**Team Members**

**Team # 2**

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| --- | --- | --- |
| **Name** | **Sec** | **B.N** |
| **Mustafa Mahmoud Hamada** | **2** | **25** |
| **Zeinab Moawad Fayez** | **1** | **29** |
| **Basma Hatem Farid** | **1** | **17** |
| **Eman Mohamed Mahmoud** | **1** | **16** |

**Used Algorithms:**

* OCR
* Find contours
* Four-point transform
* canny edge detection
* Morphological operations (dilation, Erosion closing)
* Machine Learning Algorithm (Vector Support Machine)
* KNN

**Used Libraries:**

* imutils
* numpy
* OpenCv
* sklearn
* Pandas
* pytesseract
* Tkinter ( For the GUI )

**Level of variety for test cases:**

* Bubble Sheet ( 5 different formats )
* Grades Sheet (1-7-8-9-10-11-12-13-14-15)

**The Weakness of our system:**

* **Bubble Sheet** : If the bubbles in the paper are close together, it will fail.

To succeed, the system needs the number of possible answers to the questions.

* **Grades Sheet** : The Handwritten Digits aren’t Detected by KNN(Accurately)
* **Grades Sheet** : The Codes aren’t Detected accurately by the VCM

**Workload:**

1. Bubble Sheet (Mustafa Mahmoud, Eman Mohamed)
2. Table Grades (Zeinab Moawad, Basma Hatem Farid)