Thank you for taking the time to review this code sample for the slcsp exercise.

Requirements to run:

- Python environment running python 3.8
- Environment with Pandas library installed (ver. 1.2.3)

Assumptions:

- Tester has 3 files in the same format as the 3 example files.
  - Zip codes used for the search – slcsp.csv file.
  - Zip code list with the rate_area – zips.csv file
  - File of the valid plans with rate and rate_area – plans.csv file
- Appropriate permissions when executing the program to create a new output csv file in the same directory as the slcsp.csv file.

Execution:

- Using python, execute the mvp.py file.
- You will be asked to input the path and filename of the three input files listed above. (There are also two test files slcsp_test.csv slcsp_test2.csv that can be used as well. Substitute those file names for slcsp.csv when prompted.)
- The output lists the zip codes where the slcsp could not be determined and why the slcsp could not be determined.
- At the end, the output csv file is created and displayed in stdout.

Tests:

- Verifying that input files exist and match the expected format.
  - To test existence, key in the wrong path or filename
  - To test format, enter a file with the incorrect number of columns or wrong type of columns (i.e.: enter the zips.csv file when asking for the plans.csv or vice versa)
- Enter the slcsp_test.csv file to test that the zip code is 5 digits long (note, zip codes shorter than 5 digits are prefixed with leading zeros)
  - Test for non-valid zip codes
  - Test for non-numeric zip codes
  - Test for zip codes longer than 5 digits

Sample execution:

```
Enter the full path and filename for the CSV file listing the zip codes to determine the slcsp (slcsp.csv): slcsp_test.csv

Enter the full path and filename for the CSV file listing the zip codes and rate area information(zips.csv): zips.csv

Enter the full path and filename for the CSV file listing the plans(plans.csv): plans.csv

Warning: Zip code 99999 was not found in list of zip codes - not processing this zip code
Warning: Zip code 11111 was not found in list of zip codes - not processing this zip code
Warning: Zip code abcde not numeric - not processing this zip code
Warning: Zip code 123456789 not 5 digits - not processing this zip code
Warning: Zip code 54923 has Multiple Rate Areas
Warning: Zip code 00005 was not found in list of zip codes - not processing this zip code


Final output from new file:[slcsp_test_upd.csv]

zipcode,rate
99999,
11111,
abcde,
123456789,
79168,243.68
54923,
67651,249.44
49448,221.63
00005,

Processing complete. Please press enter to exit
```