

e-Yantra Robotics Competition (eYRC 2019-20)

Task 0 - Supply Bot

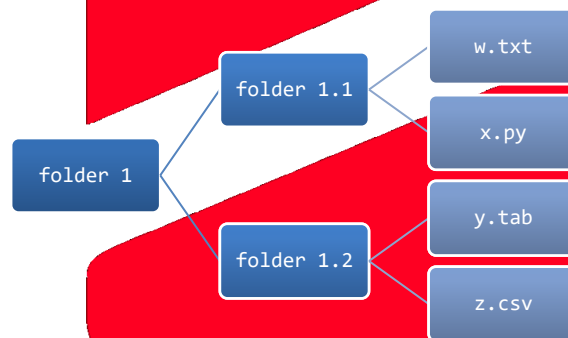
Welcome to Task 0 of Supply Bot

The aim of this task is to setup your team for further tasks in the competition. We will use Python programming language henceforth and thus, makes sense get your team acquainted with the same. This task specifically includes installing Python and relevant libraries and get your team comfortable with basics of image/video processing in Python.

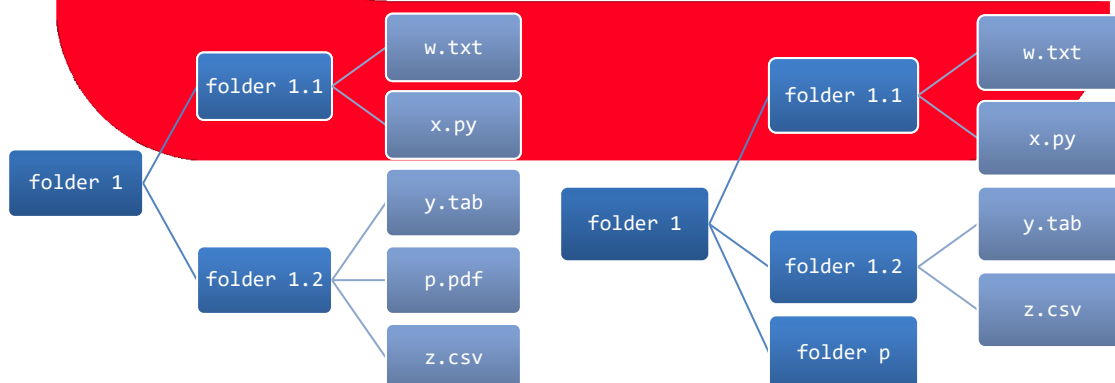
Directory Structure

All the sub-tasks will be auto-graded and thus, maintaining the directory structure while submitting is crucial. Remember that any alteration in the directory hierarchy or name of pre-existing files will result in 0 marks for that question and/or invite penalty marks. On the other hand, you can add extra folders/files you need for coding, reference, etc. but make sure to NOT alter the pre-existing directory hierarchy.

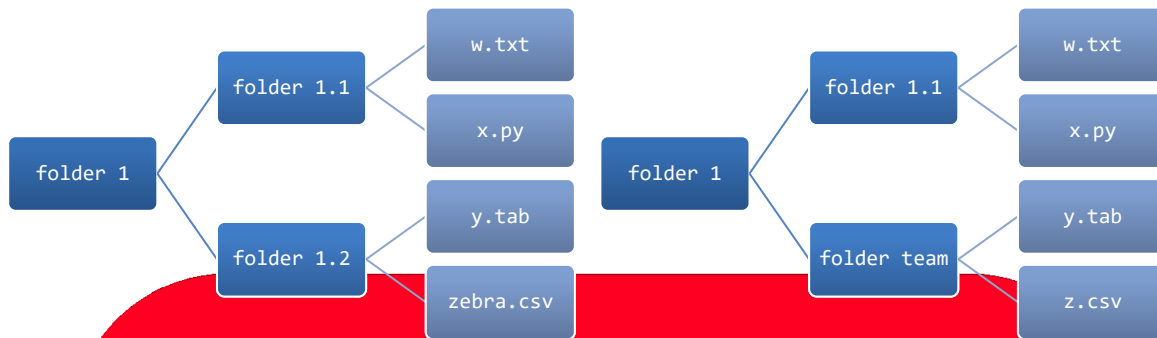
For example, if the directory hierarchy is:



Then, acceptable directory hierarchies are:



Unacceptable directory hierarchies are:



Please find the following folders within the folder that contains this READ ME file.

- **Task0.1**

This sub-task focuses on installing Python and other required libraries. This folder contains 3 sub-folders.

- **Task Description**

This folder contains the complete procedure to install latest version of Python and required libraries on your system.

- **Test Setup**

This folder contains the Python code to validate and check if all the libraries are of standard version.

- **Tutorials**

It contains a document named “*References.pdf*” for self-help on of Python and OpenCV.

- **Task0.2**

This sub-task focusses on getting acquainted with basic tasks of image and video processing. This folder contains 2 sub-folders.

- **Image Processing**

- **Codes**

Contains the program file *main.py*

- **Generated**

This folder is where you’ll save the images/results from your task.

- **Images**

This folder contains images you will require for Image Processing task

- *bird.jpg*
- *cat.jpg*
- *flowers.jpg*
- *horse.jpg*

- **Task Description**

Contains *Task Description.pdf* file which describes the overall sub-task.

- **Video Processing**

- **Codes**

Contains the program file *main.py*

- **Generated**

This folder is where you'll save the images/results from your task.

- **Videos**

This folder contains a video that you will require for Video Processing task

- *RoseBloom.mp4*

- **Task Description**

Contains file *Task Description.pdf* file which describes the overall sub-task

Submission Instructions

Unzip the downloaded file. Rename the extracted folder to *SB#XXXX_Task0* where *XXXX* stands for team ID. Zip this folder and upload it on the portal as instructed.

For example, if your team ID is 9999, your team shall follow the following steps:

1. The downloaded file will be *Task0#SB.zip*
2. After unzipping, the extracted folder will be named *Task0#SB*
3. Complete all the tasks as instructed in the respective folders and sub-folders.
4. Rename this folder-*Task0#SB*, to **SB#9999_Task0**
5. REMEMBER
 - a. The files you generate through your code should be in **Generated** folder.
 - b. Provide relative paths. Absolute paths might not work on different machines.
6. Zip the **SB#9999_Task0** folder to **SB#9999_Task0.zip**.
7. Upload this .zip file as instructed on the portal.