

Pruebas de software y aseguramiento de la calidad

5.2 Ejercicio de programación 2 y análisis estático

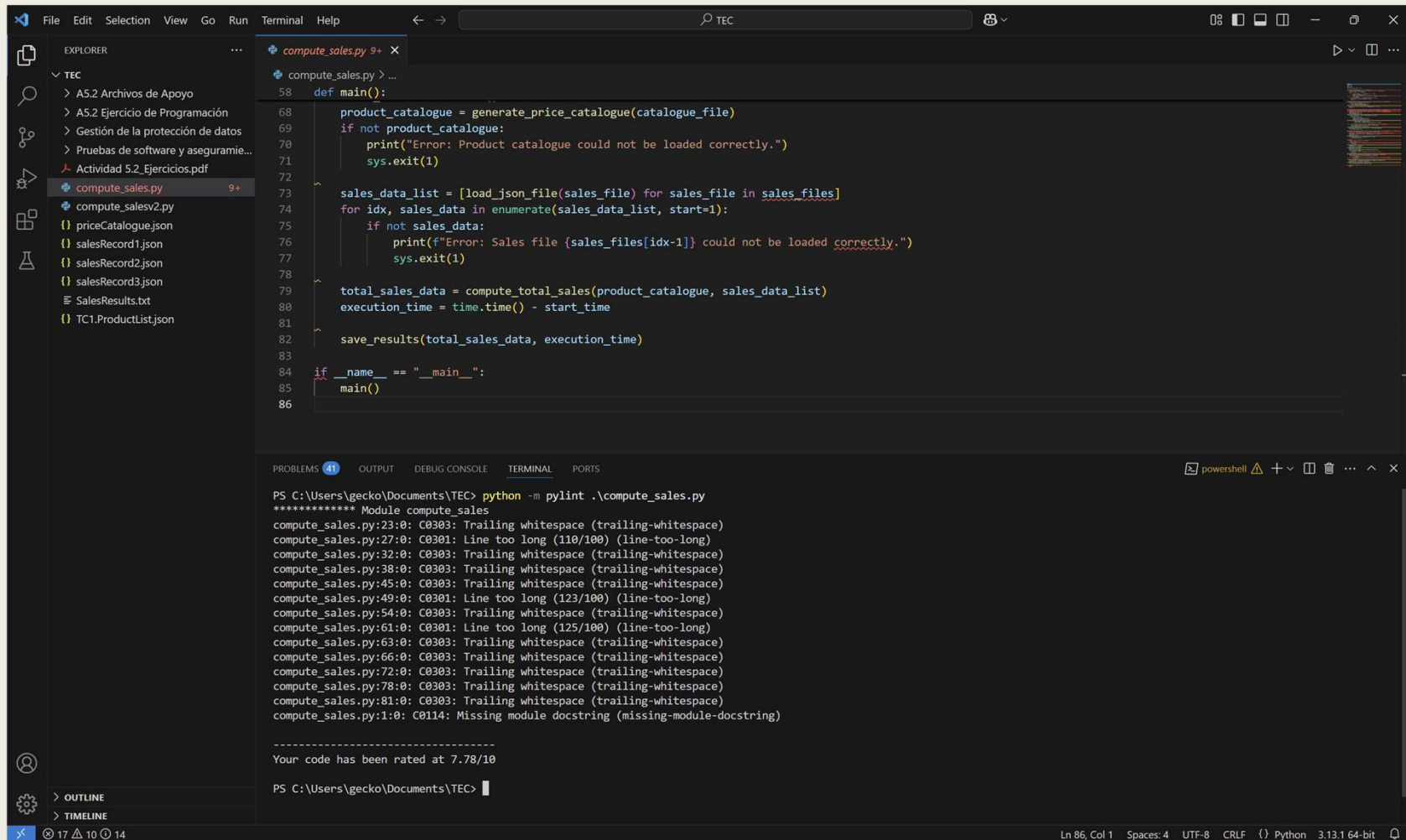
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09 de febrero de 2025

