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| Train Management System  Agrim Rai -12D  7/12/2022  Computer Project Work |

**INDEX**

**Acknowledgement…………………………….……3**

**Brief Extract………………………………….…….4**

**Imports Made………………………………………5**

**Testing Configuration ……………………………..6**

**Functions**

* **Write\_in\_file()…………………………….……7**
* **Update()…………………………………….…..8**
* **Display()……………………………………..….9**
* **Delete()……………………………………….....10**
* **Book()………………………………………..11**
* **Cancel()………………………………………….13**
* **Search()………………………………………....14**

**Outputs ->(With respective functions attached)**

**Menu Driven Syntax………………………………15**

**Mentions and Sources……………………………..16**

**ACKNOWLEDGEMENT**

**I**

**n the accomplishment of this project successfully, many people have best owned upon me their blessings and the heart pledged support, this time I am utilizing to thank all the people who have been concerned with this project.**

**Primarily I would thank god for being able to complete this project with success. Then I would like to thank my computer teacher Mrs. Sapna Gupta, whose valuable guidance has been the ones that helped me patch this project and make it full proof success. Her suggestions and instructions have served as the major contributor towards the completion of the project.**

**Then I would like to thank my parents and friends who have helped me with their valuable suggestions and guidance has been very helpful in various phases of the completion of the project.**

**…………………….**

**Teacher’s signature**

**Brief Extract**

**T**

**he project is a menu driven train management system in which booking of tickets, their cancellation, display of ongoing journeys, and even searching of specific train by the train id.**

**It also has admin controls which enable the admin to enter new information of trains, update ongoing train journeys and delete complete train information from binary file.**

**The admin controls are restricted to admin only with help of a password which if correct allows the access of admin controls and otherwise will not allow the user. This prevents un-authorized users to edit out public information.**

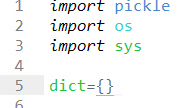
**Any train can be searched by using the ID of train assigned by the admin.**

**To book tickets, the user must specify the train by its ID and then book a number of seats. If the booking of seats is greater than the actual number of vacant seats available, the program will give an error and not process the request.**

**If tickets booked the actual number of vacancy in trains reduces to number of seats booked by the user.**

**For cancellation of tickets booked already, the tickets cancelled out gets added to the vacancy of the train in actual binary file.**

**Imports Made**



* ***Pickle*-**Python provides a library pickle that helps us in achieving this. Pickle serializes the objects so they can be saved in a file and loaded in a program whenever we want.

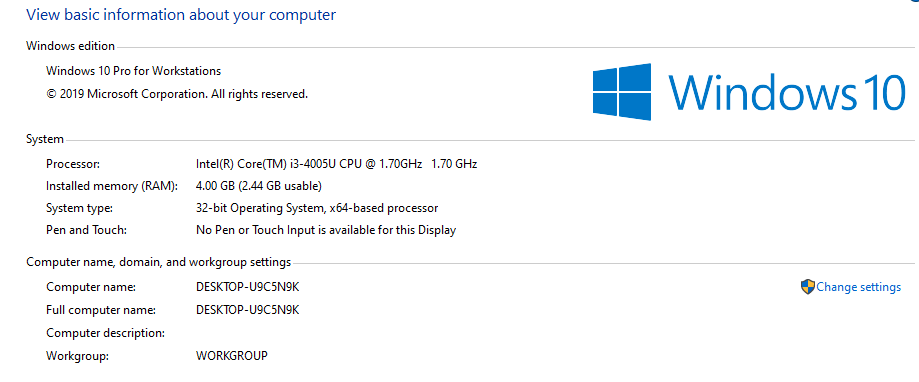
We use pickle when we want to serialize and de-serialize Python objects. Serialization is the process of converting an object to a byte stream that we can easily store on disk or share over a network.

With the help of pickle, we can easily de-serialize the byte stream back to the Python object whenever we want.

* ***Os*-** The OS module in Python provides functions for interacting with the operating system. OS comes under Python’s standard utility modules. This module provides a portable way of using operating system-dependent functionality. The \*os\* and \*os.path\* modules include many functions to interact with the file system.
* ***Sys*-** Sys module in Python basically provides access to some variables used or maintained by the interpreter and some functions that interact strongly with the interpreter. It is always available in the code library.

It provides information about constants, functions, and methods of the interpreter. But another possibility is the help() function.

Testing Configuration



# Software and Programs used:

* **Sublime Text 3.2.11 and Visual Studio Code 1.34 - as Text Editors**

[**https://www.sublimetext.com/3**](https://www.sublimetext.com/3)

[**https://code.visualstudio.com/**](https://code.visualstudio.com/)

* **Python 3.7.4 Stable – as run-time executer**

[**https://www.python.org/downloads/**](https://www.python.org/downloads/)

* **Notepad++ 8.42 - as .dat file viewer**

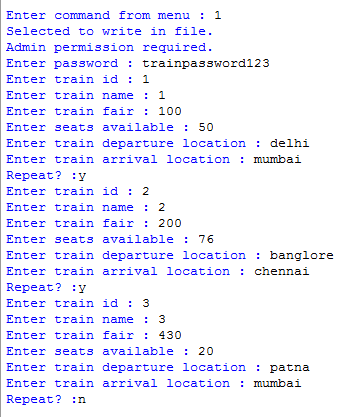
[**https://notepad-plus-plus.org/downloads/**](https://notepad-plus-plus.org/downloads/)

* **Microsoft Word 14.90– as editor**

[**https://www.microsoft.com/en-in/download/office.aspx**](https://www.microsoft.com/en-in/download/office.aspx)

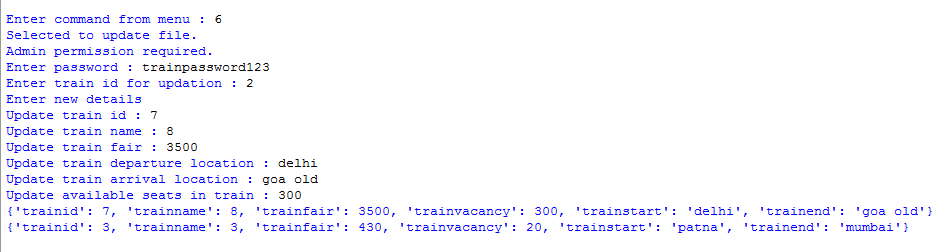
Write\_in\_file( )- function



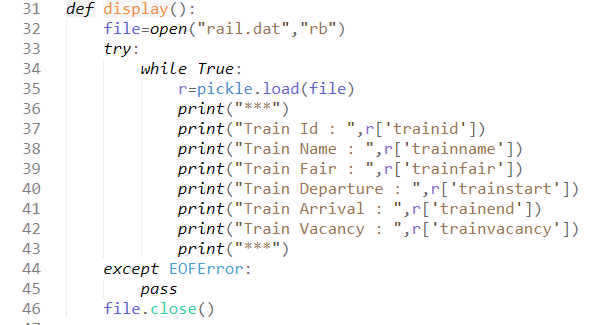


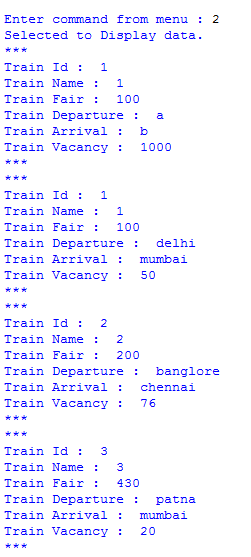
Update( )-function



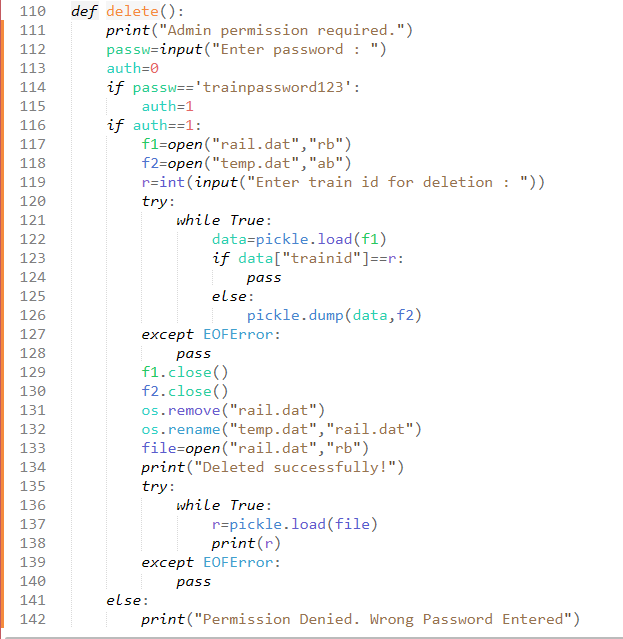


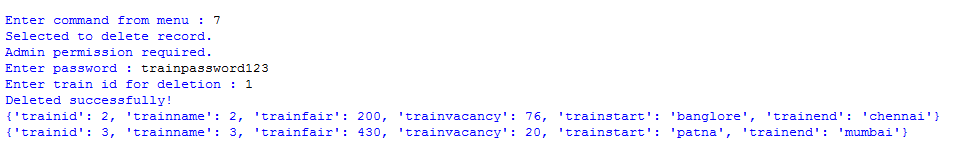
Dislplay( )-function





delete( )-function

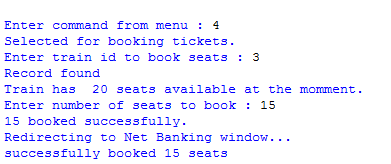


