Script Documentation: Shipping Manifest Data Processing

1. Introduction:

The Shipping Manifest Data Processing script is a versatile tool designed to manage and process datasets related to shipping manifests. It provides functionalities for reading, manipulating, and saving data in CSV format. The script aims to simplify tasks such as adding, deleting, editing, and searching entries within the dataset.

2. Dependencies:

The script relies on the following dependencies:

- Python 3.x
- pandas library

Ensure that Python 3.x is installed on your system. You can install the pandas library using pip:

```
pip install panda
```

3. Virtual Environment Setup:

It's recommended to use a virtual environment to isolate the dependencies of the script from other projects. Follow these steps to set up a virtual environment:

```
cd /path/to/your/project/directory
python3 -m venv venv
```

1. **Create a Virtual Environment:** Open a terminal and navigate to your project directory.

2. **Activate the Virtual Environment:** Activate the virtual environment using the appropriate command for your operating system.
    - On macOS and Linux:

```
source venv/bin/activate
```

4. Usage:

To use the script, follow these steps:

1. **Download the Script:** Download the Python script file (**shipping_manifest_processor.py**) to your local machine.
2. **Prepare Dataset:** Ensure you have a CSV dataset containing shipping manifest data. The dataset should have the following columns: 'Order ID', 'Customer Name', 'Surname', 'Email', 'Shipping Country', 'Shipping Time', 'Item', 'Item Colour', 'Item Size'. If you don't have a dataset, you can create one or use the provided sample dataset.
3. **Run the Script:** Activate the virtual environment (if set up) and run the script using Python:

```
python3 Task2_ Python Script for Data Processing.py
```

4. **Menu Navigation:** Once the script is running, you'll see a menu with options to perform various operations on the dataset:

- Display dataset: View the current contents of the dataset.
- Add entry: Add a new entry to the dataset.
- Delete entry: Remove an existing entry from the dataset.
- Edit entry: Modify details of an existing entry in the dataset.
- Search entries: Search for specific entries based on keywords.
- Exit: Quit the script.

5. **Follow On-screen Prompts:** Follow the prompts displayed on the screen to input data or select menu options. The script will guide you through the process of interacting with the dataset and performing desired operations.
6. **Save Changes:** Any changes made to the dataset (such as adding, deleting, or editing entries) will be saved automatically to the CSV file (**dataset.csv**) upon exiting the script.

5. Sample Dataset:

You can use the provided sample dataset (**dataset.csv**) to test the script. Alternatively, you can create your own dataset in CSV format with similar columns and structure.

6. Notes:

- Ensure that the CSV dataset is formatted correctly with appropriate column headers.
- Input validation and error handling are implemented to handle various scenarios, but ensure valid inputs to avoid unexpected behavior.
- The script can be customized or extended to handle different datasets or additional functionalities as per specific requirements.

8. Conclusion:

The Shipping Manifest Data Processing script provides a convenient and versatile solution for managing shipping manifest datasets. With its user-friendly interface and comprehensive functionalities, it simplifies data processing tasks and enhances productivity in handling shipping-related data.