Evidencia del ejercicio “Compute sales” al usar Pylint y antes de corregir



The screenshot shows a Visual Studio Code editor window with a dark theme. The Explorer sidebar on the left displays a file tree for a project named 'TEC'. The file 'compute_sales.py' is selected and open in the main editor. The code in the editor is a Python script that generates a price catalogue and processes sales data. The script includes functions for generating a catalogue, loading sales files, and computing total sales. The main function is defined and called at the bottom of the file.

```
58 def main():
68     product_catalogue = generate_price_catalogue(catalogue_file)
69     if not product_catalogue:
70         print("Error: Product catalogue could not be loaded correctly.")
71         sys.exit(1)
72
73     sales_data_list = [load_json_file(sales_file) for sales_file in sales_files]
74     for idx, sales_data in enumerate(sales_data_list, start=1):
75         if not sales_data:
76             print(f"Error: Sales file {sales_files[idx-1]} could not be loaded correctly.")
77             sys.exit(1)
78
79     total_sales_data = compute_total_sales(product_catalogue, sales_data_list)
80     execution_time = time.time() - start_time
81
82     save_results(total_sales_data, execution_time)
83
84 if __name__ == "__main__":
85     main()
86
```

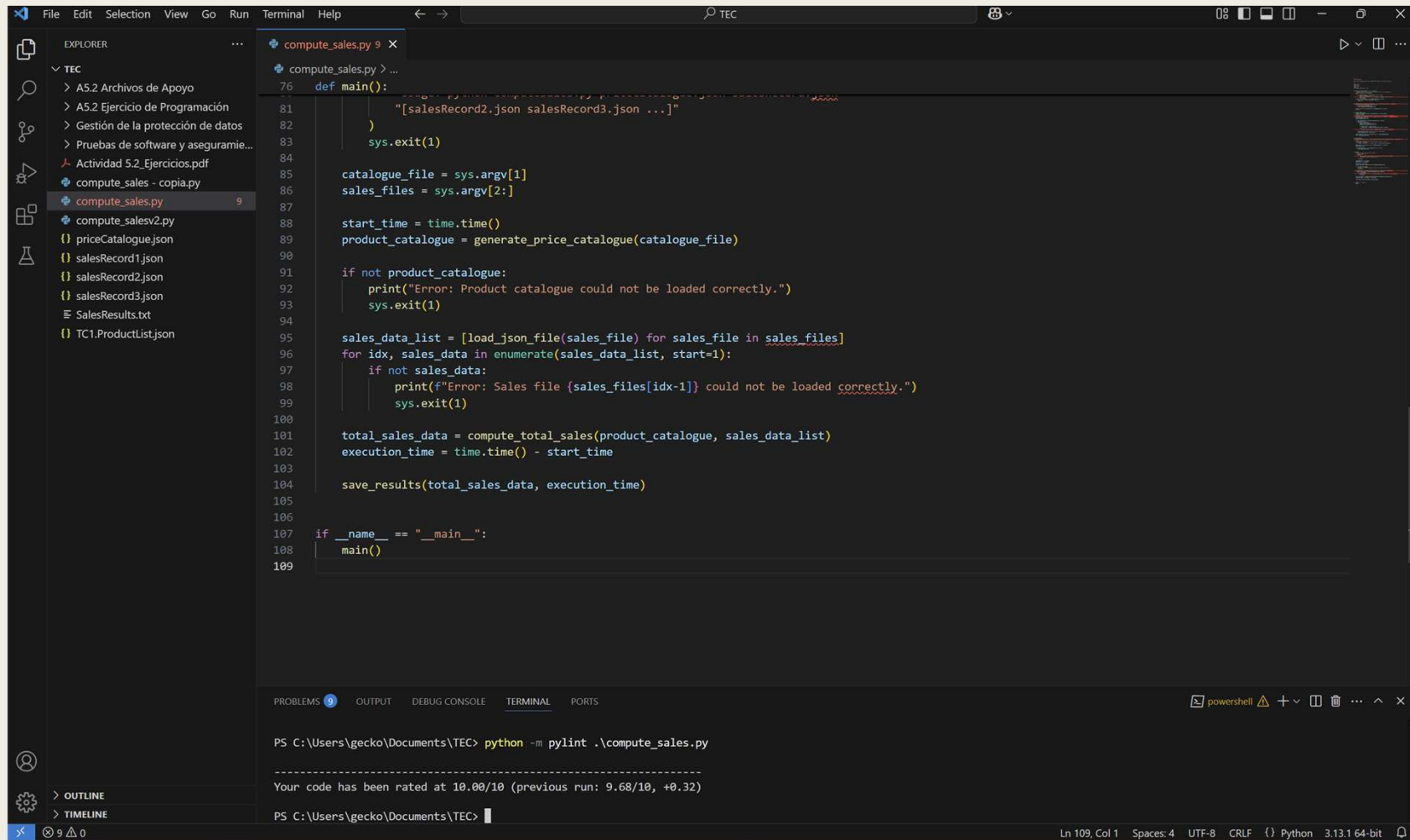
The terminal window at the bottom shows the output of the Pylint command. It lists several errors related to trailing whitespace and line length, as well as a missing module docstring. The code has been rated at 7.78/10.

```
PS C:\Users\gecko\Documents\TEC> python -m pylint .\compute_sales.py
***** Module compute_sales
compute_sales.py:23:0: C0303: Trailing whitespace (trailing-whitespace)
compute_sales.py:27:0: C0301: Line too long (110/100) (line-too-long)
compute_sales.py:32:0: C0303: Trailing whitespace (trailing-whitespace)
compute_sales.py:38:0: C0303: Trailing whitespace (trailing-whitespace)
compute_sales.py:45:0: C0303: Trailing whitespace (trailing-whitespace)
compute_sales.py:49:0: C0301: Line too long (123/100) (line-too-long)
compute_sales.py:54:0: C0303: Trailing whitespace (trailing-whitespace)
compute_sales.py:61:0: C0301: Line too long (125/100) (line-too-long)
compute_sales.py:63:0: C0303: Trailing whitespace (trailing-whitespace)
compute_sales.py:66:0: C0303: Trailing whitespace (trailing-whitespace)
compute_sales.py:72:0: C0303: Trailing whitespace (trailing-whitespace)
compute_sales.py:78:0: C0303: Trailing whitespace (trailing-whitespace)
compute_sales.py:81:0: C0303: Trailing whitespace (trailing-whitespace)
compute_sales.py:1:0: C0114: Missing module docstring (missing-module-docstring)

-----
Your code has been rated at 7.78/10

PS C:\Users\gecko\Documents\TEC>
```

