

Laboratory Exercise

Data Types

Objective:

At the end of the exercise, the students should be able to:

- Write programs utilizing various data types

Requirements:

- Microsoft Word
- Programming Environments

Procedure (80 points):

- Create a Python program that computes the travel time for a trip based on the user's input.
- Various data types should be used in ways such as:
 - Accept trip details** (starting location, destination, and mode of transport) as **string** values.
 - Accept distance and speed details** (distance in kilometers as a **float**, speed in km/h as a **float**).
 - Compute the estimated travel time** using the formula:

$$\text{Travel Time} = \text{Distance} / \text{Speed}$$
 - Determine if the trip takes more than 5 hours (boolean)** and give a warning if necessary.
 - Display the travel details, travel time, and if a rest stop is recommended.** A stop is recommended if the travel time is greater than 5 hours.
- Provide a screenshot of the final output.
- Consolidate the code and screenshot in a Word file and call the instructor to check before submitting a PDF copy on eLMS.

GRADING RUBRIC

Criteria	Excellent 4	Good 3	Fair 2	Poor 1	Points
Completeness (x5)	The student did <u>all</u> the requirements.	The student <u>missed one (1)</u> requirement.	The student <u>missed half of the</u> requirements.	The student <u>missed all</u> the requirements.	___/20
Screenshot (x5)	The student provided <u>correct and complete screenshots</u> .	The student provided <u>correct but incomplete screenshots</u> .	The student provided <u>incorrect but complete screenshots</u> .	The student provided <u>incorrect and incomplete screenshots</u> .	___/20
Coding (x10)	The code is <u>complete and properly structured</u> .	The code is <u>complete but improperly structured</u> .	The code is <u>properly structured but incomplete</u> .	The code is <u>incomplete and improperly structured</u> .	___/40
				Total Score	___/80