MEMORANDUM

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RE: **Homework 0x00: Reading CSV Files**

The results of the assignment can be seen below:

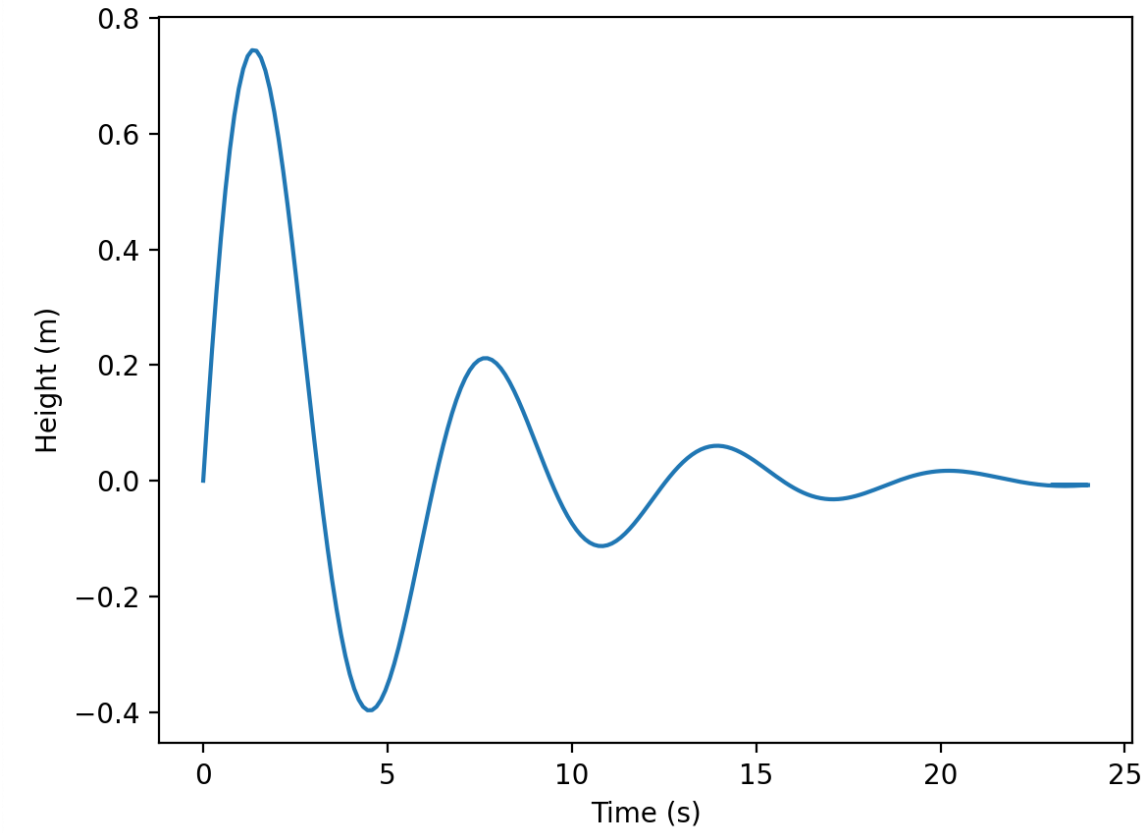

Figure 1: CSV Plot Results

The following is the console results:

```
Row #6 rejected. Reason: Line does not contain a minimum of two columns. Data: ""
Row #7 rejected. Reason: Line does not contain a minimum of two columns. Data: "# 0.0 0.0 0.0, 0.0"
Row #8 rejected. Reason: Line does not contain a minimum of two columns. Data: ""
Row #12 rejected. Reason: Line does not contain a minimum of two columns. Data: "waffles!!!"
```

```
from matplotlib import pyplot as plt

file_name = "data.csv"
# rejection function for printing
def rejection(row_num, reason, row_data):
    print(f'Row #{row_num} rejected. Reason: {reason}. Data: "{row_data.strip()}"')

# variable initializations
dataset_1 = []
dataset_2 = []

# open the file and read the data
try:
    with open(file_name, 'r') as datafile:
        for line_num, line in enumerate(datafile):
            line_num += 1               # Line numbers start at 1
            line_altered = line.split('#')[0].strip()  # Remove end comment and strip whitespace
            line_altered = [x.strip() for x in line_altered.split(',')]  # Split by comma and
strip whitespace
            if len(line_altered) < 2:             # Ensure there are exactly two headers
                rejection(line_num, "Line does not contain a minimum of two columns", line)
                continue                  # Skip to next loop
            line_altered = line_altered[:2]  # Keep only the first two columns
            if line_num <= 1:               # Skip header line
                dataset_1.append(line_altered[0])  # Append first column to dataset_1
                dataset_2.append(line_altered[1])  # Append second column to dataset_2
                continue                  # Skip to next loop

            try:
                line_altered = [float(x) for x in line_altered]  # Convert to float
            except ValueError:              #throw error if conversion fails
                rejection(line_num, "Non-numeric data found", line)
                continue                  # Skip to next loop

            dataset_1.append(line_altered[0])  # Append first column to dataset_1
            dataset_2.append(line_altered[1])  # Append second column to dataset_2
except FileNotFoundError:
    print(f"Error: Could not open file {file_name}")
    exit()

# Plot skipping headers
plt.plot(dataset_1[1:],dataset_2[1:])
# plt.plot([1,2,3],[1,2,3])

# Labeling the axes
if type(dataset_1[0]) != str:
    plt.xlabel("1st column data")
else:
    plt.xlabel(dataset_1[0])
```

```
if type(dataset_2[0]) != str:
    plt.ylabel("2nd column data")
else:
    plt.ylabel(dataset_2[0])
plt.show()
```