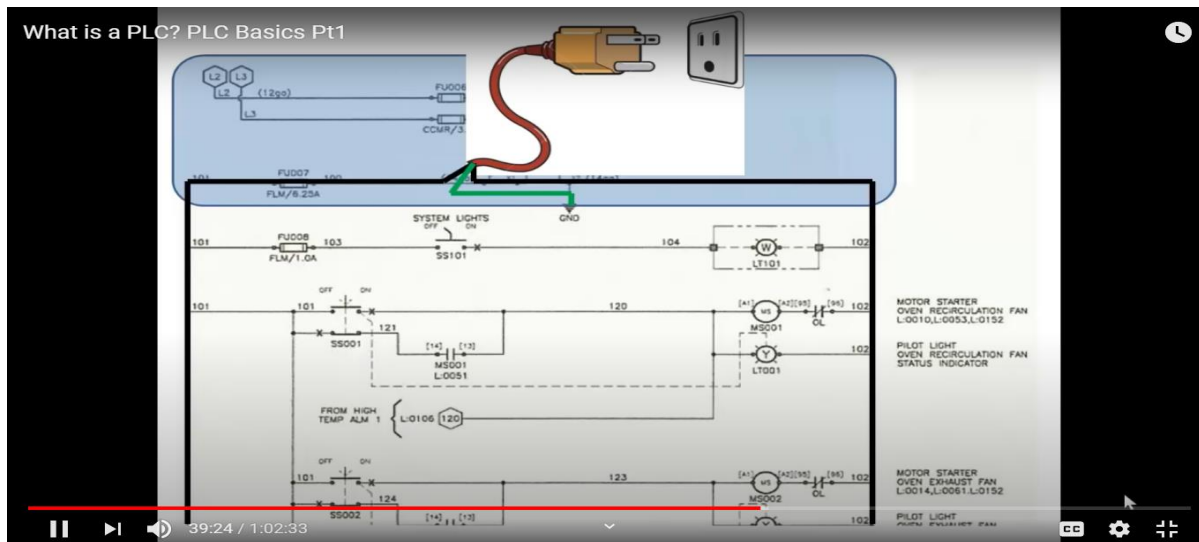
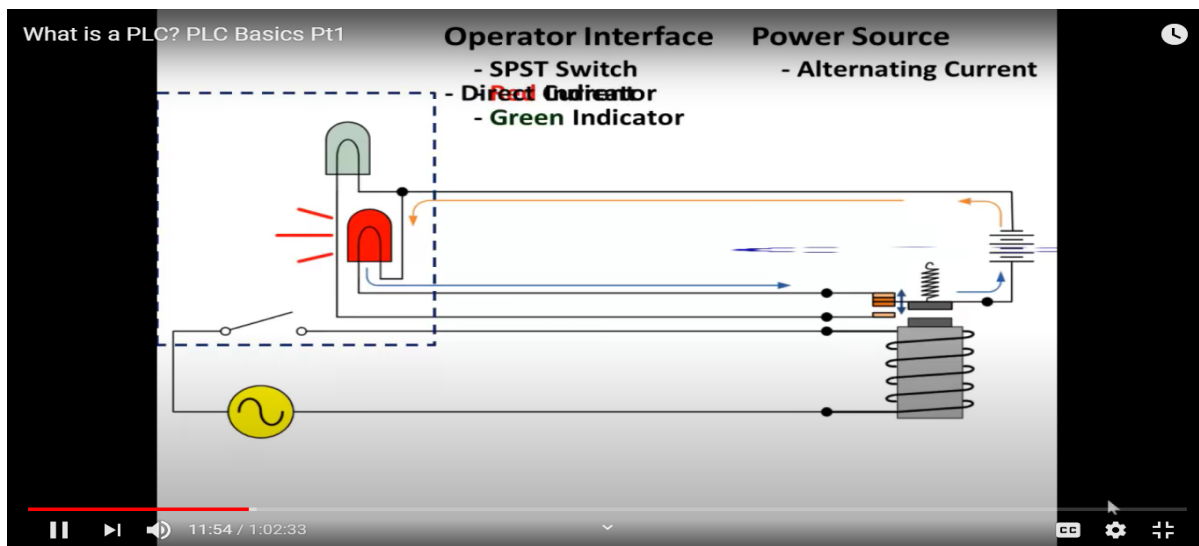


DAILY ASSESSMENT FORMAT

Date:	30-05-2020	Name:	K B KUSHI
Course:	Logic Design	USN:	4AL17EC107
Topic:	1.Applications of programmable logic controllers	Semester & Section:	6 th & 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.

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			

```
script1.py — D:\pp\image_processing\Demo\L0-Loading,Displaying,Resizing,Writing Images — Atom
File Edit View Selection Find Packages Help

script1.py
1 import cv2
2
3 img=cv2.imread("galaxy.jpg",0)
4
5 print(type(img))
6 print(img)
7

SyntaxError: unexpected EOF while
PS D:\pp\image_processing\Demo\L0-Loading,Displaying,Resizing,Writing Images> python .\script1.py
<class 'numpy.ndarray'>
PS D:\pp\image_processing\Demo\L0-Loading,Displaying,Resizing,Writing Images>
<class 'numpy.ndarray'>
[[14 18 14 ..., 20 15 16]
 [12 16 12 ..., 20 15 17]
 [12 13 16 ..., 14 24 21]
 ...,
 [ 0  0  0 ...,  5  8 14]
 [ 0  0  0 ...,  2  3  9]
 [ 1  1  1 ...,  1  1  3]]
PS D:\pp\image_processing\Demo\L0-Loading,Displaying,Resizing,Writing Images>

script1.py 6:10 CRLF UTF-8 Python
```

14 18

pixel and so on and then you have these dots which means Python cannot display

```
217. Loading, Displaying, Resizing, and Writing Images
script1.py
1 import cv2
2
3 img=cv2.imread("galaxy.jpg",0)
4
5 print(type(img))
6 print(img)
7 print(img.shape)
8 print(img.ndim)
9
10 resized_image=cv2.resize(img,(img.shape[1],img.shape[0]))
11 cv2.imshow("Galaxy",resized_image)
12 cv2.waitKey(0)
13 cv2.destroyAllWindows()

[ 1  1  1 ...,  1  1  3]]
(1485, 990)
2
PS D:\pp\image_processing\Demo\L0-Loading,Displaying,Resizing,Writing Images> python .\script1.py
<class 'numpy.ndarray'>
[[14 18 14 ..., 20 15 16]
 [12 16 12 ..., 20 15 17]
 [12 13 16 ..., 14 24 21]
 ...,
 [ 0  0  0 ...,  5  8 14]
 [ 0  0  0 ...,  2  3  9]
 [ 1  1  1 ...,  1  1  3]]
(1485, 990)
2
PS D:\pp\image_processing\Demo\L0-Loading,Displaying,Resizing,Writing Images>

image dot shape with index of 0
for this number.
```

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