Comprobación del ejercicio “Compute sales” al 100% con Pylint



The screenshot shows the Visual Studio Code interface with the file explorer on the left, the editor in the center, and the terminal at the bottom. The file explorer shows a project named 'TEC' with various files and folders. The editor displays the code for 'compute_sales.py'. The terminal shows the command 'python -m pylint .\compute_sales.py' and the output indicating a perfect score of 10.00/10.

```
76 def main():
81     "[salesRecord2.json salesRecord3.json ...]"
82     )
83     sys.exit(1)
84
85     catalogue_file = sys.argv[1]
86     sales_files = sys.argv[2:]
87
88     start_time = time.time()
89     product_catalogue = generate_price_catalogue(catalogue_file)
90
91     if not product_catalogue:
92         print("Error: Product catalogue could not be loaded correctly.")
93         sys.exit(1)
94
95     sales_data_list = [load_json_file(sales_file) for sales_file in sales_files]
96     for idx, sales_data in enumerate(sales_data_list, start=1):
97         if not sales_data:
98             print(f"Error: Sales file {sales_files[idx-1]} could not be loaded correctly.")
99             sys.exit(1)
100
101     total_sales_data = compute_total_sales(product_catalogue, sales_data_list)
102     execution_time = time.time() - start_time
103
104     save_results(total_sales_data, execution_time)
105
106
107 if __name__ == "__main__":
108     main()
109
```

