# Lab 08 - Cognito and Python

## Item 1 (20 Marks)

#### **Dragon App and Cognito - Completion information**

In addition to a completion screenshot, please provide the following information about your DragonApp integration with Cognito lab:

- URL:
- Dragons Endpoint:
- Cognito Domain:
- Cognito Client Id:

## **Coding Exercise: Decode a Secret Message**

#### Problem:

You are given a Google Doc (like test-1) that contains a list of Unicode characters and their positions in a 2D grid. Your task is to write a function that takes the URL for this Google Doc as an argument, retrieves and parses the data in the document, and prints the grid of characters. When printed in a fixed-width font, the characters in the grid will form a graphic showing a sequence of uppercase letters, which is the secret message.

#### **Input Data Format:**

The document specifies the Unicode characters in the grid, along with the x and y coordinates of each character.

- The minimum possible value of these coordinates is 0.
- There is no maximum possible value, so the grid can be arbitrarily large.
- Any positions in the grid that do not have a specified character should be filled with a space character.
- You can assume the document will always have the same format as the example document linked above.

#### Example:

The simplified example document linked above ( 😑 test-1 ) draws out the letter 'F'

(sina)	<pre>sina@Sinux:~/python_decode\$ python3 q.py</pre>
(	

Note that the coordinates (0,0) will always correspond to the same corner of the grid as in this example, so make sure to understand in which directions the x and y-coordinates increase.

To verify that your code works, please run your function with this URL as its argument:

test\_2

Notes:

- You can write your code using any IDE you prefer. Make sure to copy the Google Docs files into your own Google account before working on them.
- Working with the Google Docs API might be necessary to make an API call to retrieve data from a Google Doc. Refer to the Google Docs API documentation for instructions on making calls to Google Docs documents.
- If you're unable to work with the Google Docs API, a simpler version of the assignment is provided in the withcontent.py file. This file contains the content retrieved from the API. You can focus solely on writing Python code to parse this content and display the hidden code. However, this approach will result in a 20-point deduction for not completing the API call section in item 4.
- Feel free to use any external libraries you find helpful.
- You may write helper functions, but there should be one function that:
  - 1. Takes in one argument, which is a string containing the URL for the Google Doc with the input data, AND
  - 2. When called, prints the grid of characters specified by the input data, displaying a graphic of correctly oriented uppercase letters.
- This coding exercise is a coding interview question. Please do not share the question or your solution online. You may use Google Search or other tools to research, but you should not directly search for the solution to this specific exercise.

## Item 2 (20 Marks)

To verify that your code works, please run your function with this URL as its argument:

**■** test\_2

What is the secret message encoded by this document? Your answer should only contain uppercase letters.

## Item 3 (20 Marks)

Explain how your code works in 2-5 complete sentences.

## Item 4 (40 Marks)

Please submit the complete code for your function: