

National University of Computers and Emerging Sciences FAST-NUCES

BSAI(A,B,C,D)

Project Phase 1: **Virtual Company** **(Learn Professionalism Technically)**

Task 1: Basic Image-to-Word Converter (MVP)

Problem: Converting scanned documents or images to editable Word format typically results in plain, unformatted text. Users lose essential formatting like bold/italic styles, alignment, and paragraph structure, requiring manual reconstruction.

Objective: Develop a desktop application that extracts text from images while preserving basic formatting. The tool will accept JPG/PNG inputs, process them using Tesseract OCR, detect formatting attributes, and generate a formatted .docx file. Sample images are attached.

Scope: Single-page, English-language documents with clear text. Includes image preprocessing, OCR integration, formatting detection (bold, italic, alignment, paragraphs), and Word document generation with a simple GUI (Tkinter/PyQt).

Deliverables: Working prototype with source code, project report, and demonstration video.

Outcome: A functional converter that maintains document formatting, reducing post-processing time. This foundation enables advanced features (equations, multi-language) in later phases.

Requirement:

Make group of 3 students

Submission deadline : Wednesday 28 – 1- 2026