Task 1 – Image Processing

Please find the *task1_code.py* file in the folder *Task1_Practice*. Modify the *task1_code.py* to accomplish the following:

**Given:**
A set of test images, each containing

- Arena having two divisions: Division 1 (**D1**), and Division 2 (**D2**).
- Division D1 is a grid having 12 **Cells** numbered from 0 to 11 and D2 is a grid having 24 **Cells** numbered from 0 to 23 as shown in Figure 1.
- Each **Cell** in D1 contains a one digit number (i.e. number from 0 to 9) while any one or two digits numbers (i.e. numbers from 0 to 99) are present in **some** of the **Cells** in D2.

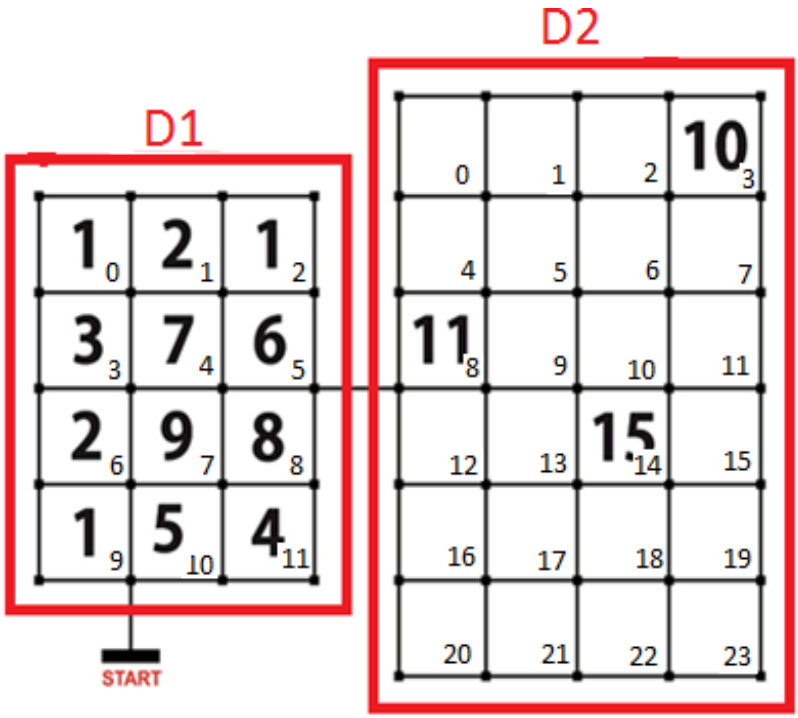


Figure 1: Test Image showing Divisions and Cell Numbering

A set of two test images is given at: *Task1_Practice/test_images*. An example test image is given in Figure 2.

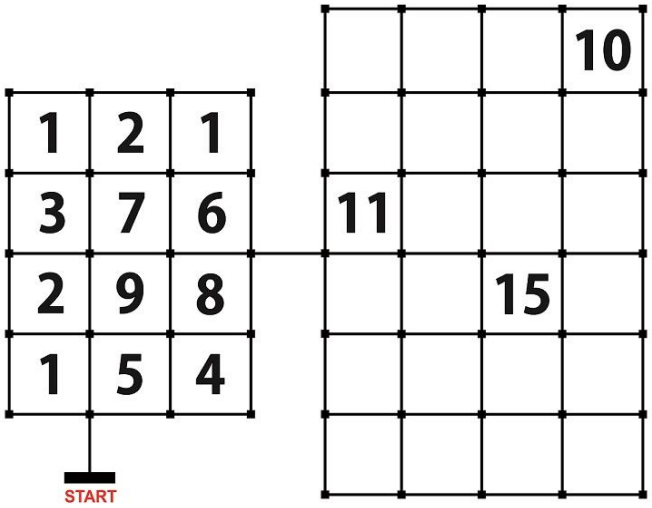


Figure 2: Example Test Image

**Problem Statement:**

A "snippet" of outline code is given in *task1_code.py* file.

- Teams Modify the ***play (img)*** function in the *task1_code.py* file to take a test image as input and return number and their Cell position in D1 and D2 on Python IDLE console. Also show image with green contours around detected numbers as shown in Figure 3.

  Note: For green color take BGR value as (0,255,0)
- For D1, display the entire array of numbers in the cells starting from 0 to 11 and for D2, display only the Cell number and the number contained in that corresponding Cell.
- For example, given the test image in Figure 2 as input, one of the solutions is as indicated in Figure 3.

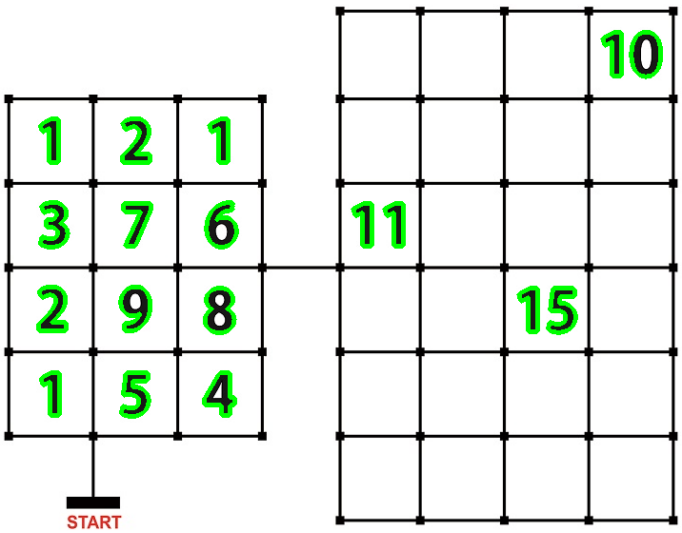


Figure 3

- The output on the Python IDLE console will look like:

```
D1 = [1, 2, 1, 3, 7, 6, 2, 9, 8, 1, 5, 4]
D2 = [ [3,10], [8,11], [14,15] ]
```