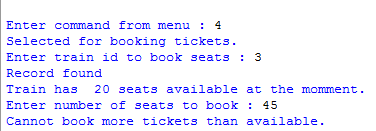


book( )-function

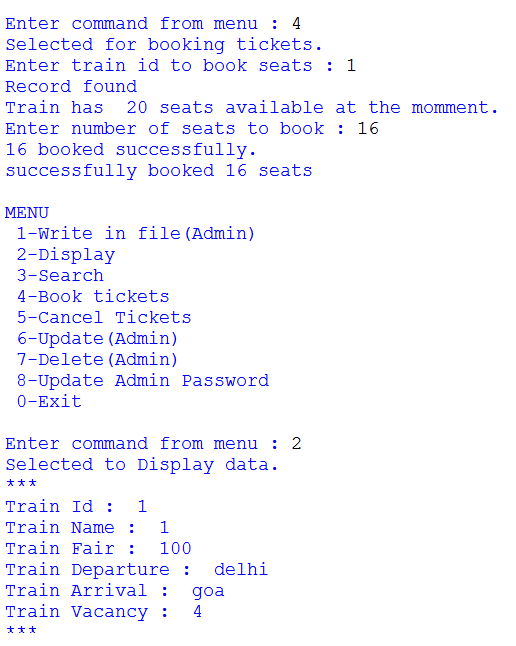


# When tried to book more tickets than vacant seats:

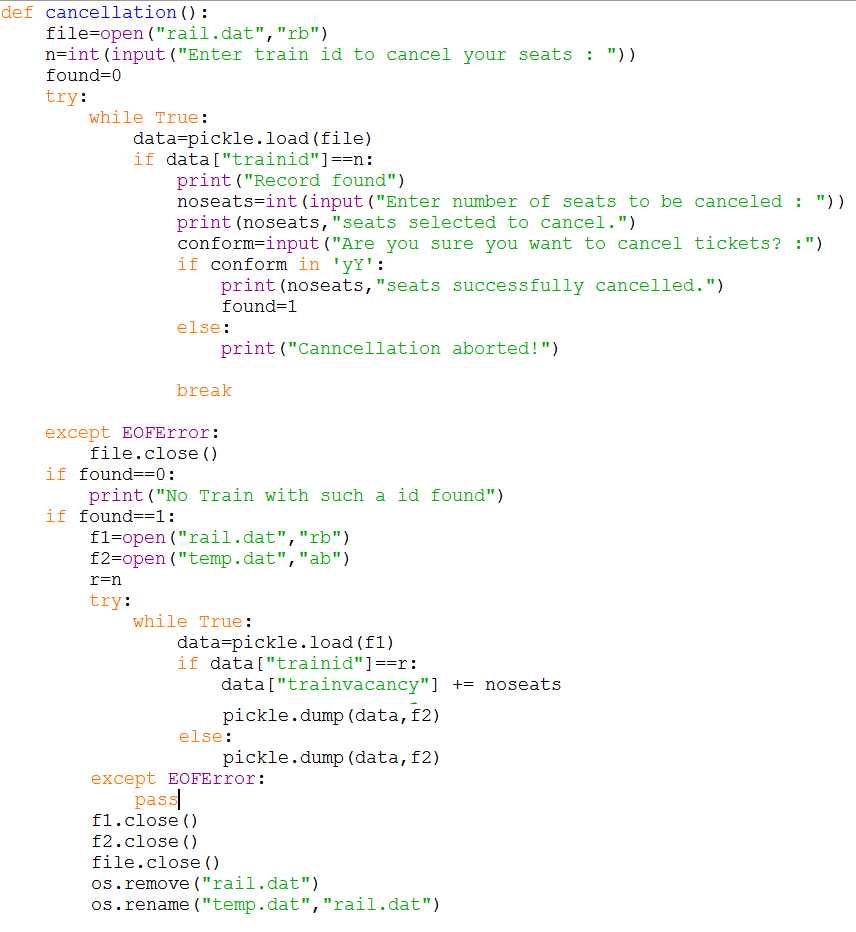


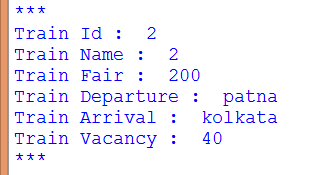
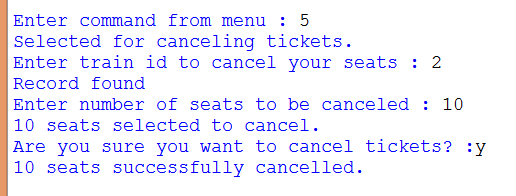
When booked with equal or less seat than actual existing ones.

When booked some allowed number of tickets.

