**Data Driven Assessment by Patrick**

**Level 5 Creative Computing**

**Abstract:**

I have made a Tkinter GUI that retrieves posts from a website called Reddit and shares them on the webpage. The API I used is the free, (as long as you do not profit from it) Reddit API. Here is the GitHub repository: <https://github.com/PatrickPlantilla/API-Assessment-CC-Level-5>

**Project Plan:**

**Planning what my project will be:**

est: ~1 day

actual time it took: 1 hour. I had the idea already at the same class that Mrs. Fakhra announced the assessment

**Design:**

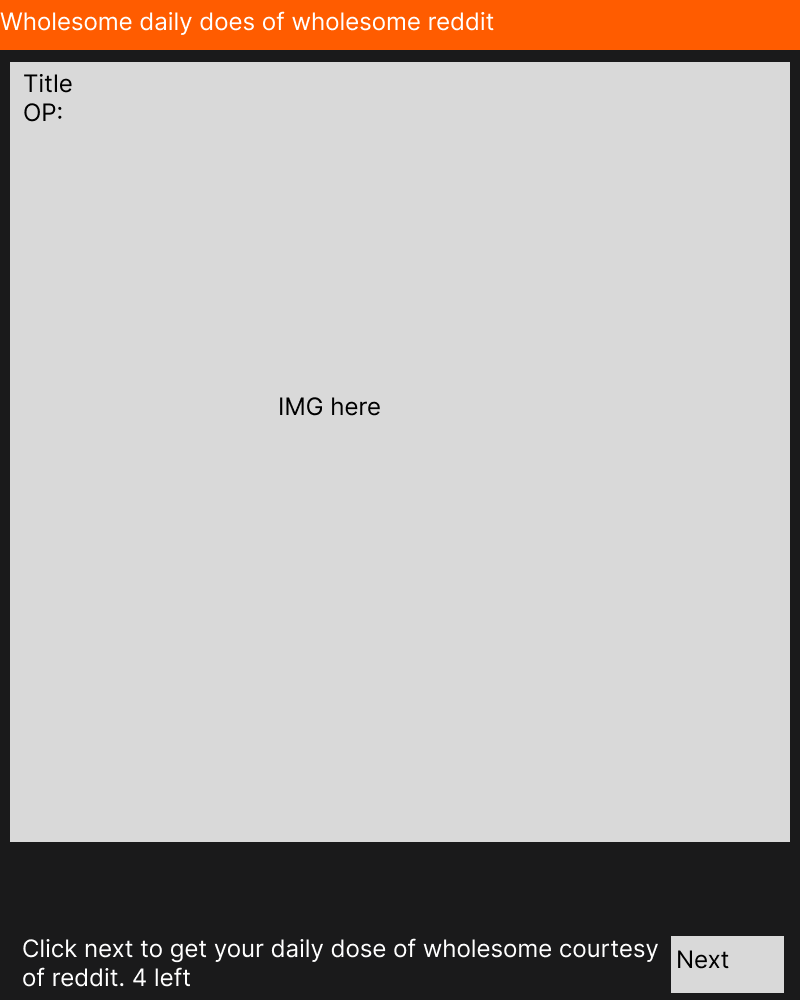
est: ~1 day

actual time: 1 day. I tried to copy the actual reddit UI but simplified it and only showed one post.

**Evidence of design:**

Est: ~1 hour

Actual time: 1 hour. Here’s the figma final design. Some changes were made eventually due to lack of programming skills.



**Walkthrough:**

**Video walkthrough:** [2024-01-14 02-34-19.mkv](https://drive.google.com/file/d/1uFrQ7ga2QVZxGNrV8LJyxTSvY26fTo8l/view?usp=sharing)

**Technical Breakdown:**

**Imports:**

**import tkinter as tk**

**from io import BytesIO**

**from PIL import Image, ImageTk**

**import praw**

**import requests**

**import random**

**Import tkinter as tk**

So that i can use tkinter.

**From io import BytesIO**

This makes it so that the image URL from reddit, like for example, www.redditcutedogimage.jpg, is treated like a file. This can then be opened and processed by the Image park from the PIL library.

**From PIL import Image, ImageTk**

I used this library to process images.

