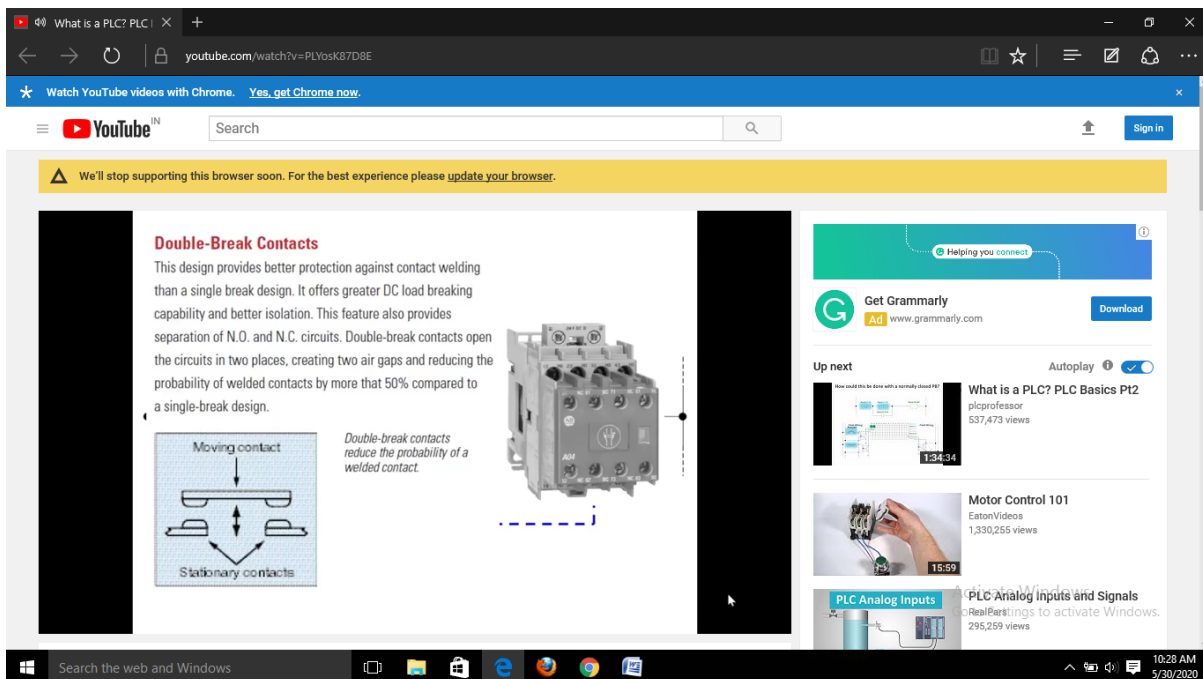
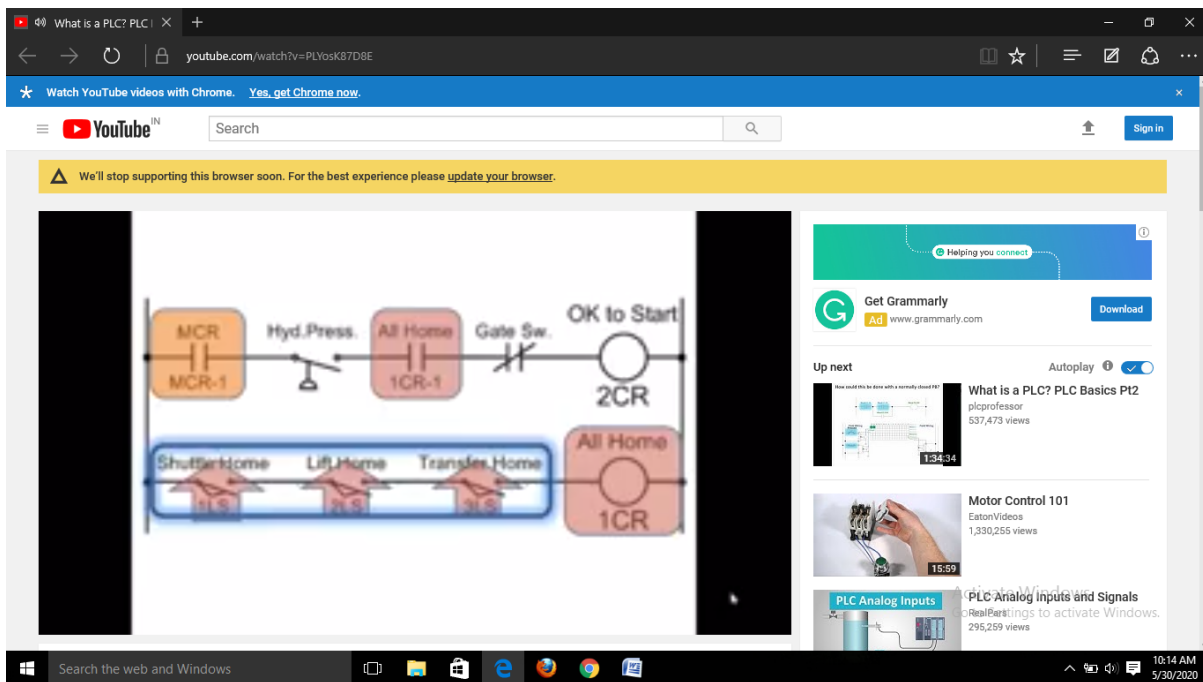