PROBLEMS 9 OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\gecko\Documents\TEC> python -m pylint .\compute_sales.py

Your code has been rated at 10.00/10 (previous run: 9.68/10, +0.32)

PS C:\Users\gecko\Documents\TEC>

Ln 109, Col 1 Spaces: 4 UTF-8 CRLF {} Python 3.13.1 64-bit

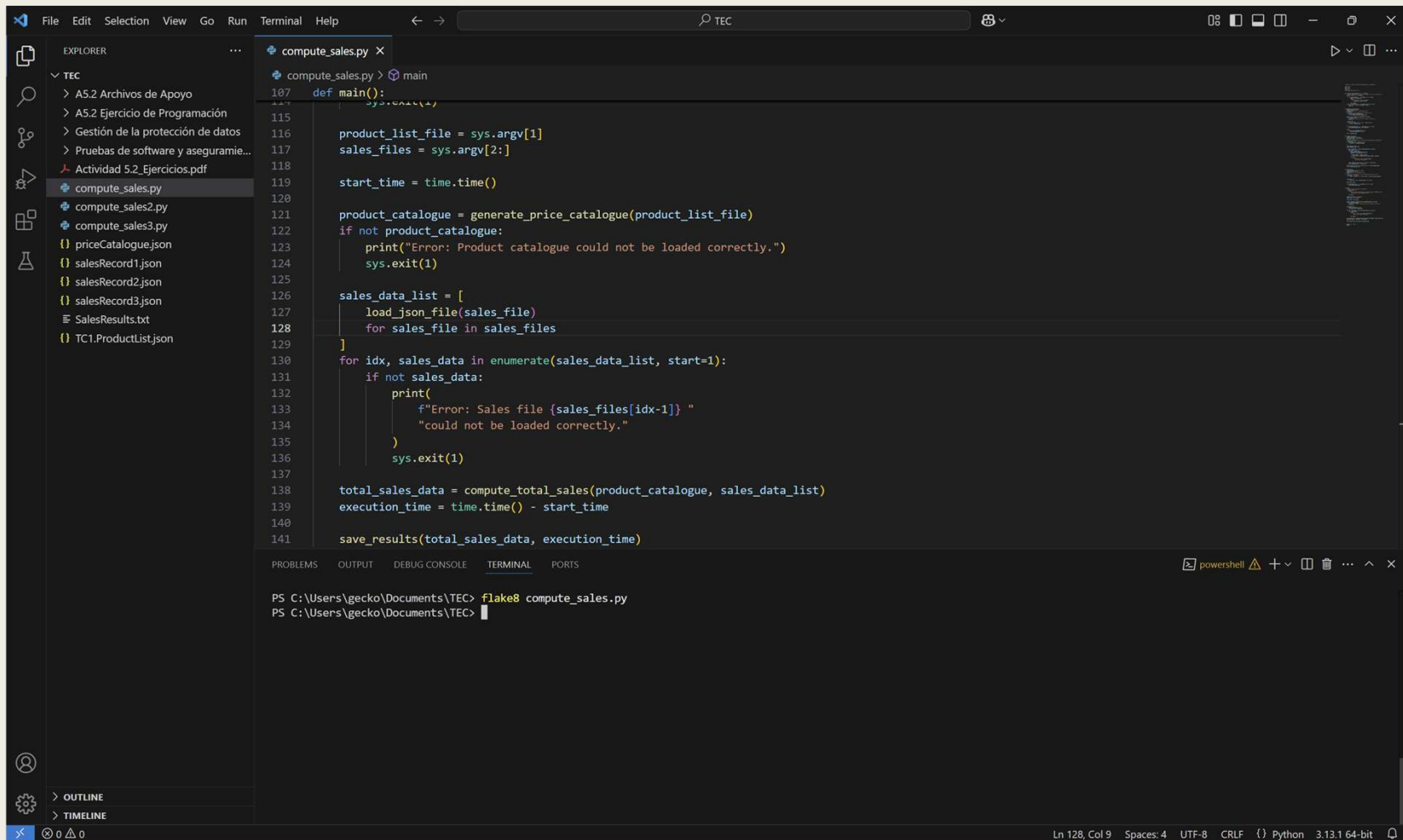
Evidencia del ejercicio “Compute sales” al usar Flake8 y antes de corregir

