Class Project

Course: ADEV-3005 (268580) Programming in Python

Scraping	Master 6 points	Try Again 0 points	Criterion Score
Name	WeatherScraper class has been created inside a scrape_weather module.		/ 6
Parse	Code uses the Python HTMLParser class to parse the website html.		/ 6
Collect Data	Code successfully scrapes the min, max & mean temperature and date, and stores them in a dictionary of dictionaries.		/ 6
Detect End	Code successfully scrapes weather data from the current date, as far back in time as is available. Last available weather date should be auto-matically detected in some way, not hard coded.		/ 6
I/O	Code receives a url to scrape as input, and outputs the scraped data for use in other parts of the program.		/ 6

Database	Master 4 points	Try Again 0 points	Criterion Score
Name	A class named DBOperations has been created inside a db_operations module.		/ 4
Context Manager	Code uses a database context manager named DBCM correctly. DBCM returns a cursor object in __enter__. DBCM commits changes and closes all connection objects in __exit__		/ 4
Initialise	Code successfully initializes the database and creates the necessary tables/fields if they don't already exist, every time the program starts.		/ 4
Store	Code receives & processes date, min, max & mean temperature as input, checks for duplicates in some way, and successfully stores it in the database.		/ 4
I/O	DBOperations outputs the data required for plotting.		/ 4

Plotting	Master 3 points	Try Again 0 points	Criterion Score
Name	A class named PlotOperations has been created inside a plot_operations module.		/ 3
Box Plot	Code successfully uses Python matplotlib to create a basic boxplot of mean temperature data with the same labels/design given in the example.		/ 3
Line Plot	Code successfully uses Python matplotlib to create a line plot of mean temperature data for a particular month.		/ 3
Process	PlotOperations receives & processes the data to be used in the plots. Data is processed in PlotOperations not DBOperations.		/ 3
Format	Plots are formatted nicely and include axis labels and title. Title includes the correct year or month/day. No axis items are overlapping.		/ 3

User Interaction	Master 5 points	Try Again 0 points	Criterion Score

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Name	A class named WeatherProcessor has been created in a module named weather_processor.		/ 5
Fetch Data	On startup, code successfully prompts the user to download a full set of weather data, or update their existing data.		/ 5
Plot	Code successfully prompts the user for a date range of interest to display. From year, to year for box plot. Year and month for line plot User prompt shows date format example.		/ 5
Manage	Code successfully launches and manages all the other tasks.		/ 5

Packaging	Master 5 points	Try Again 0 points	Criterion Score

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Create	Successfully create a Windows package installer using Inno Setup, which includes a logo and license agreement.		/ 5
Install & Run	Package can be installed successfully on Windows. Program runs successfully after installation.		/ 5

Additional Requirements	Master 1 point	Try Again 0 points	Criterion Score
PEP8 Compliance	Code adheres to PEP8 standard by achieving a score of 8 or higher using pylint.		/ 1
Docstrings	Code blocks include comments. Code documentation includes module, class & function/method level docstrings.		/ 1
Participation	Each module/class/function documentation contains the names of the people who worked on it.		/ 1

Additional Requirements	Master 1 point	Try Again 0 points	Criterion Score
Error Handling & Logging	Every function/method implements error handling that logs errors to a file using the python logging module.		/ 1
Q&A	Q&A		/ 1

Bonus 1 - Optional	Master 10 points	Try Again 0 points	Criterion Score
UI	Create a user interface for all user interaction. All the widgets are labelled and aligned properly. The UI is polished and presentable, ready for sale.		/ 10

Bonus 2 - Optional	Master 5 points	Try Again 0 points	Criterion Score
Thread	Implement threading in your scraping class to speed up scraping operations.		/ 5

Total	/ 115

Overall Score

Master 80 points minimum	Try Again 0 points minimum