Live Detection and Evaluation of a Document

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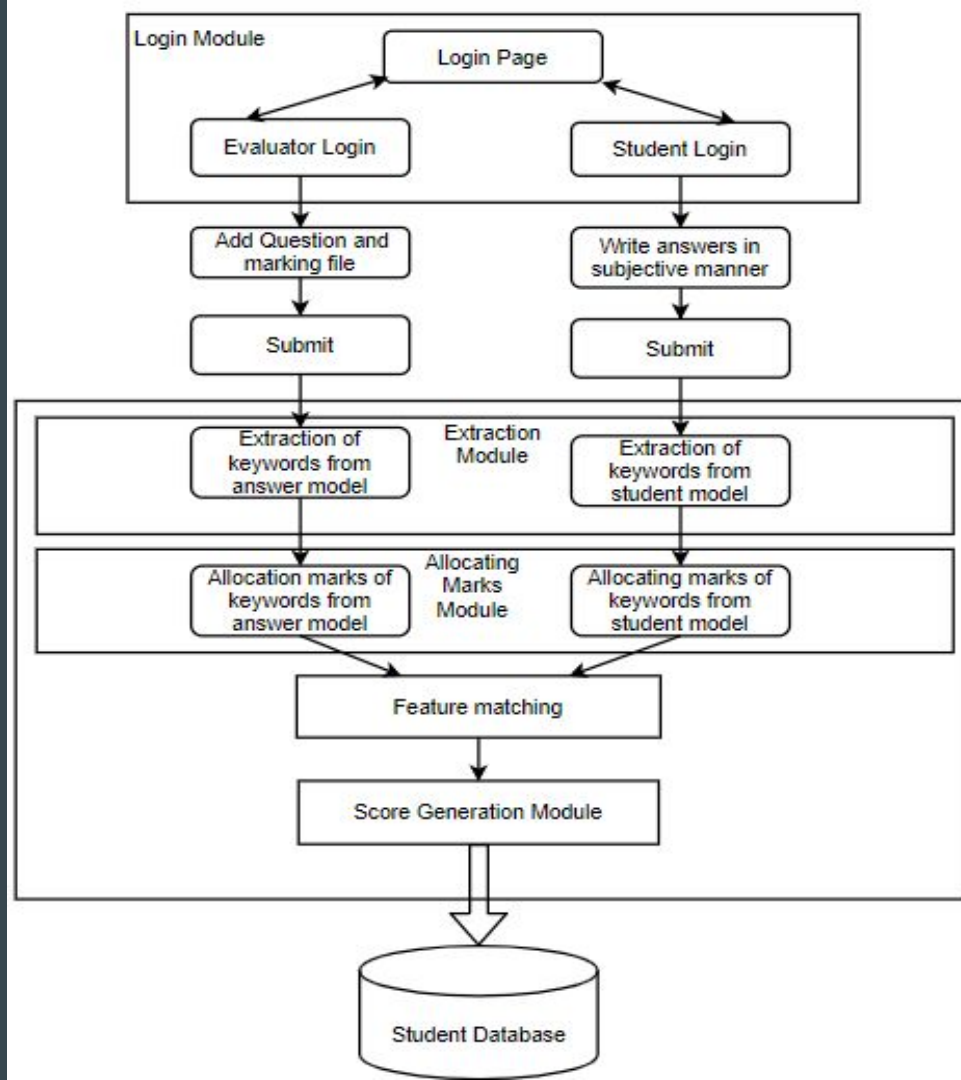Prachi Desai(201852024)

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Objective

To make online exam more user friendly as well as to reduce the workload of checking subjective answers manually, this system is developed

At the time of writing the answers, in handwritten format, it will be scanned and at the same time the answer-sheet will be detected as well as evaluated automatically.

Architectural Diagram

How evaluation is done ?

❖ Evaluation of the answers will be done on the basis of keywords provided by an evaluator in a password protected excel file(ans.xlsx).

❖ An evaluator is allowed to add questions in the questions.txt file.

❖ Marks will be update according to the IDs of student in an excel file - marksheet.xlsx

What is is Python-Tesseract ?

Python-Tesseract which is also referred to as Pytesseract plays an important role here , for the handwritten character recognition. Python-tesseract is an optical character recognition (OCR) tool for python.

Training for unique Handwriting

S-1 : collect different samples and merge those samples.

S-2 : Insert .tif file into Jtessbox editor with name sat.font.exp0(here sat represents language name and font represents font name).
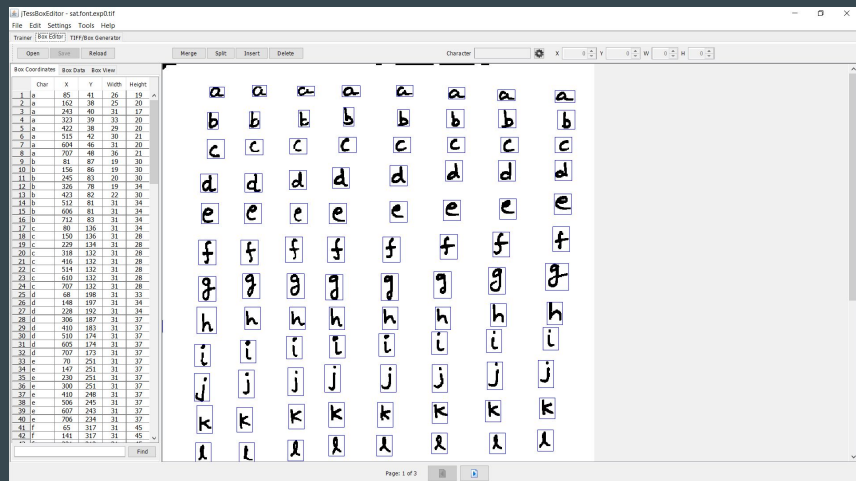
S-3 : Prepare box file and correct box file for training. Correction can be done by adding or deleting or adjusting the boxes.
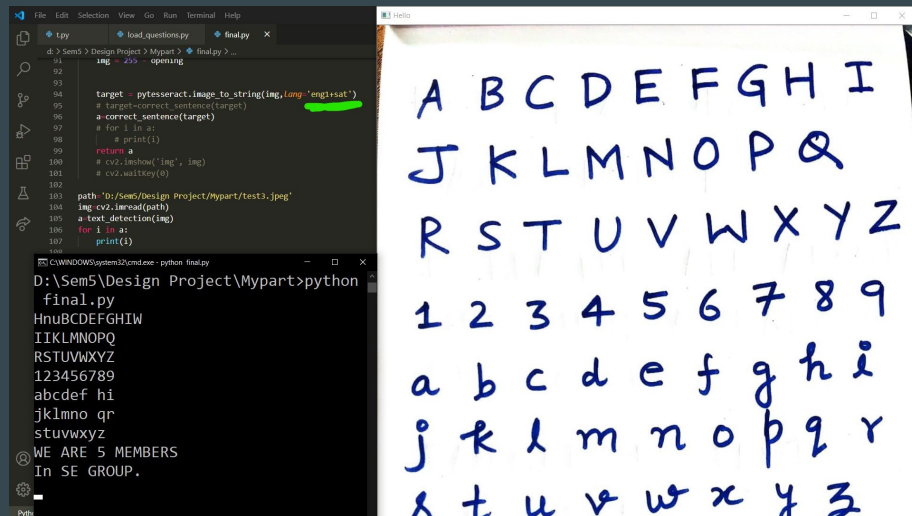
S-4 : Create .txt file for font configuration.

S-5: Run training commands in the terminal.

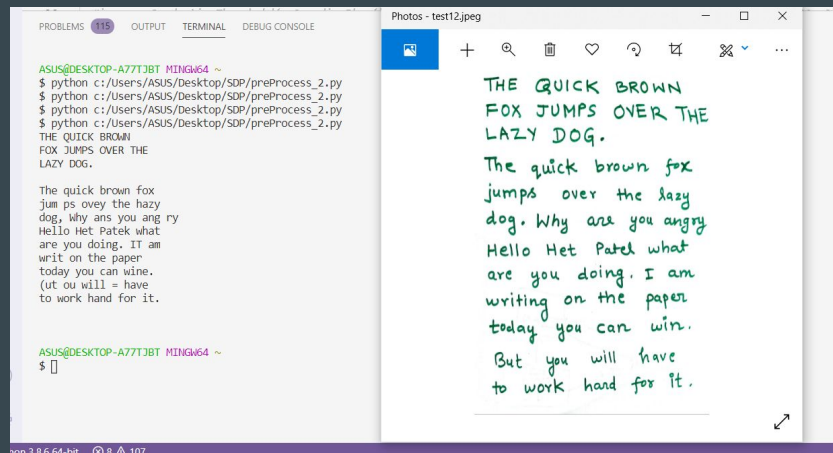S-6 : sat.traindata will be the final trained file.
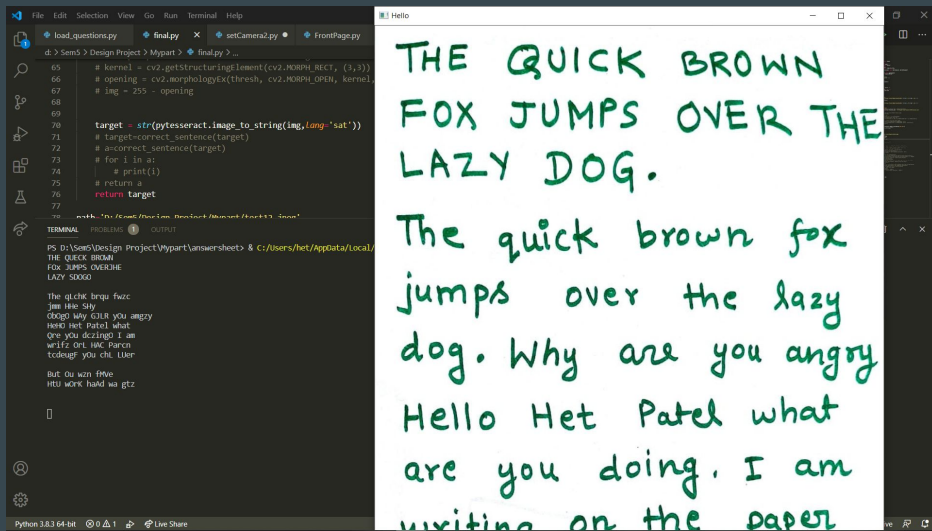
Continue ...