The screenshot shows the Visual Studio Code interface with the file explorer on the left, the editor in the center, and the terminal at the bottom. The file explorer shows a project named 'TEC' with various files and folders. The editor displays the code for 'compute_sales.py'. The terminal shows the command 'flake8 compute_sales.py' and its output, which lists several errors (E302, E501, E305) related to blank lines and line lengths.

```
File Edit Selection View Go Run Terminal Help
compute_sales.py 9+ X
compute_sales.py > ...
73 def main():
76     print(
77         "Usage: python computeSales.py productList.json salesRecord.json "
78         "[salesRecord2.json salesRecord3.json ...]"
79     )
80     sys.exit(1)
81 product_list_file = sys.argv[1]
82 sales_files = sys.argv[2:]
83 start_time = time.time()
84 product_catalogue = generate_price_catalogue(product_list_file)
85 if not product_catalogue:
86     print("Error: Product catalogue could not be loaded correctly.")
87     sys.exit(1)
88 sales_data_list = [load_json_file(sales_file) for sales_file in sales_files]
89 for idx, sales_data in enumerate(sales_data_list, start=1):
90     if not sales_data:
91         print(f"Error: Sales file {sales_files[idx-1]} could not be loaded correctly.")
92         sys.exit(1)
93 total_sales_data = compute_total_sales(product_catalogue, sales_data_list)
94 execution_time = time.time() - start_time
95 save_results(total_sales_data, execution_time)
96
97 if __name__ == "__main__":
98     main()
99

PROBLEMS 14 OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\gecko\Documents\TEC> flake8 compute_sales.py
compute_sales.py:9:1: E302 expected 2 blank lines, found 1
compute_sales.py:15:80: E501 line too long (80 > 79 characters)
compute_sales.py:21:1: E302 expected 2 blank lines, found 1
compute_sales.py:24:80: E501 line too long (92 > 79 characters)
compute_sales.py:32:80: E501 line too long (81 > 79 characters)
compute_sales.py:39:1: E302 expected 2 blank lines, found 1
compute_sales.py:42:80: E501 line too long (86 > 79 characters)
compute_sales.py:43:80: E501 line too long (90 > 79 characters)
compute_sales.py:54:80: E501 line too long (83 > 79 characters)
compute_sales.py:60:1: E302 expected 2 blank lines, found 1
compute_sales.py:73:1: E302 expected 2 blank lines, found 1
compute_sales.py:88:80: E501 line too long (80 > 79 characters)
compute_sales.py:91:80: E501 line too long (91 > 79 characters)
compute_sales.py:97:1: E305 expected 2 blank lines after class or function definition, found 1
PS C:\Users\gecko\Documents\TEC>
```

