Read Me - Task 3 Arena Setup

The objective of Task 3 is to prepare arena for further tasks and to test the setup.
This task is divided into 2 sections.

Section A: Preparing the arena

Instructions for Flex Printing

Please find the *Flex_Printing* folder within *eyrcplus_task3* folder.

- You must carry *Flex_Printing* folder in any storage device to the vendor who prints the flex sheet.
- This folder has a file with extension .cdr (Corel Draw file- X5 version) which opens in Corel draw X5 or higher version. This Corel Draw version would be available with the vendor printing the flex.
- Dimension of the arena is already specified in .cdr file and your vendor will understand the dimension from the file. For your reference and verification, the printed flex sheet will be of dimension 7 feet x 5 feet.
- Ask the vendor to make sure that colours such as black are perfect black and do not contain shades. Vendor can make changes in colour accordingly to get best from his/her printer.
- Team is not allowed to make any change in the Corel Draw file. Any team making such manipulations will be disqualified from the competition.

Please find the *Arena_Design_Image* folder within *eyrcplus_task3* folder.

- This folder is for your reference. It contains a pdf version of the arena. You can have complete view of arena by viewing this file.
- You can open this file in any pdf reader.
- When you go to vendor for printing the flex sheet, carry a print out of this pdf file. When your vendor opens the .cdr file in their system check that it looks similar to one in the pdf printout.
- Dimensions of arena are not mentioned in pdf version.

General Instructions for keeping flex sheet in good condition:

1. Leave sheet open for about 30 minutes to dry in air after printing. After this, you can roll it and bring it home.
2. **Do not fold the flex sheet.** Always keep it rolled after using it.
3. You will be using the printed flex sheet throughout the competition, so teams are advised to store the rolled up flex sheet in a dry, safe place.

Instructions for Preparing the Arena

Arena for this theme consists of:

- Flex sheet which represents the Hospital floor
- Overhead camera for image capture of the Hospital floor.

To prepare the arena, follow the steps below:

1. Place the Flex sheet in the room with smooth floor having good overhead lightings.

2. Prepare and place the Walls, Beds and Provision markers as mentioned in the **Arena** section of the *eyrcplus_rulebook.*
3. Now place the camera over the center of the arena such that the whole arena is captured in the camera frame. For capturing the whole arena approximate height of camera must be about 7 feet 7 inches.

Important:

- **Lighting on the Arena must be uniform for proper functioning of your code.**
- **Place the overhead camera such that no shadow falls on the arena.**

Section B: Testing the Setup

Please find *task3_code.py* file in the folder *Task3_Testing*. This python file has the code which crops part of input image enclosed by a black rectangle. For example, when the image of the arena as shown in Figure 1 is given as input, the output image as shown in Figure 2 is returned. Note that this code crops the redundant parts of the image to get the arena image bounded by the black rectangle.
Run the file *task3_code.py* which will generate two images, *input_image.jpg* and *output_image.jpg*.

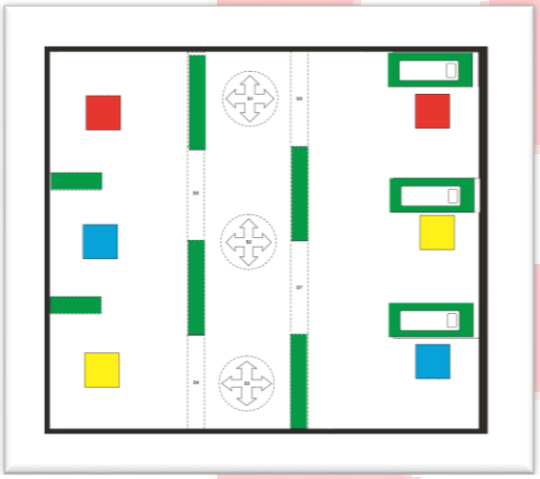

Figure 1. Input Image

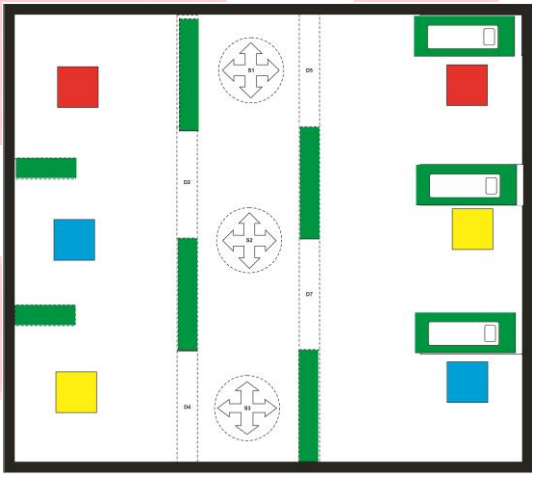

Figure 2. Output Image

Submission Instructions

- For Section A – Please take the 3 images of the arena from 3 different angles. These images must include arena and overhead camera. Then save the image as **<#TeamID>_Arena1.jpg, <#TeamID>_Arena2.jpg** and **<#TeamID>_Arena3.jpg**
- For Section B – Please save the images obtained from *task3_code.py* file as **<#TeamID>_input_image.jpg** and **<#TeamID>_output_image.jpg.**
- Then put the above files into **<#TeamID>_Arena** folder and compress into zip format.
- Upload the **< #TeamID>_Arena.zip** at the **"Upload" tab** on the Portal Interface. The deadline for uploading the solution to Task 3 is **Midnight, 26th January 2015.**

Warning:

- The team should NOT mail or upload the document anywhere else except on the portal.
- e-Yantra WILL NOT entertain any request for extension of deadline for uploading the task.