# DAILY ASSESSMENT FORMAT

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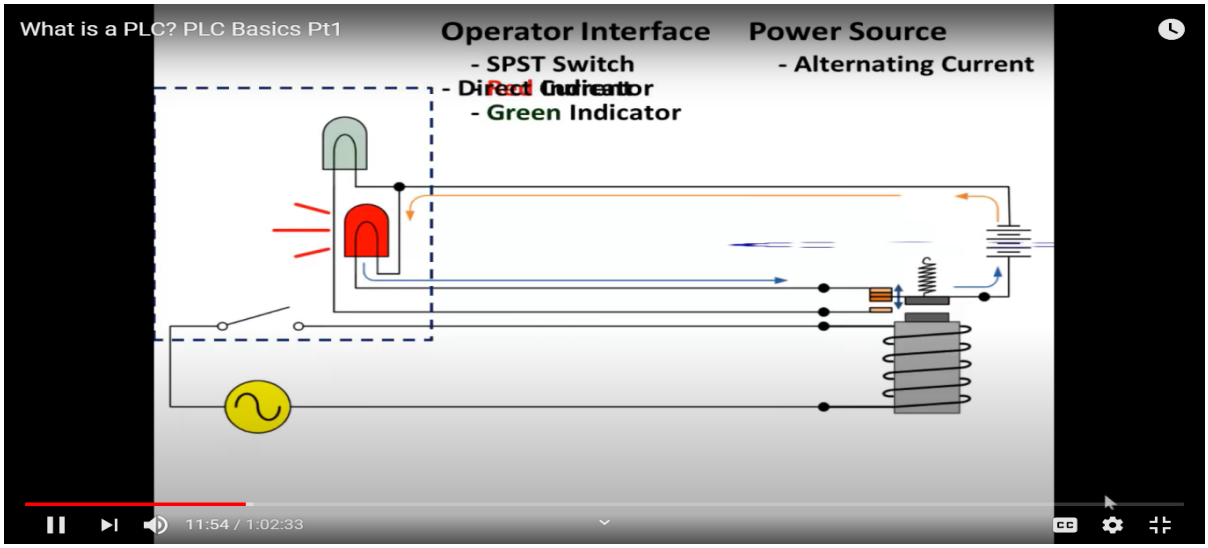
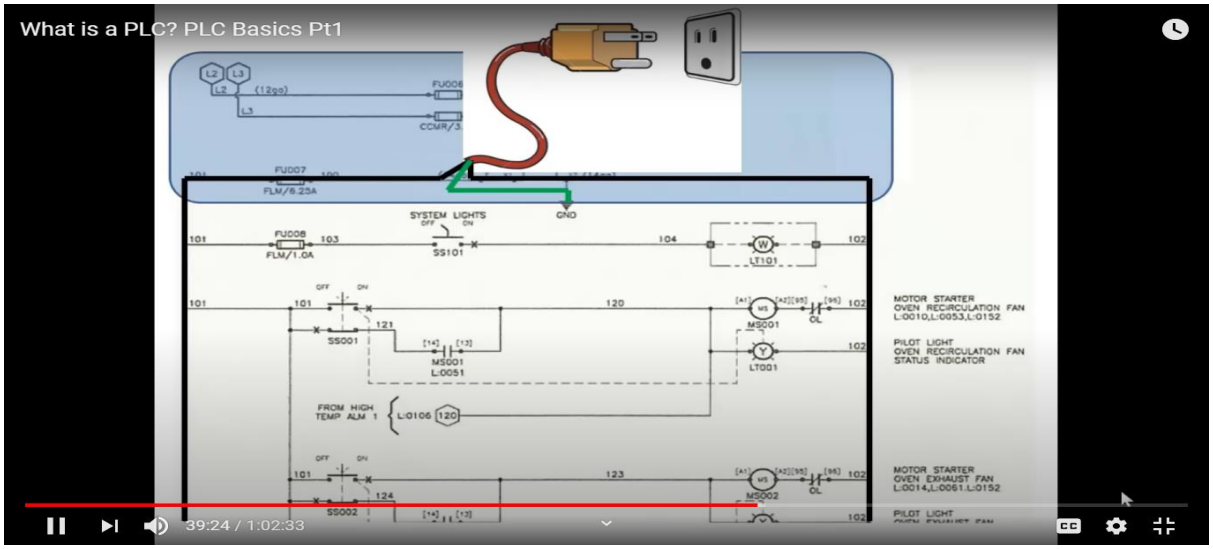
| **Date:** | **30-05-2020** | **Name:** | **K B KUSHI** |
| **Course:** | **Logic Design** | **USN:** | **4AL17EC107** |
| **Topic:** | **1.Applications of programmable logic controllers** | **Semester & Section:** | **6th & B** |
| **Github Repository:** | **https://www.github.com/alvas-education-foundation/KUSHI-COURSES** | | |