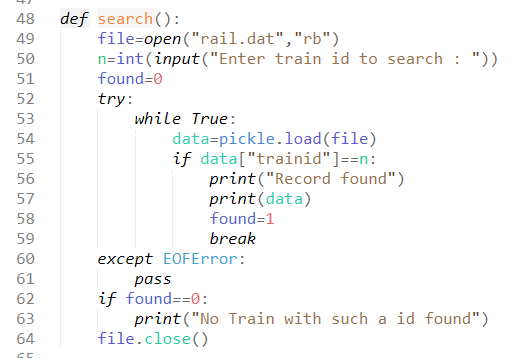


cancel( )-function

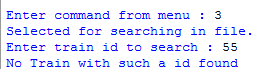




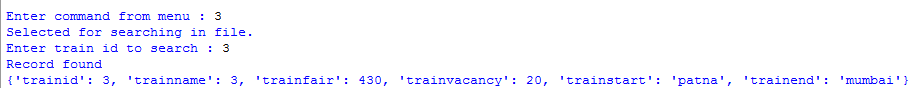
search( )-function



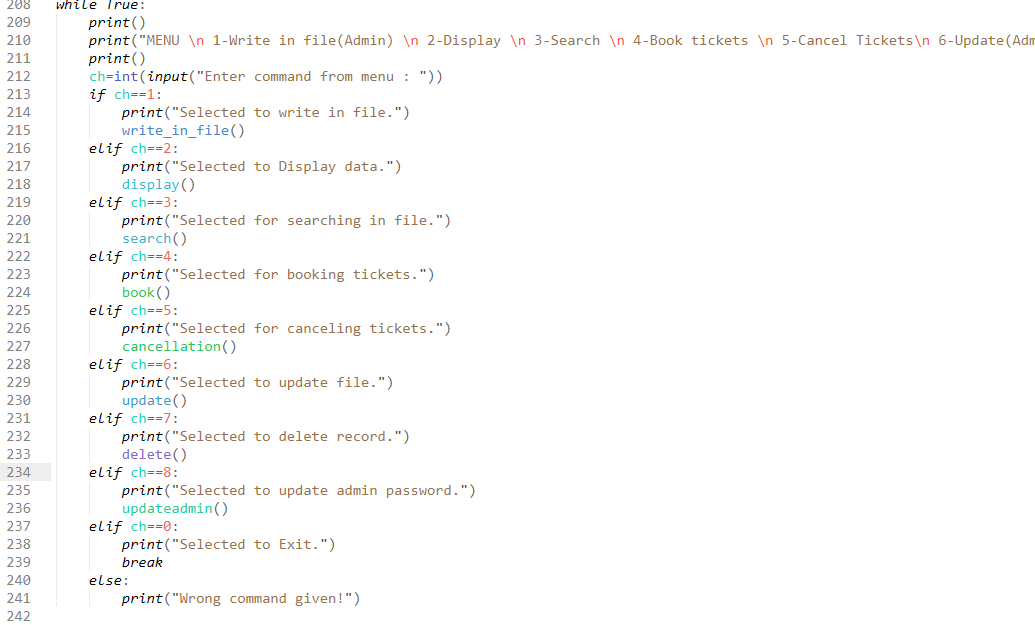
# When tried to search for train that does not exist.

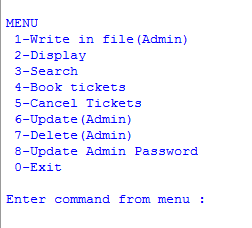


# When searched a train with correct id and existence.



Menu driven syntax





**Reference and External**

# Books Referred:

* **Sumita Arrora Python for class 12**
* **NCERT computer science book class 12**
* **All-in-one Computer book class 12**

# Links and Info sources:

* [Sys Module in Python with Examples - TechVidvan](https://techvidvan.com/tutorials/sys-module-in-python-with-examples/#:~:text=Sys%20module%20in%20Python%20basically%20provides%20access%20to,about%20constants%2C%20functions%2C%20and%20methods%20of%20the%20interpreter.) (<https://techvidvan.com/tutorials/sys-module-in-python-with-examples/#:~:text=Sys%20module%20in%20Python%20basically%20provides%20access%20to,about%20constants%2C%20functions%2C%20and%20methods%20of%20the%20interpreter>.)
* [OS Module in Python with Examples - GeeksforGeeks](https://www.geeksforgeeks.org/os-module-python-examples/#:~:text=The%20OS%20module%20in%20python%20provides%20functions%20for,many%20functions%20to%20interact%20with%20the%20file%20system.)

(<https://www.geeksforgeeks.org/os-module-python-examples/#:~:text=The%20OS%20module%20in%20python%20provides%20functions%20for,many%20functions%20to%20interact%20with%20the%20file%20system>.)

* [Pickle Load in Python | Delft Stack](https://www.delftstack.com/howto/python/pickle-load-python/#:~:text=%20Advantages%20of%20Pickle%20in%20Python%20%201,to%20save%20the%20data%20for%20predictions...%20More%20)

(<https://www.delftstack.com/howto/python/pickle-load-python/#:~:text=%20Advantages%20of%20Pickle%20in%20Python%20%201,to%20save%20the%20data%20for%20predictions...%20More%20>)

# Source code posted at:

* <https://www.github.com/agrimbishnoi>