**PROJECT NAME:**

**Design and Analysis of Algorithms Deliverable 2**

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**GROUP MEMBERS:**

**Student Name Roll Number SECTION**

**Abdul Ahad 22k-4221 BCS-5G**

**Daaim Ali 22k-4363 BCS-5G**

**Sohaib Baig 22k-4204 BCS-5G**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Theory Teacher SIGNATURE & DATE

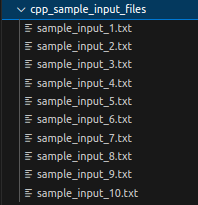
**Course Title: Design and Analysis of Algorithms**

**Course Code: CS2009**

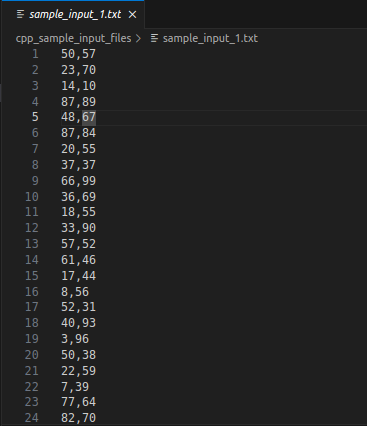
**Submitted to Miss Anaum Hamid**

Q2

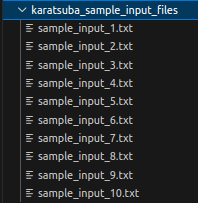
i) 10 Sample input text files with 101 coordinates each, created using the generate\_cpp\_sample\_input.py script attached with submission



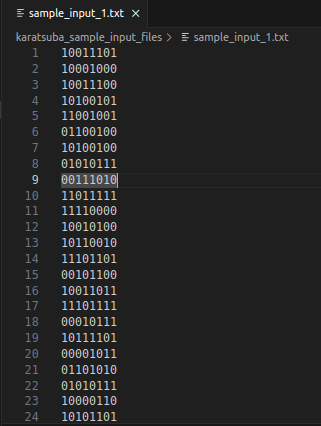
Example sample input file:



ii) 10 Sample input text files with 101 8-bit binary integers each, created using the generate\_karatsuba\_sample\_input.py script attached with submission



Example sample input file:



Q3 & 4

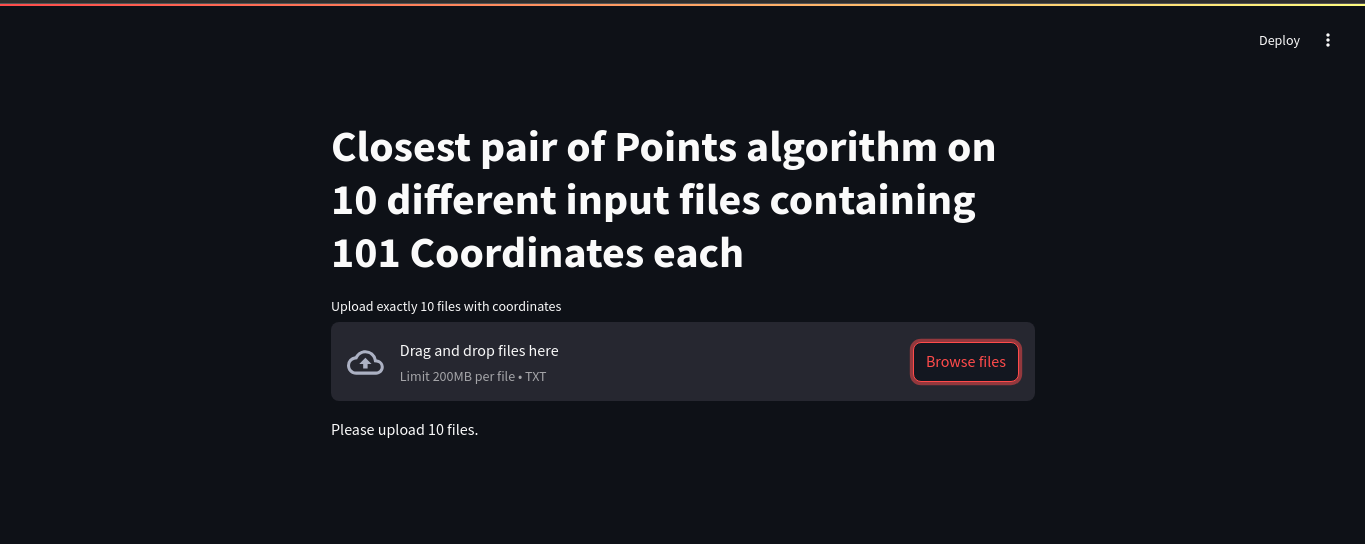
Python Streamlit library UI:

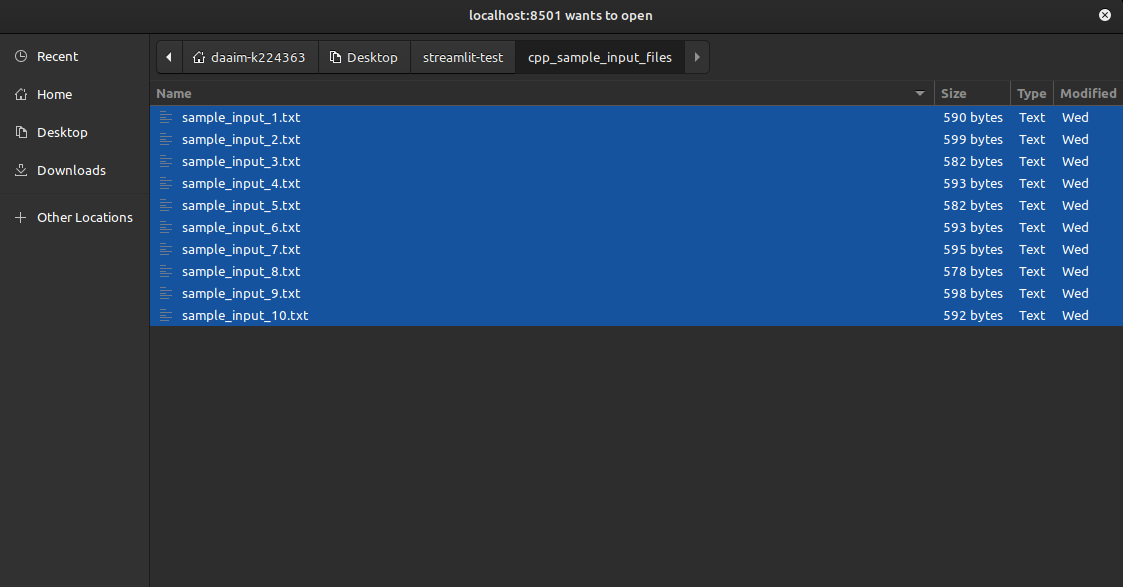
* Install python dependencies, run the following command when inside the same directory as the requirements.txt file:

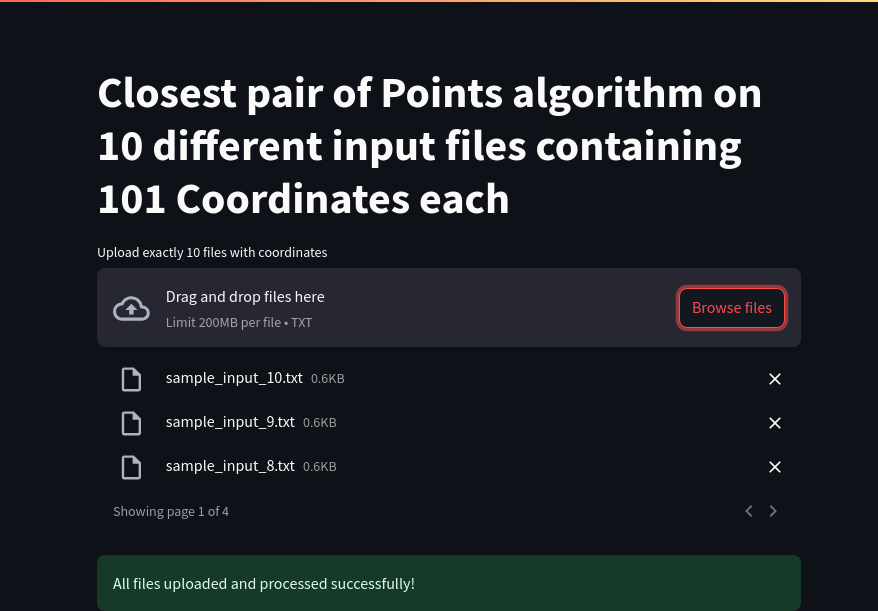
**pip install -r requirements.txt**

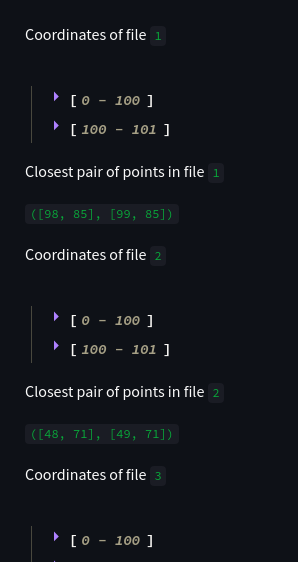
i) Closest Pair Points Algorithm

* command: **streamlit run cpp.y**









ii) Karatsuba Integer Multiplication Algorithm

* command: **streamlit run karatsuba.py**