Comprobación del ejercicio “Compute sales” al 100% con Flake8



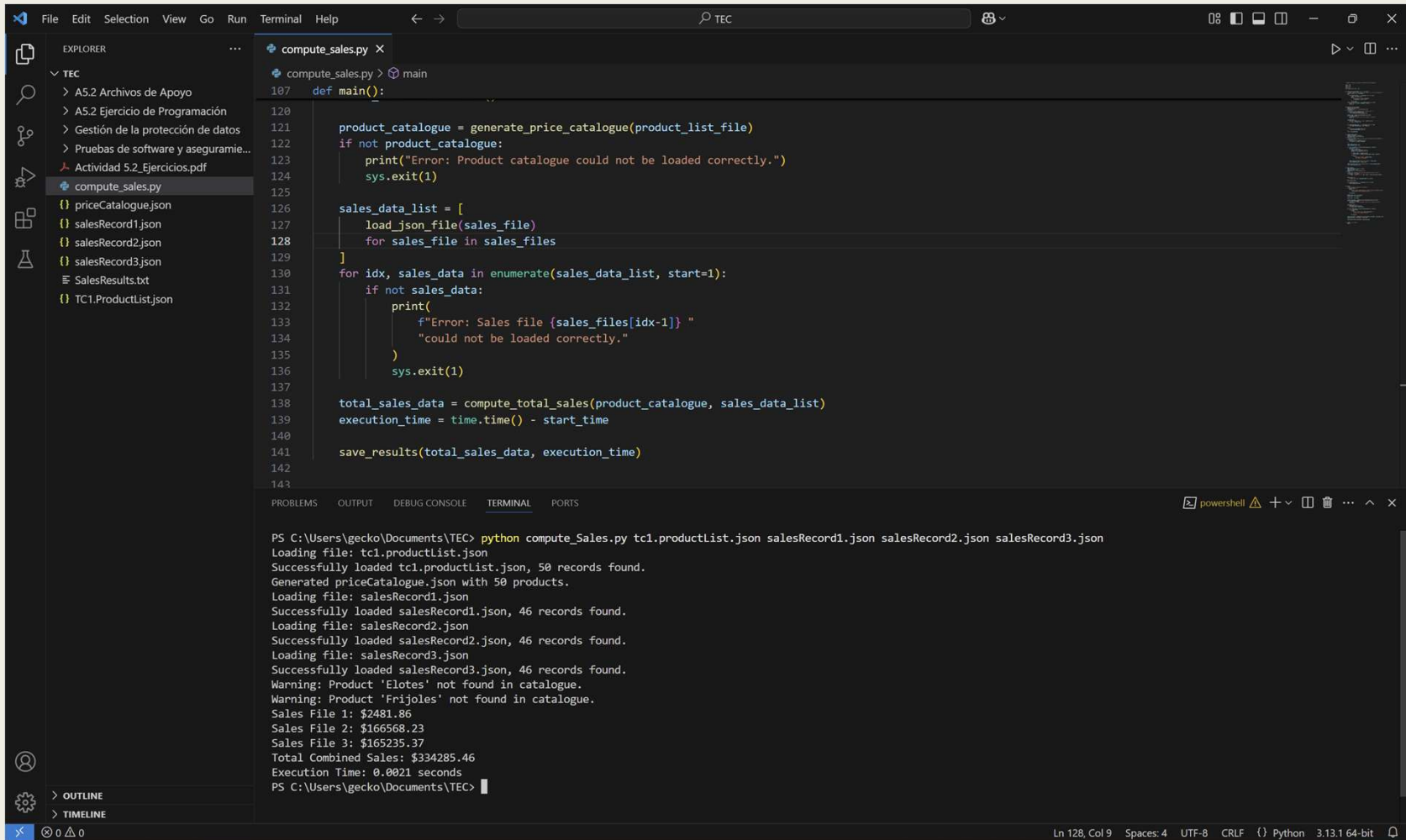
The screenshot displays the Visual Studio Code interface. The Explorer panel on the left shows a project structure under the name 'TEC'. The files listed include 'A5.2 Archivos de Apoyo', 'A5.2 Ejercicio de Programación', 'Gestión de la protección de datos', 'Pruebas de software y aseguramie...', 'Actividad 5.2 Ejercicios.pdf', and several Python and JSON files: 'compute_sales.py', 'compute_sales2.py', 'compute_sales3.py', 'priceCatalogue.json', 'salesRecord1.json', 'salesRecord2.json', 'salesRecord3.json', 'SalesResults.txt', and 'TC1.ProductList.json'. The main editor window shows the code for 'compute_sales.py'. The code defines a 'main' function that takes command-line arguments for a product list file and sales files. It calculates the total sales by loading a product catalogue and iterating through sales files. The execution time is measured and the results are saved. The terminal window at the bottom shows the command 'flake8 compute_sales.py' being executed in a PowerShell prompt at the path 'C:\Users\gecko\Documents\TEC>'. The status bar at the bottom right indicates the current line and column (Ln 128, Col 9), the number of spaces (4), the encoding (UTF-8), the line ending (CRLF), the interpreter (Python), and the architecture (3.13.1 64-bit).

```
107 def main():
108     product_list_file = sys.argv[1]
109     sales_files = sys.argv[2:]
110
111     start_time = time.time()
112
113     product_catalogue = generate_price_catalogue(product_list_file)
114     if not product_catalogue:
115         print("Error: Product catalogue could not be loaded correctly.")
116         sys.exit(1)
117
118     sales_data_list = [
119         load_json_file(sales_file)
120         for sales_file in sales_files
121     ]
122     for idx, sales_data in enumerate(sales_data_list, start=1):
123         if not sales_data:
124             print(
125                 f"Error: Sales file {sales_files[idx-1]} "
126                 "could not be loaded correctly."
127             )
128             sys.exit(1)
129
130     total_sales_data = compute_total_sales(product_catalogue, sales_data_list)
131     execution_time = time.time() - start_time
132
133     save_results(total_sales_data, execution_time)
```