Date:	30-05-2020	Name:	Yamunashree N
Course:	Logic design	USN:	4AL17EC097
Topic:	Applications of Programmable logic controllers.	Semester and section	6 <sup>th</sup> sem 'B' section
Github repository:	yamunashree-course		





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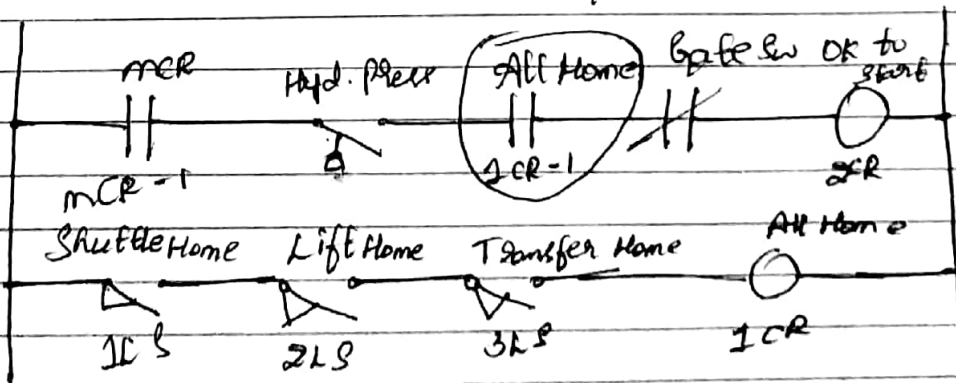
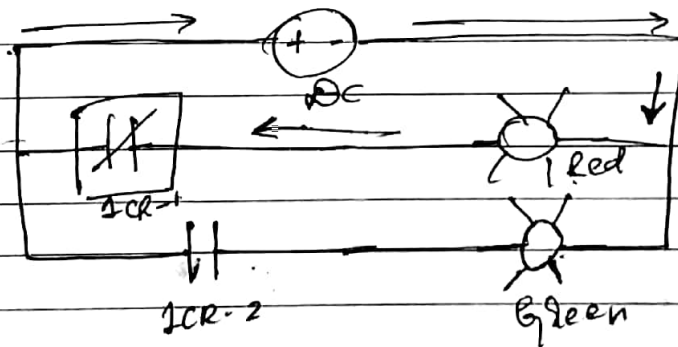
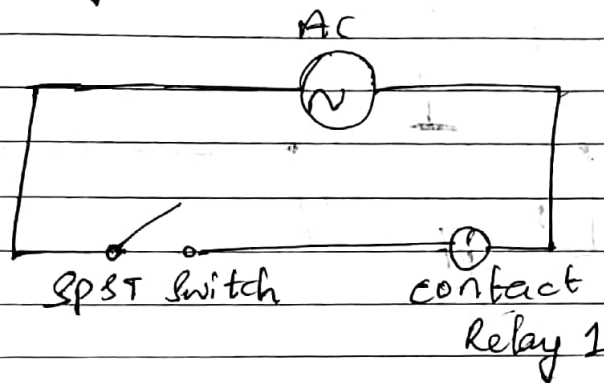
Day - 3

