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Course: IT FDN 110 A

Assignment #: Assignment 7

Github link: https://github.com/ruby0606/IntroToProg-Python-Mod07

Assignment 7: Pickling data and Exception Handling

Introduction

In this document, I wrote down the steps I took to create a script to display a menu to the user, request user to choose a menu option, add "Name" and "ID" lists, store lists as a pickle, unpickle and read data from binary files. I watched the videos from Module 7, reviewed the list of other exceptions from the web, and read the seventh chapter from the book "Python Programming for Absolute Beginners". I encountered some challenges in pickling and reading from the file but was able to resolve them and also added some exceptions.

Step 1: Load Data and display menu

I displayed a menu with four options to the user. I requested the user to add "names" and "ids" in two lists.

Step 2: Pickle data

Pickling means to preserve your piece of data in the format you stored. I saved each list (names and ids) as a pickle onto a binary file called "Appdata".

Step 3: Unpickle data

When user selects this action, data is read from the selected file, the lists are unpickled and displayed back to the user.

Step 4: Exception handling

I created four exception handling cases:

1. When user enters a menu choice that is not in the integer format
2. When user enters “ID” that is not in the integer format
3. When user tries to open a file that does not exist
4. When user messes up the pickled binary file and tries to unpickle the information

Step 5: Exit program

When user selects this action, a message is displayed to the user and they exit from the program

Step 6: Results in pyCharm

Results in PyCharm showing the user performing each of the actions succesfully:

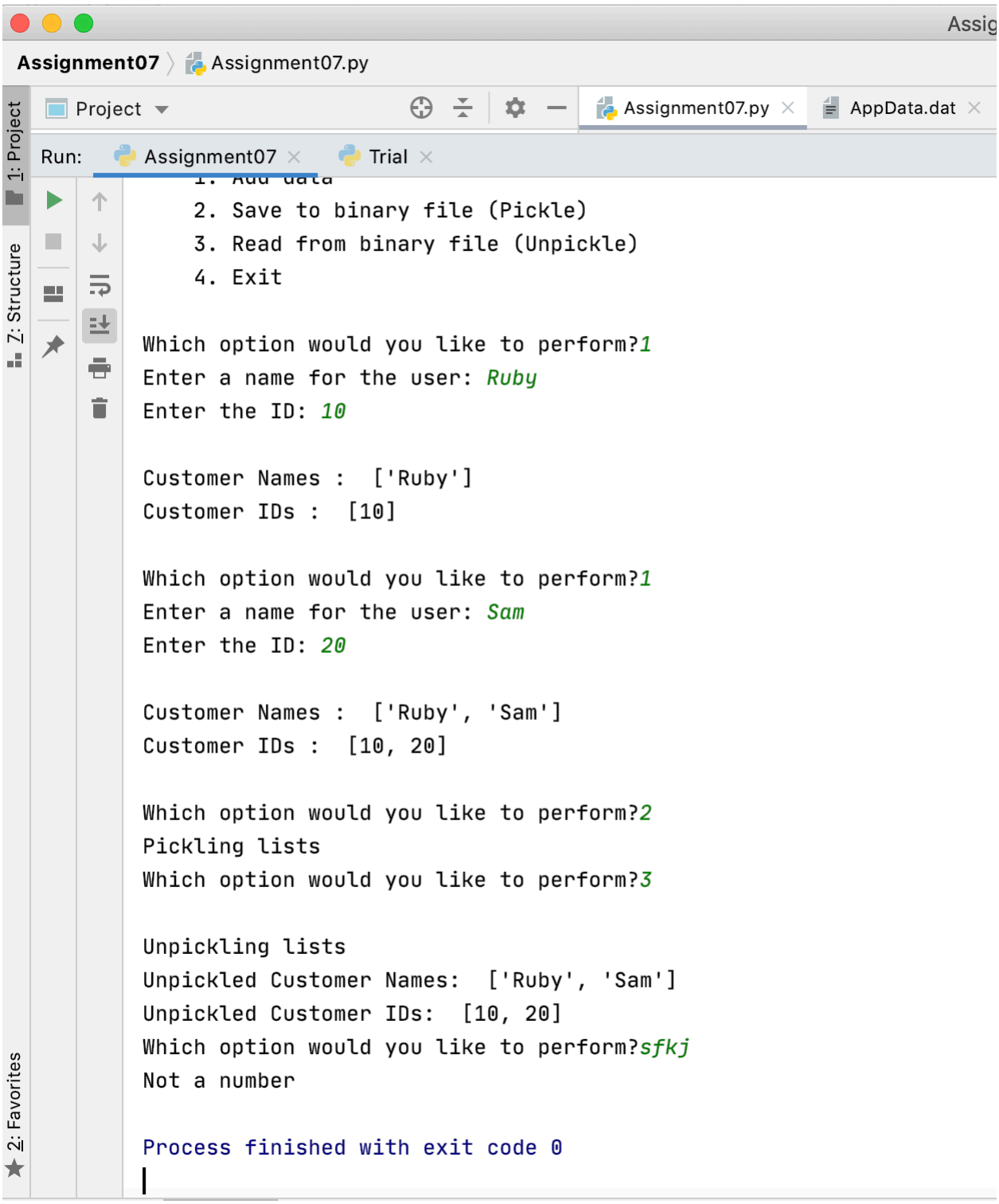


Fig 1.1: Screenshot of the result in Pycharm