(Tool used : Jtessbox Editor)

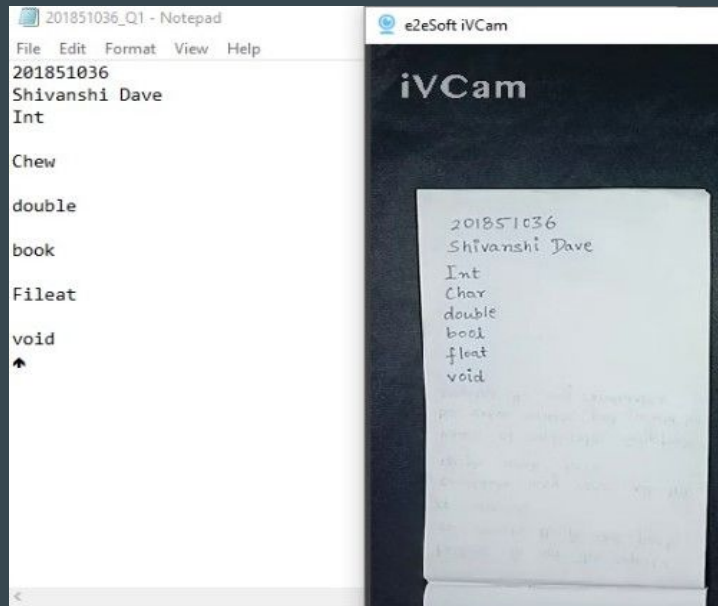(Accuracy with eng1+sat)
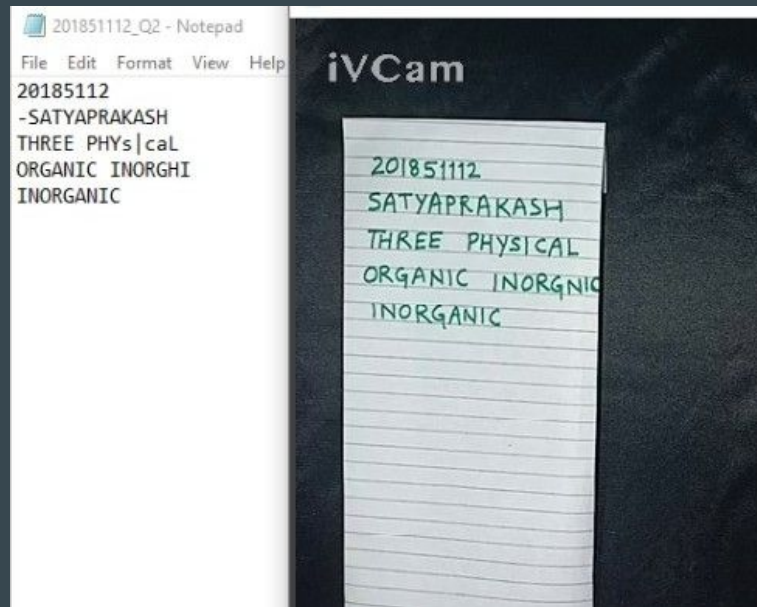
Observations

Use of Pre-Processing

Sat.traindata can't give accurate result alone

Continue ...

Using simple pen

Using lined page

Future Scope

❖ Further optimization can be done, such as customise evaluation algorithm deployment, efficient training of particular handwriting

❖ Live detection and evaluation of Graphs as well as Mathematical Equations.

❖ Create automated database from hard copy of filled form

❖ Signature authenticity

❖ Live Language Translation from handwritten papers.

Thank You