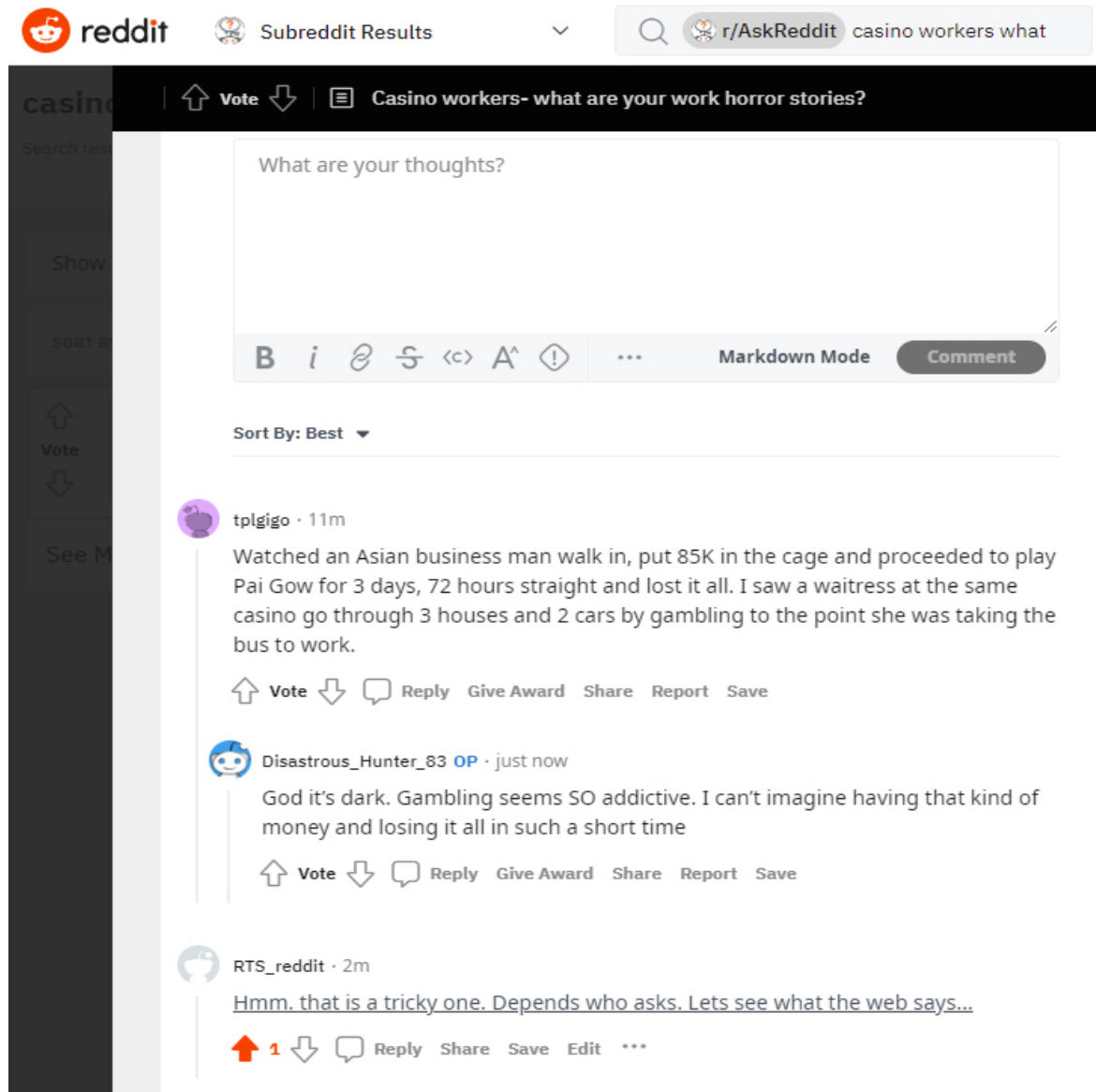# ART384 Creative Coding

Exercise 4

Python – create a Reddit response bot

Reddit bot responding to the question*: Casino workers – what are your horror stories.*

OVERVIEW

The fourth assignment asks you to create a simple chatbot that can respond to questions posted on Reddit.