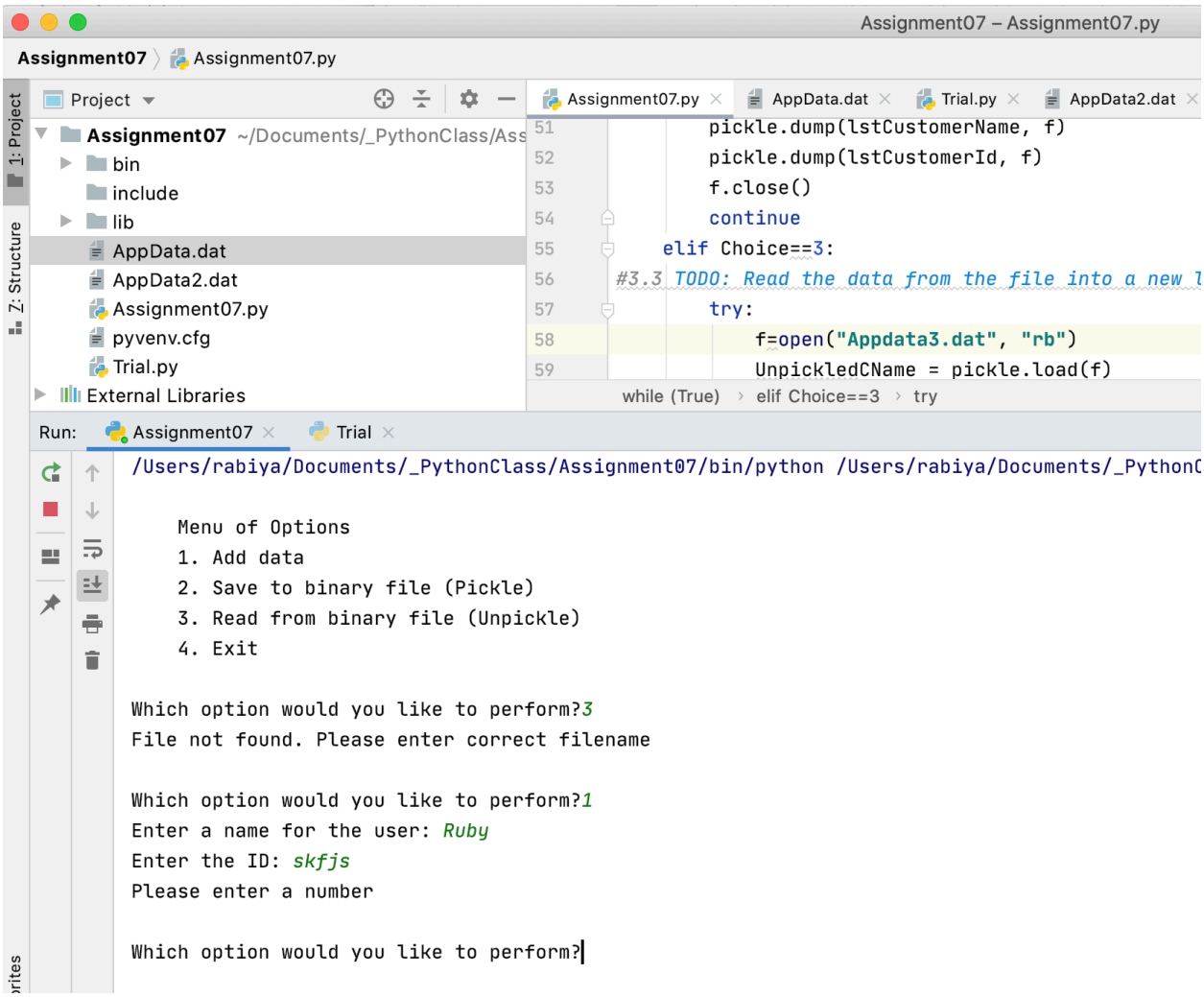
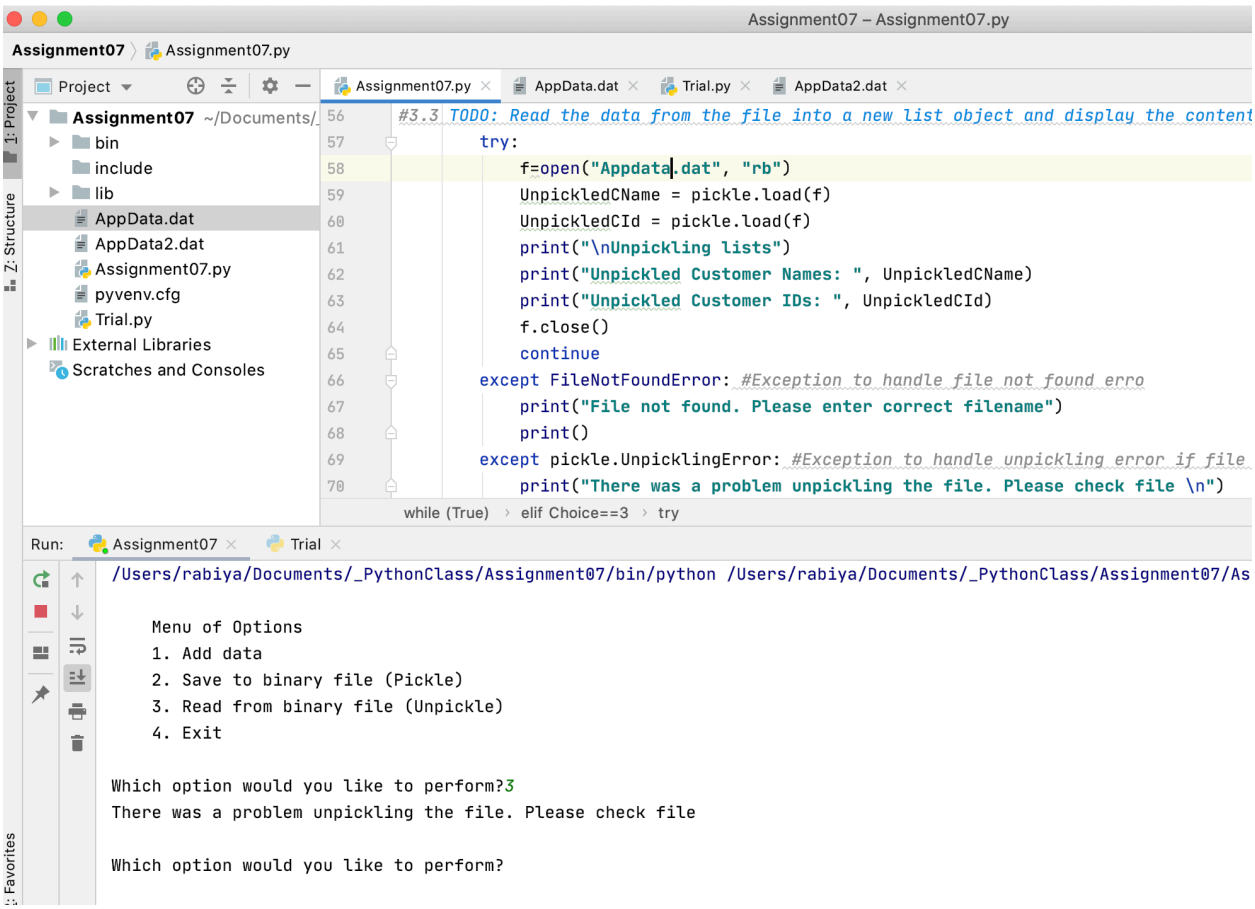


