

Python Exercises 1

[Start Assignment](#)

- Due Monday by 11:59pm
- Points 15
- Submitting a file upload
- File Types zip



Python Exercises - 1

NOTE: All coding problems must be done via code - no hard coding of any type is allowed for credit. Any crash or execution errors that are not gracefully handled will result in a mandatory 20% reduction.

Tasks:

Exercise 1: String Sorting

Write a Python program to read a list of strings from the given text file ([strings.txt](https://canvas.asu.edu/courses/234472/files/112832978?wrap=1) (<https://canvas.asu.edu/courses/234472/files/112832978?wrap=1>)_ ↓
(https://canvas.asu.edu/courses/234472/files/112832978/download?download_frd=1), sort these strings alphabetically and finally write the sorted strings to another text file (sorted_strings.txt). Ensure the original strings remain intact in the given file.

Exercise 2: Name Formatter

Write a Python program to read the first name, middle name, and last name from the user, and format the name in three different ways:

1. Display the initials of the name.
2. Format the name as "Last Name, First Name, Middle Initial".
3. Format the name as "First Name Middle Name Last Name".

Ensure the program handles cases where the middle name is not provided (e.g., left blank or marked as N/A).

Exercise 3: Multiplication Quiz

Write a Python program to create a multiplication quiz for the user. The program should:

1. Prompt the user for the number of questions they want to attempt.
2. Randomly generate multiplication problems (factors between 1 and 15).
3. Validate the user's answers and display whether they are correct or incorrect for each question.
4. At the end of the quiz, display the total number of questions answered correctly.

Submission Details:

.zip folder comprising:-

- Python script files (.py) for each exercise:
 - exercise1.py
 - exercise2.py
 - exercise3.py
- Generated output files:
 - sorted_strings.txt for Exercise 1.
 - A terminal screenshot showing the interaction for Exercises 2 and 3.

Exercise 1 Rubric

Criteria	Ratings			Pts
Ex1 - Correct O/p	2 pts All strings sorted alphabetically and written to sorted_strings.txt correctly	1 pts Partially sorted or minor mistakes	0 pts Incorrect sorting or no output	2 pts
Ex1 - File Handling	2 pts Properly handles file reading and writing with error checking	1 pts File handling attempted but with some issues	0 pts No file handling or errors not managed	2 pts
Ex1- Code Quality and Comments	1 pts Clean, well-organized code with comments		0 pts Poor code quality or no comments	1 pts
Ex2- Correct Output Formatting	2 pts All 3 name formats are displayed correctly (Initials, Last, First Middle Initial, Full Name)	1 pts 1-2 formats are incorrect or missing	0 pts All formats incorrect or no output	2 pts
Ex2 -Handling Missing Middle Name	1 pts Correctly handles cases where the middle name is blank or N/A		0 pts No handling for missing middle name	1 pts
Ex2- Code Quality and Comments	1 pts Clean, well-organized code with comments		0 pts Poor code quality or no comments	1 pts
Ex3 - User Input and Validation	2 pts Correctly prompts and validates user input for the number of questions	1 pts Input validation attempted but with issues	0 pts No input validation	2 pts

Criteria	Ratings			Pts
Ex3 - random question generation	2 pts Random multiplication questions generated correctly within the range (1-15)	1 pts Questions generated but not random or with errors	0 pts No random questions generated	2 pts
Ex3 - Answer Validation and Feedback	1 pts Correctly validates and displays feedback for each answer		0 pts No feedback or incorrect validation	1 pts
Ex3- Total Score Calculation	1 pts Correct total score displayed at the end		0 pts No scoring or incorrect total	1 pts
Total Points: 15				