ECOR 1042

Project Report

Analyzing CSV files using Python

Submitted by

TEAM T150

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1 CONTENT

2 THE PROBLEM STATEMENT:

This program was developed with one principle in mind, which is simplicity/convenience. In our Day-to-day lives we are used to working with large data entries. One of the common problems faced by many people is organizing certain specific collections of data.

To solve this problem, a dictionary-based data sorting structure was developed in this project which makes it easier for someone to organize/sort many data entries at once.

The program which was developed would use a set of data entries in a csv file or a spreadsheet in Microsoft Excel and the program will help a user to find specific entries or even arrange the entries according to the user's wish.

The only thing which the user needs to input is a data entry. To be more specific, this program was made to do certain operations on the data entry which housed information about many books. Any user can find any specific information about any book by running the program and by entering some command keys.

The most beneficial aspect of this program is that the principles used here can be used to make other programs that can be tailored specifically to meet the user's needs. For example, a department store can keep track of their sales by pairing them up with a product code and then corresponding a price with that code so that it is easier for the user, in this case, the workers to sort their items accordingly in terms of price. The program can also be modified and used for something else.

Motivation for this project can be many different things starting from cost savings to time management. The possibilities here are endless in terms of modifying the program to fit someone's specific needs.

3 The Project Goal

The goal of this project is to build an application that allows a user to extract a dataset from a CSV file. Then the user can apply various functions on the dataset, with the functions allowing the user to sort, add/remove data, and provide user interface for one's CSV file.

4 The Project Design:

This application contains multiple functional parts that work together to simplify the process of reading and sorting through large data entries.

First, the user selects a CSV file to be extracted into a dataset for further simplification.

Then, the user is prompted to enter a command. Based on what letter they enter, a command is selected, and they are then prompted to enter a subcommand. Each subcommand will require different arguments to run depending on what information is sought after.

The book’s data is then processed, and its information is then relayed to the user in an organized, easy to read fashion.

5 The Project Process

In the first week, the group was divided into 4 different cases with 1 person taking on 1 case. Two cases were on creating a certain criterion, the key, and the rest of the information as the value and the other two cases were on reading a CSV file with the output being either a list or a tuple.

The second week, the 4 members were given 12 functions with 1 person making 3 different functions and making a test for 4 other functions. With the functions pertaining to loading the file, changing the dataset provided by adding or removing data, and adding a search mechanic that will filter any data that doesn’t meet the search requirement.

In the third week, 6 sorting functions were given to the group as well as the unit testing of the functions which totaled 12 codes, where 3 were given to 1 person. The reason for the codes was about sorting the dataset by using various keys.

The last week was spent making a user interface providing an operator with 8 functions to run as soon as the appropriate input is sent and 2 functions that had two different input requirements. The functions covered here have been made in week 2.

6 TEAM CONTRIBUTIONS

For this report, the problem statement was written by Shadman Sakib Rashid, the project goals were written by Muhammad Hasan Suriya, the project design and criteria were written by Joey Thomas, and project process was written by Corson Haywood.

7 REFERENCES

[1] T. Staff, *Milestone_1_Description*. Ottawa: Carleton University, 2021.
[2] T. Staff, *Milestone_2_Description*. Ottawa: Carleton University, 2021.
[3] T. Staff, *Milestone_3_Description*. Ottawa: Carleton University, 2021.