

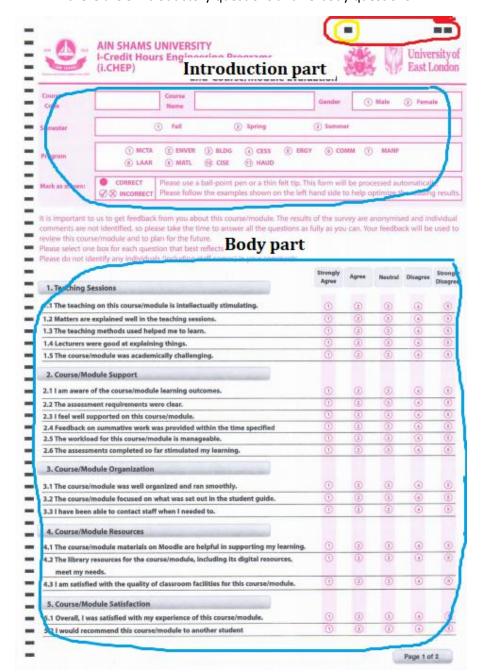
Ain Shams University Faculty of Engineering Computer Engineering and Software Systems CSE365: Computer Vision

Project Report

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Introduction

Our task is to implement an OMR for the End-Course/Module Evaluation MCQ paper. This paper contains 22 question, divided into introductory questions and body questions.



there are 3 introductory questions and 19 body questions.

Beside the introduction and body parts, we have an important area in the top of the page marked by red. these 3 rectangles are very important for paper orientation, however we will only use the "lonely rectangle" (marked by yellow) to help us through our implementation.

Implementation

The implementation consists of mainly 3 part:

- 1. Identify the current orientation and adjust accordingly.
- 2. Fill the data array.
- 3. Process question and give out answers.

Diving deeper into the implementation:

1. Identify the current orientation and adjust accordingly:

- i) getting "minor orientation" angle.
- ii) getting "major orientation" angle
- iii) rotating necessarily.
- iv) adjusting flips with the aid of the "lonely rectangle".

2. Fill the data array:

- i) getting centroids of answers.
- ii) categorizing centroids into 22 questions.

3. Process question and give out answers:

- i) filtering out duplicate answer and no answer questions.
- ii) iterating over answers places and checking centroids.
- iii) dealing with special case question (question 3).

Test cases