**Import praw**

So that I can use the reddit library. I downloaded it in the terminal by typing “pip install praw” on the terminal.

**Import requests**

Requests is used to get the actual content of an image from a given URL.

**Import random**

So that i can request a post on reddit at random.

**Retrieve the reddit API**

**reddit = praw.Reddit(client\_id='o\_dVy2h\_REeg6cVJiGaxEA',**

**client\_secret='urt1BzBNt7a3fXhb1rieyNSKpy0i0g',**

**user\_agent='Patrick API\_Assessment')**

This code is to import the reddit API i created. To use the reddit API, you must create one using <https://old.reddit.com/prefs/apps/>

**Retrieve the subreddits I want to take posts from**

**subreddits = ["MadeMeSmile", "wholesomememes", "aww", "Eyebleach", "UpliftingNews", "AnimalsBeingBros", "HumansBeingBros", "wholesomepics", "wholesomecomics", "wholesomevandalism", "wholesomejerk"]**

**Retrieve the actual post at random**

**def get\_random\_post():**

**subreddit\_name = random.choice(subreddits)**

**subreddit = reddit.subreddit(subreddit\_name)**

**post = random.choice(list(subreddit.top(limit=100)))**

**Creating variables to be used by retrieving information from the posts**

**title = post.title**

**url = post.url**

**author = post.author**

**subreddit\_of\_origin = post.subreddit**

**If the post chosen had an image, requests retrieves the data and the image is opened and displayed using PIl**

**if url.endswith((".jpg", ".jpeg", ".png")):**

**response = requests.get(url)**

**img\_data = BytesIO(response.content)**

**img = Image.open(img\_data)**

**Code that makes it so that an image fits within the chosen dimensions**

**if img.size[0] > 800 or img.size[1] > 800:**

**width\_percent = 800 / float(img.size[0])**

**height\_percent = 800 / float(img.size[1])**

**min\_percent = min(width\_percent, height\_percent)**

**new\_width = int(float(img.size[0]) \* min\_percent)**

**new\_height = int(float(img.size[1]) \* min\_percent)**

**else:**

**new\_width = img.size[0]**

**new\_height = img.size[1]**

**Sets the new dimensions of the resized image to the variable img.**

**Sets the image gathered into the photo variable.**

**Rest is to input variables for the tkinter GUI part of the code.**

**img = img.resize((new\_width, new\_height), Image.BICUBIC)**

**photo = ImageTk.PhotoImage(img)**

**image\_label.config(image=photo)**

**image\_label.image = photo**

**title\_label.config(text=title)**

**author\_label.config(text=f"Posted by: u/{author} in r/{subreddit\_of\_origin}")**

**Regular Tkinter GUI coding and stuff which uses the info from the previous codes and puts it on the webpage for view and use.**

**root = tk.Tk()**

**root.title("Wholesome Reddit")**

**root.geometry("800x1000")**

**root.resizable(0,0)**

**root.configure(background="#1a1a1b")**

**label1 = tk.Label(root, text="Wholesome Reddit Retriever", bg="#ff4500", font=('Arial', 18), anchor="w", fg="white")**

**label1.pack(fill='x', side="top")**

**frame = tk.Frame(root, bg="black", height="800", width="800", highlightbackground="white", highlightthickness=1)**

**frame.pack(side="top")**

**title\_label = tk.Label(frame, text="", font=("Arial", 16), bg="black", fg="white", wraplength="800")**

**title\_label.pack()**

**author\_label = tk.Label(frame, text="", font=("Arial", 14), bg="black", fg="white", wraplength="800")**

**author\_label.pack()**

**image\_label = tk.Label(frame, bg="black")**

**image\_label.pack()**

**label2 = tk.Label(root, text="Next post should load within 5 seconds of clicking next. If there's nothing, click it again. It must have chosen a post that was a video which cannot be displayed.", bg="#1a1a1b", fg="white", anchor="w", wraplength="730", font=("Arial", 14))**

**label2.place(rely=1, anchor="sw")**

**button = tk.Button(root, text="Next", font=("Arial", 18), command=get\_random\_post)**

**get\_random\_post()**

**button.pack(side='bottom', anchor="se")**

**root.mainloop()**

**Testing:**

I was really just testing the code every now and then when I made updates and changes during the creation phase. There was no real testing phase if I am being honest. It’s just that once the webpage was sufficient for my taste.