PS C:\Users\gecko\Documents\TEC> flake8 compute_sales.py
PS C:\Users\gecko\Documents\TEC>

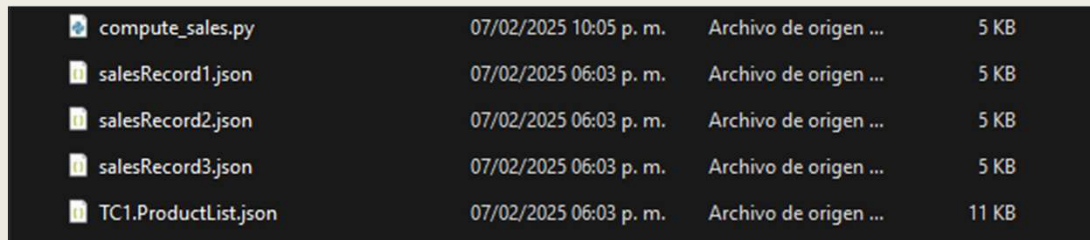
Ln 128, Col 9 Spaces: 4 UTF-8 CRLF Python 3.13.1 64-bit

Problema corregido con Pylint y Flake8: Ejecución ejercicio



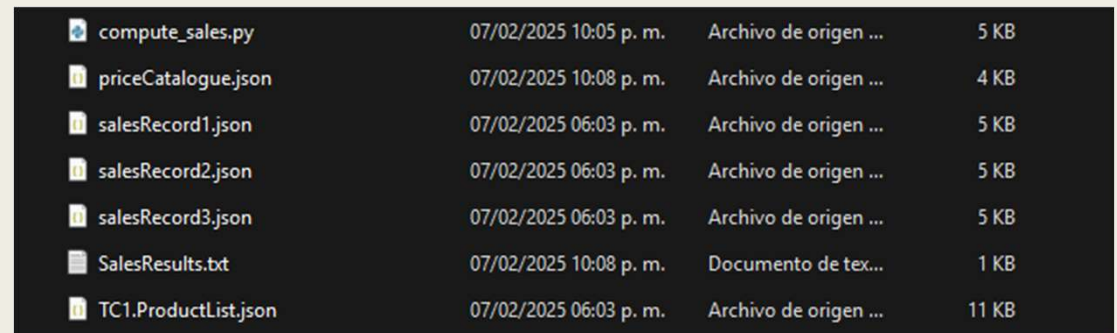
```
File Edit Selection View Go Run Terminal Help
compute_sales.py X
compute_sales.py > main
107 def main():
120
121     product_catalogue = generate_price_catalogue(product_list_file)
122     if not product_catalogue:
123         print("Error: Product catalogue could not be loaded correctly.")
124         sys.exit(1)
125
126     sales_data_list = [
127         load_json_file(sales_file)
128         for sales_file in sales_files
129     ]
130     for idx, sales_data in enumerate(sales_data_list, start=1):
131         if not sales_data:
132             print(
133                 f"Error: Sales file {sales_files[idx-1]} "
134                 "could not be loaded correctly."
135             )
136             sys.exit(1)
137
138     total_sales_data = compute_total_sales(product_catalogue, sales_data_list)
139     execution_time = time.time() - start_time
140
141     save_results(total_sales_data, execution_time)
142
143
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\gecko\Documents\TEC> python compute_Sales.py tc1.productList.json salesRecord1.json salesRecord2.json salesRecord3.json
Loading file: tc1.productList.json
Successfully loaded tc1.productList.json, 50 records found.
Generated priceCatalogue.json with 50 products.
Loading file: salesRecord1.json
Successfully loaded salesRecord1.json, 46 records found.
Loading file: salesRecord2.json
Successfully loaded salesRecord2.json, 46 records found.
Loading file: salesRecord3.json
Successfully loaded salesRecord3.json, 46 records found.
Warning: Product 'Elotes' not found in catalogue.
Warning: Product 'Frijoles' not found in catalogue.
Sales File 1: $2481.86
Sales File 2: $166568.23
Sales File 3: $165235.37
Total Combined Sales: $334285.46
Execution Time: 0.0021 seconds
PS C:\Users\gecko\Documents\TEC>
```


