight: 19.9
Mail Destination: Israel
Mail Price: $205.96

Total Price: $ 208.26000000000002

Would you like to checkout? (Y for 'Yes', N for 'add more items to basket'
 or D for 'delete item from basket' D
Would you like to checkout? (Y for 'Yes', N for 'add more items to basket'
 or D for 'delete item from basket'Y


**** Checkout ****

Order Number: 2686
Timestamp: 2020-Sep-28 22:26:17

Item Number:1
Mail Type: letter
Mail Weight: 0.05
Mail Destination: India
Mail Price: $2.3

Total Price: $ 2.3
```

At checkout, information is added to the sales log, and an invoice is created.

2020-Sep-28 22/24/13.txt

```
**** Invoice ****

Order Number:2685
Timestamp: 2020-Sep-28 22:24:13

Item Number:1
Mail Type: letter
Mail Weight: 0.05
Mail Destination: India
Mail Price: $2.3

Total Price: $2.3
```

sales_history

2680	2020-Sep-28	letter	0.12	France	9					
2681	2020-Sep-28	letter	0.34	Romania	18					
2681	2020-Sep-28	letter	0.13	Japan	6					
2682	2020-Sep-28	letter	0.05	India	6					
2682	2020-Sep-28	letter	0.2	Spain	9					
2683	2020-Sep-28	parcel	19.9	Netherlands	186.81					
2683	2020-Sep-28	parcel	9	Israel	113.39					
2684	2020-Sep-28	letter	0.015	Nigeria	3					Text
2685	2020-Sep-28	letter	0.05	India	2.3					
2685	2020-Sep-28	letter	0.05	India	2.3					