Fig 1.2 Screenshot of the exceptions in Pycharm



1.3 Screenshot of the unpickling exception in PyCharm

Step 7: Results in Terminal

Results in Terminal displaying all user actions

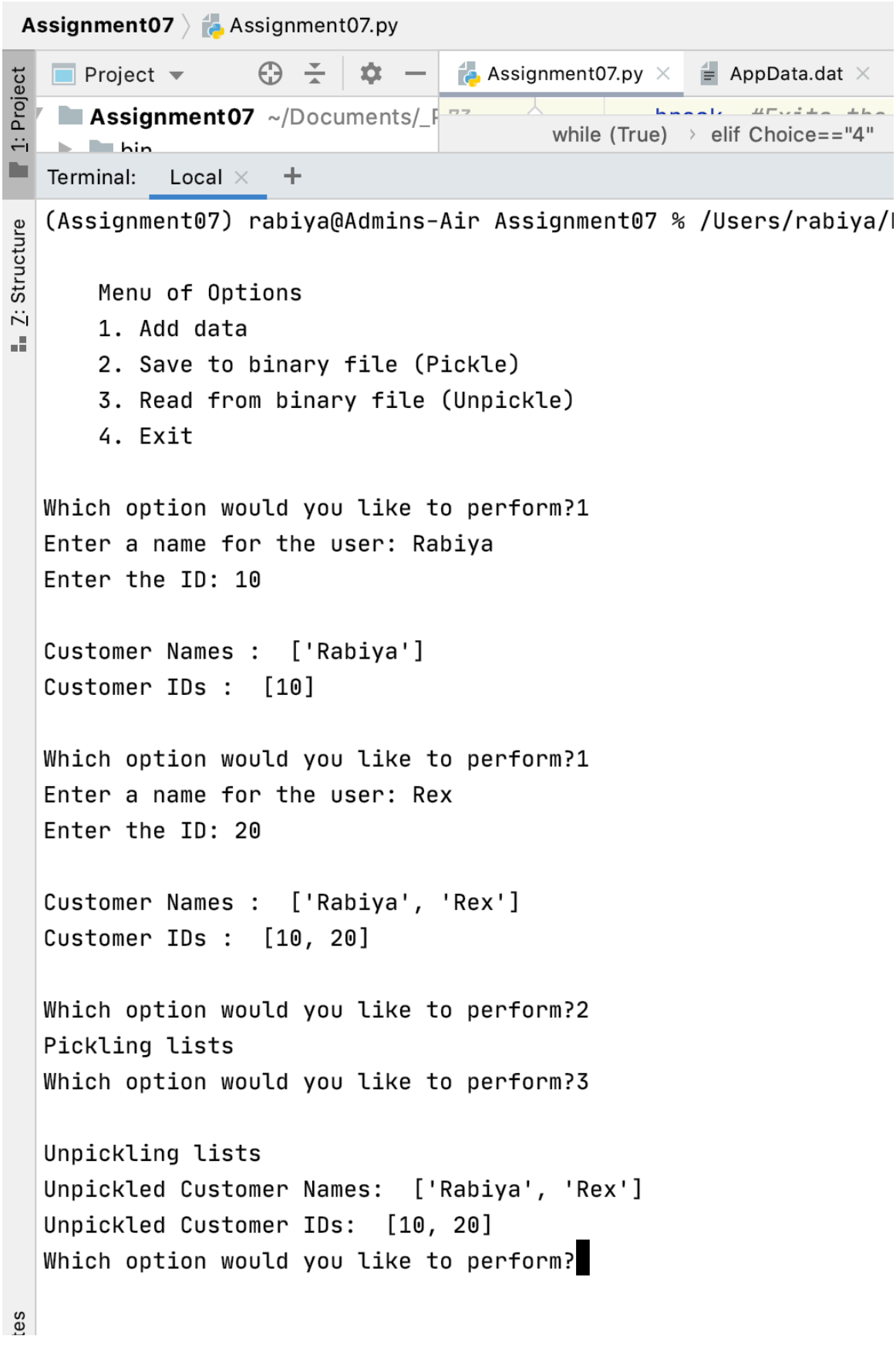

Assignment07 〉 Assignment07.py
Project
Assignment07.py
AppData.dat
Assignment07 ~/Documents/_
while (True) 〉 elif Choice=="4"
Terminal: Local
1: Project
Z: Structure
(Assignment07) rabiya@Admins-Air Assignment07 % /Users/rabiya/
Menu of Options
1. Add data
2. Save to binary file (Pickle)
3. Read from binary file (Unpickle)
4. Exit
Which option would you like to perform?1
Enter a name for the user: Rabiya
Enter the ID: 10
Customer Names : ['Rabiya']
Customer IDs : [10]
Which option would you like to perform?1
Enter a name for the user: Rex
Enter the ID: 20
Customer Names : ['Rabiya', 'Rex']
Customer IDs : [10, 20]
Which option would you like to perform?2
Pickling lists
Which option would you like to perform?3
Unpickling lists
Unpickled Customer Names: ['Rabiya', 'Rex']
Unpickled Customer IDs: [10, 20]
Which option would you like to perform?

Fig 2: Screenshot of the result in Terminal

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Step 8: Github link

https://github.com/ruby0606/IntroToProg-Python-Mod07

Summary

I started with a basic trial file where I defined my list data in the program instead of requesting user to add information. I then attempted pickling/unpickling actions and verified how the information looks. Once I was able to complete this properly, I went onto requesting data from user and performing these actions and dealing with exceptions. It was challenging to ensure all actions could be completed successfully and to ensure that errors were caught gracefully.