Evidencia de carpeta para la generación del archivo de resultado



compute_sales.py	07/02/2025 10:05 p. m.	Archivo de origen ...	5 KB
salesRecord1.json	07/02/2025 06:03 p. m.	Archivo de origen ...	5 KB
salesRecord2.json	07/02/2025 06:03 p. m.	Archivo de origen ...	5 KB
salesRecord3.json	07/02/2025 06:03 p. m.	Archivo de origen ...	5 KB
TC1.ProductList.json	07/02/2025 06:03 p. m.	Archivo de origen ...	11 KB

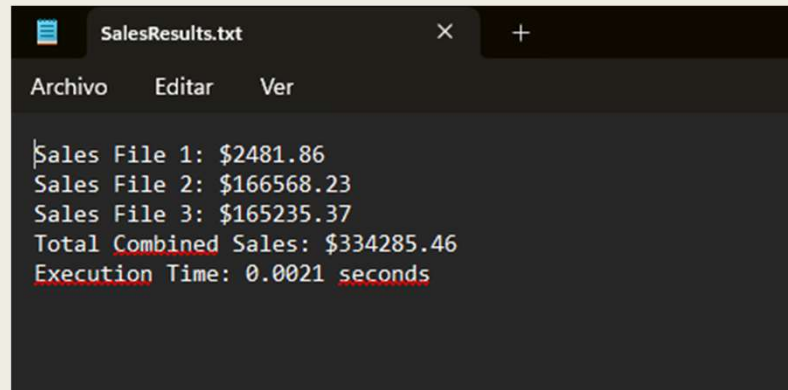
Imagen de la carpeta antes de ejecutar el programa



compute_sales.py	07/02/2025 10:05 p. m.	Archivo de origen ...	5 KB
priceCatalogue.json	07/02/2025 10:08 p. m.	Archivo de origen ...	4 KB
salesRecord1.json	07/02/2025 06:03 p. m.	Archivo de origen ...	5 KB
salesRecord2.json	07/02/2025 06:03 p. m.	Archivo de origen ...	5 KB
salesRecord3.json	07/02/2025 06:03 p. m.	Archivo de origen ...	5 KB
SalesResults.txt	07/02/2025 10:08 p. m.	Documento de tex...	1 KB
TC1.ProductList.json	07/02/2025 06:03 p. m.	Archivo de origen ...	11 KB

Imagen de la carpeta después de ejecutar el programa

Problema corregido con Pylint y Flake8: Archivo .txt con resultados

A screenshot of a text editor window titled "SalesResults.txt". The window has a dark theme and a menu bar with "Archivo", "Editar", and "Ver". The text content is as follows:

```
Sales File 1: $2481.86  
Sales File 2: $166568.23  
Sales File 3: $165235.37  
Total Combined Sales: $334285.46  
Execution Time: 0.0021 seconds
```

The text is displayed in a monospaced font. The words "Combined", "Execution", and "seconds" in the last two lines are underlined in red.