**FORENOON SESSION DETAILS**

**Image of session**




**Report –**

- **PLC is a special form of microprocessor- based controller. It includes a programmable memory to store instructions and to implement functions such as logic, sequencing, timing, counting.**
- **It has a great advantage of changing the PLC Ladder Diagram**
- **A PLC system has the basic functional components of processor unit, memory, power supply unit, input/output interface section, communications interface and the programming device**
- **PLC represents such a universal controller.**
- **The program has been designed on the programming device and then transferred to the memory unit of the PLC.**
- **When the program is completed, the CPU performs internal and communication tasks.**
- **Also, the control program is built of things called instructions.**
- **It provides the user with a simple means of changing, extending and optimizing control processes.**
- **We can take multiple switches wired to the discrete input channels of a programmable logic controller (PLC), with red LED indicator denoting the real-time status of each input on the PLC.**
- **If a switch happens to be in the same state as its normal state , we know its stimulus must be less than the threshold value.**
- **If a switch happens to be in the opposite state as its normal state, we know its stimulus has exceeded the threshold value.**

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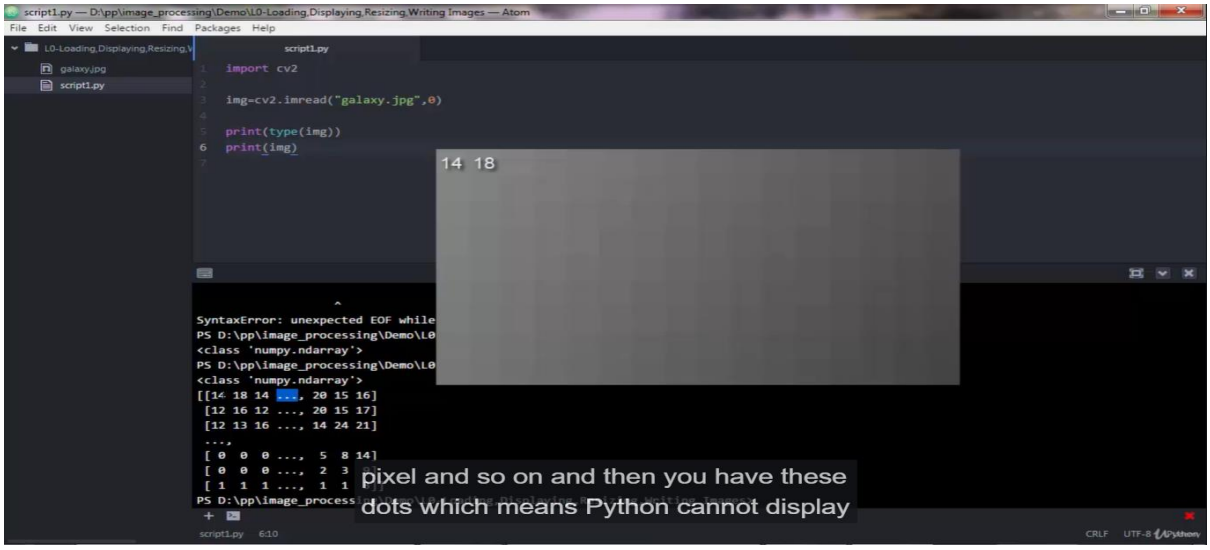
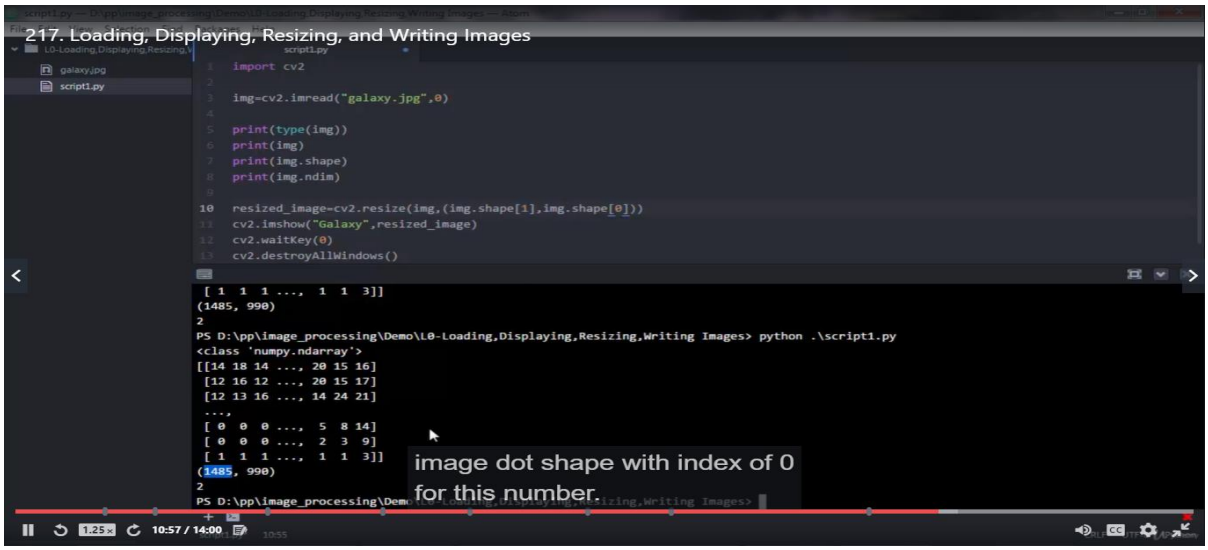
|---|---|---|---|
| **Date:** | **30-05-2020** | **Name:** | **K B KUSHI** |
| **Course:** | **Udemy-python** | **USN:** | **4AL17EC107** |
| **Topic:** | **1. Python for image and video processing with open CV** | **Semester&Section:** | **6th & B** |
