

Casey Levy – CS 361 – Sprint 4 Assignment

Video Submission

Video submitted through Canvas: Sprint 4 submission page

Code Smell Evaluation and Refactoring

Code Smells About Comments

- **Obsolete Comment** – I do have a few instances of obsolete comments needing removal or updating. Revisions are below.
- **Commented-Out Code** – I have many instances of commented out code. Most have been functions no long needed or obsolete code. Changes are below.
- **Redundant Comment** – I have a couple examples of redundant comments such as explaining buttons and . Changes below.
- **Long Comment** – I don't believe I have any unnecessarily long comments. Comments were attempted to be as short and detailed as possible.

Code Smells About Functions:

- **Long Function and Function With Many Jobs** – my “def generate()” function has quite a few lines within it, although this is the main function of the program. I attempted to break parts of it into other functions but the program breaks no matter what options I attempted. I am going with the “sometimes living with smells is the wiser choice” option here.
- **Function With Many Parameters** – The only function with many parameters within my program is the “callback” function required for communication with my partner's program. There are no other examples. The function was built this way based on documents within RabbitMQ's documentation.

Code Smells About Code in General

- **Duplicate Code** – There are a couple situations where code is semi-duplicated but these instances are necessary for proper program execution.
- **Long Lines** – I don't believe I have any unnecessary long lines of code
- **Inconsistent Conventions** – I don't believe there are any inconsistent conventions within the program. I did my best to keep tidy and uniformly formatted code
- **Vague Naming** – There are no vague names within the program based on my observations.

Refactors/Changes

Obsolete Comments and Commented-Out Code

Lines 59 and 60, Before:

```
# Button for downloading data
# download_button = tk.Button(master=window, text="Download Results as CSV",
width=30, height=1, bg="green4", fg="black", relief=RAISED)
```

After: Comment and accompanying code has been removed

Lines 216 and 219, Before:

```
# Generate results and download button
#download_button.pack(pady=10)
```

After: Comment has been updated and accompanying coder removed

```
# Generate results button
download_button.pack(pady=10) has been removed
```

Lines 97-99, Before:

```
# -- Code to make program open in full-screen, may remove later? -- #
#w, h = window.winfo_screenwidth(), window.winfo_screenheight()
#window.geometry("%dx%d+0+0" % (w,h))
```

After: Comments and code have been removed

Redundant Comments

Lines 210-212, Before:

```
# Generate results button
generate_button = tk.Button(master=window, text="Generate!", width=10,
height=1, font="bold", bg="darkorange2", fg="white", relief=RAISED,
command=generate)
generate_button.pack()
```

After:

```
generate_button = tk.Button(master=window, text="Generate!", width=10,
height=1, font="bold", bg="darkorange2", fg="white", relief=RAISED,
```

```
command=generate)
generate_button.pack()
```

Lines 106-110, Before:

```
# Various Greetings/Messages/Styling
canvas = tk.Canvas(window, height=200, width=300)
canvas.place()
category_label = tk.Label(master=window, text="Please Select a Toy
Category:")
results_label = tk.Label(master=window, text="Please Enter the Number of
Results You Would Like Displayed: ")
```

After:

```
canvas = tk.Canvas(window, height=200, width=300)
canvas.place()
category_label = tk.Label(master=window, text="Please Select a Toy
Category:")
results_label = tk.Label(master=window, text="Please Enter the Number of
Results You Would Like Displayed: ")
```

Long Function and Function With Many Jobs

Line 143: *def generate():*

This function is lengthy and performs many jobs. An attempt was made to break up the function, such as a ***def setOptions():*** function for the job of setting values for the dataframe but this caused many output errors. I decided to stick with the original version since it is the most stable and gets the program working correctly.

Line 55: *def sendBack():*

This function as well is long with numerous jobs, but it is another vital function for proper program execution. I originally planned on having this function be 2 separate functions although this ultimately didn't work out. My partner and I had difficulties getting communication functioning when I tried breaking up this one, so we decided to "live with the code smell" to ensure our programs work correctly.

Function With Many Parameters

Line 32: *def callback(ch, method, properties, body):*

This is the only function with more than 1 or 2 parameters. This function cannot be changed since the 4 parameters are required for communication with the accompanying program. I attempted to take them

out and only use the “body” parameter but an error occurred. These parameters are required according to the RabbitMQ documentation.

Duplicate Code

There are instances of code duplicated, but these were kept for program functionality. My ***with open(“amazon.....csv)*** is used a couple times within the program, but I deemed it necessary for proper program functionality.