**Critical Reflection:**

This is the best I can do and the final product with my limited programming knowledge and various internet tutorials and guides. Once I did not know how to make any other thing better, and I was sufficiently satisfied with the current result, and I finished it.

**Here are some things that I wish I could include in my website:**

Multiple posts appearing at the same time

Scrolling

Videos showing

GIfs showing

Showing Replies

The link to the actual reddit post

Ability to upload your own post on reddit though my website

These are just a few that I could think of which could have made my website even better.

I think one compelling thing about my assessment is that it tries to give reddit a more positive light. Reddit has unfortunately been known for being a cesspool of hate and extreme political ideologies. If you search up “reddit” on YouTube, the website will show terrible things about reddit. I wish this project would at least show some people that there’s a good side of reddit.

**Appendix:**

**Full code**

**import tkinter as tk**

**from io import BytesIO**

**from PIL import Image, ImageTk**

**import praw**

**import requests**

**import random**

**reddit = praw.Reddit(client\_id='o\_dVy2h\_REeg6cVJiGaxEA',**

**client\_secret='urt1BzBNt7a3fXhb1rieyNSKpy0i0g',**

**user\_agent='Patrick API\_Assessment')**

**subreddits = ["MadeMeSmile", "wholesomememes", "aww", "Eyebleach", "UpliftingNews", "AnimalsBeingBros", "HumansBeingBros", "wholesomepics", "wholesomecomics", "wholesomevandalism", "wholesomejerk"]**

**def get\_random\_post():**

**subreddit\_name = random.choice(subreddits)**

**subreddit = reddit.subreddit(subreddit\_name)**

**post = random.choice(list(subreddit.top(limit=100))) # anything more than 50 and it will load way too long, unfortunately**

**title = post.title**

**url = post.url**

**author = post.author**

**subreddit\_of\_origin = post.subreddit**

**if url.endswith((".jpg", ".jpeg", ".png")):**

**response = requests.get(url)**

**img\_data = BytesIO(response.content)**

**img = Image.open(img\_data)**

**# This is to make it fit within 800x600 pixels**

**if img.size[0] > 800 or img.size[1] > 800:**

**width\_percent = 800 / float(img.size[0])**

**height\_percent = 800 / float(img.size[1])**

**min\_percent = min(width\_percent, height\_percent)**

**new\_width = int(float(img.size[0]) \* min\_percent)**

**new\_height = int(float(img.size[1]) \* min\_percent)**

**else:**

**new\_width = img.size[0]**

**new\_height = img.size[1]**

**img = img.resize((new\_width, new\_height), Image.BICUBIC)**

**photo = ImageTk.PhotoImage(img)**

**image\_label.config(image=photo)**

**image\_label.image = photo**

**title\_label.config(text=title)**

**author\_label.config(text=f"Posted by: u/{author} in r/{subreddit\_of\_origin}")**

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**author\_label.pack()**

**image\_label = tk.Label(frame, bg="black")**

**image\_label.pack()**

**label2 = tk.Label(root, text="Next post should load within 5 seconds of clicking next. If there's nothing, click it again. It must have chosen a post that was a video which cannot be displayed.", bg="#1a1a1b", fg="white", anchor="w", wraplength="730", font=("Arial", 14))**

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**button = tk.Button(root, text="Next", font=("Arial", 18), command=get\_random\_post)**

**get\_random\_post()**

**button.pack(side='bottom', anchor="se")**

**root.mainloop()**

**Tutorials that helped:**

<https://youtu.be/nssOuD9EcVk?si=wSsMiOV7fAoaQXhB>

[Python Tkinter Tutorial - GeeksforGeeks](https://www.geeksforgeeks.org/python-tkinter-tutorial/)

[(2) download and display images : redditdev](https://www.reddit.com/r/redditdev/comments/4ehzqi/download_and_display_images/)

https://www.reddit.com/r/redditdev/comments/15c4npe/comment/jtucvqk/?utm\_source=share&utm\_medium=web2x&context=3