| **Git hub repository** | **https://www.github.com/alvas-education-foundation/KUSHI-COURSES** | | |
| **AFTERNOON SESSION DETAILS** | | | |
| **Image of session** | | | |




**Report –**

- **This section deals with modelling and replicating human vision using computer software and hardware.**

- **Computer Vision overlaps significantly with the following fields –**

  **Image Processing – It focuses on image manipulation.**

  **Pattern Recognition – It explains various techniques to classify patterns.**

**Photogrammetry is concerned with obtaining accurate measurements from images.**

- **Computer Vision Vs Image Processing**
- **Image processing deals with image-to-image transformation. The input and output of image processing are both images.**

- **The output of computer vision is a description or an interpretation of structures in 3D scene.**

- **Robotics Application**

  **Localization − Determine robot location automatically**

  **Navigation**

  **Obstacles avoidance**

  **Assembly (peg-in-hole, welding, painting)**

  **Manipulation (e.g. PUMA robot manipulator)**

  **Human Robot Interaction-Intelligent robotics to interact with and serve people**

- **Medicine Application**

  **Classification and detection (e.g. lesion or cells classification and tumor detection)**

  **2D/3D segmentation**

  **3D human organ reconstruction (MRI or ultrasound)**

  **Vision-guided robotics surgery**

- **Features of OpenCV Library**

  **Read and write images**

**Capture and save videos**

**Process images**

**Perform feature detection**

**Detect specific objects such as faces, eyes, cars, in the videos or images.**

**Analyse the video, i.e., estimate the motion in it, subtract the background**