Reddit bills itself as "the front page of the internet". Reddit is a large collection of fora on which people chat in real time, share news, content and comment on other people's posts. Reddit is subdivided into many communities known as 'subreddits', each dedicated to a different topic. Some topics are quite general, others edgy and weird (to say the least). Subreddits are manage by moderators who attempt to uphold content and courtesy standards. You can be banned for the site.

Chatbots are computer programs that interact with people in a way that mimics human interaction, ranging from simple keyword-driven queries to elaborate conversations using AI techniques.

In this exercise we will take some shortcuts in order to create a bot that appears to understand a question posted to Reddit and responds in ways that do not seem nonsensical. Bona fide and contextually accurate text comprehension is not a goal of this project. In fact it remains out of reach of even the best A.I. systems today.

In order to access the ecology of Reddit feeds, you will have to do some preparatory work. First, set up a Reddit account and create an application (click on 'apps' in the preferences menu).

Take note of the **ID** (to the right of the '?', below personal use script)**.** Give the app a name (no spaces). Enter into the text boxes 'about url' and 'redirect url': http://localhost:8080.
Then click 'create app'. Take note of the code **secret.**

Launch your VM on the Google console and install the python *Reddit API PRAW* (*pip install praw*).
Create a new python program *bot1.py* with the Nano editor: *nano bot1.py*

Edit the bot1.py program as follows:

```
import os, sys, time
import praw
import getpass
from urllib.parse import quote_plus
```

Then set your Reddit variables:

```
mpass = 'your Reddit Password'
mid = 'your client ID'
msecret = 'your secret code'
mname = 'your Reddit user name'magent = 'name of your agent'      # 'bot_v1 (by /u/RTS_reddit)'
```

Then create a Reddit instance:

```
reddit = praw.Reddit(
        client_id = mid,
        client_secret = msecret,
        password = mpass,
        user_agent = magent,
        username = mname)
```

Then add this line:

```
whoisit = reddit.user.me()
print(whoisit)
```

Save the file and test it: python3 bot1.py. It should print out your Reddit user name.
Once you have this test file running, you can move to crafting a first version of the chatbot.

SIMPLE BOT EXAMPLE

First, we create some simple question and reply templates.

```
QUESTIONS = ["what is", "who is", "who was", "what are"]
REPLY_TEMPLATE = "[ Lets see what the web says...](https://lmgtfy.com/?q={})"

subreddit = reddit.subreddit("AskReddit")
```

Then we collect some recent submission from the Reddit stream:

```
for submission in subreddit.stream.submissions():
        if(len(submission.title.split()) < tlim):
                collection.append(submission)
                if(len(collection) > clim):
                break
```

Then we find questions similar to those in our collection and match them with the response template:

```
for sub in collection:
        for question in QUESTIONS:
                if question in sub.title.lower():
                        print('Here is the template question: ', question)
                        print('Here is the reddit question: ', sub.title.lower())
                        url_title = quote_plus(sub.title)
                        reply_text = REPLY_TEMPLATE.format(url_title)
                        print("Replying to: ", sub.title)
                        print("Replying with: ", reply_text)
                        sub.reply(reply_text)
                        #break out of the loop after one response.
                        break
```

That completes the basic Reddit bot. This program is available on UBlearns in the assignment folder (assignment4).

Your task consists in modifying the simple algorithm such that it appears to be 'more realistic'. Your tool chest is limited at this point, but you can experiment with a few options, including:

- Searching for Reddit feeds that are particularly interesting to you.
- Modifying the Questions and Reply Template
- Checking this tutorial: https://ublearns.buffalo.edu/ultra/courses/_182458_1/cl/outline
- Adding some language processing to the reply in order to generate more variation.

DELIVERABLES

A python program - a simple response chat bot -   that extends the sample program demonstrated in class. The program should take as an input a Reddit feed of your choice and post an answer to Reddit.

 > *Extra credit if a human {not you} responds to the comment by your bot ! <*

POINTS 15 points. See syllabus.   **Extra Credit** 5 points.

DEADLINE Tuesday, November 30th, noon

FORMAT and DELIVERY

- Do a screen capture of your Reddit bot's response to a Reddit feed.
- Place copies of the python code with this image into UBBox, and send the instructor a link before the deadline.