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Assignment 1 - GGS366 Spatial Computing

February 6th 2024

Please find the 5 assignment questions enclosed, totaling 100 available points.

Remember, if you just rely on genAI, you will not learn the fundamental basics, and thus fail the graded closed-book test/exam planned for later in the semester. So, the important thing here is to really make a good attempt at solving these problems without any assistive tools, based on the materials you have learnt in the first few weeks of the class.

To submit the work, you need to write your answers in a colab .ipynb notebook and then:

1. Print the .ipynb notebook to a .pdf and submit for review on blackboard.
2. Submit also the actual .ipynb notebook on blackboard allowing your code to be easily run.

Submitted work may be checked for plagiarism, including for GenAI usage. The Mason honor code applies.

```
# Q1
# Describe what is wrong with this list? (15 points)
# Rewrite to make it function correctly (5 points)
my_data_structure = "{"

    1 # < - this is my first element

    2 # < - this is my second element

    3 # < - this is my third element

    4 # < - this is my forth element

    5# < - this is my fifth element

"}"

# Q2
# Write python code to add in values from 6-10 to your Q1 answer (5 points)
# Now print the length of this list (5 points)
# Write a print format function which inserts your second Q1 list element (5 points)
# Write a piece of code logic to check if this list contains a zero (5 points)
```

```
# Q3
# Describe what is wrong with this dictionary? (15 points)
# Rewrite to make it function correctly (5 points)
my_data_structure = #"[    <- open my data structure

    Comment: Below is my first key-value pair

    'key1'; 'value1'

    Comment: Below is my second key-value pair

    'key2'; 'value2'

    Comment: Below is my third key-value pair

    'key2'; 'value2'

#]"
```

```
# Q4
# Explain what is wrong with the list of dictionaries below (15 points)
# Rewrite to make it function correctly (5 points)
my_list_of_dicts
    =
{
  #[var1; 1, var2; 2]

  #[var1; 1, var2; 2]

  #[var1; 1, var2; 2]

}

# Q5
# Write a user-defined function which accepts a list of dicts
# and then prints the length. Within the function, extract the
# second list and write a loop to print each element. Explain the
# key parts of the function (20 points)
```