Code Flow Diagram

Start: main()

```
import math
import csv
import os
import unittest
```

Orchestrate the entire program (load the data, calls the two calculation function, prints the result, and writes them to output file csv/txt)

Input: None
Output: None

read_data(file_name)

Input: csv file name exactly (str)
Output: list (lst) of dict, each row being one dictionary with keys being the header per each column value

Locating file's full path then read the provided csv, convert it into a list of dict, one dictionary per row, each key is the header/value

net_profit_margin_per_selected_state (rows, selected_state)

Input: list (lst) of dict + selected state (str)
Output: profit_margin_text (str) included with the calcualated number (float) as a string

Calculate the net profit margin for a selected state
NPM = Total Profit/Total Sales

dict_of_city_and_revenue_per_city (rows, selected_state)

Input: list (lst) of dict + selected state (str)
Output: dictionary (dict) of each city within a state as key and value as the total sales

Aggregates total sales per city for a selected state, returns a dictuonary keyed by city and total as value

write_result_of_net_profit_margin_to _txt(file_name, profit_margin_text)

Writes the profit-margin result string to a text file for easy reviewing

Input:
Output: None, create a new txt file instead

write_result_of_dict_of_city_and_rev enue_per_city_to_csv(file_name, city_revenue_dict)

Writes city-revenue pair dictionary to csv with headers City, Total Sales

Input:
Output: None, create a new csv file instead