Logic design

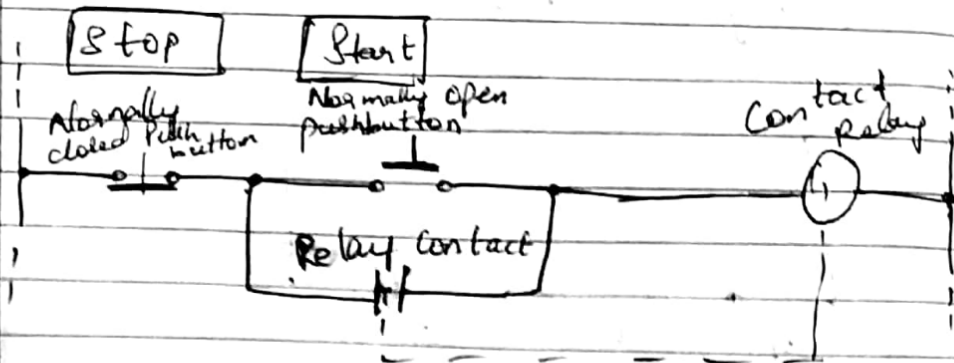
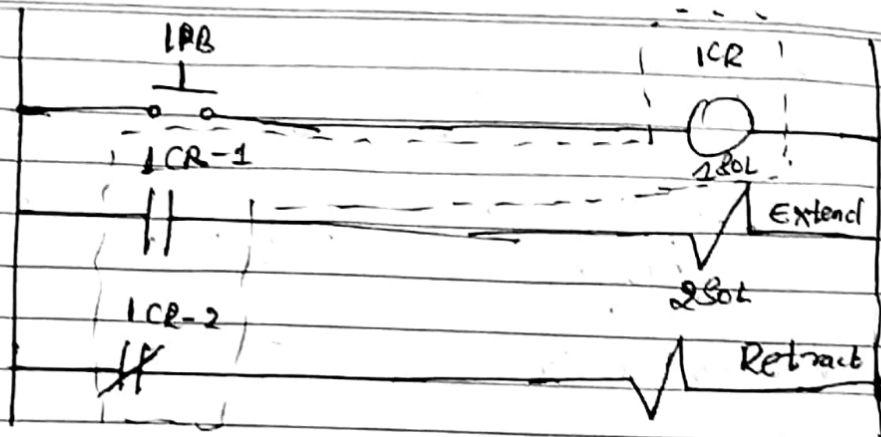
## Applications of programmable logic controllers

x Introduction:

Relays to bits



Brilliant



Date:	30-05-2020	Name:	Yamunashree N
Course:	Python programming	USN:	4AL17EC097
Topic:	Python for image and video processing with openCV	Semester and section:	6 <sup>th</sup> sem and 'B' sec

```

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]/2,img.shape[0]/2))
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>
+
script1.py 10:60

```

error, then please type the following again in the command line:

```
pip install opencv-python
```

4. Now you should successfully import cv2 in Python.

## 2. My opencv installation didn't go well on Mac

Solution:

If pip install opencv-python didn't go well please install OpenCV for Python 2 and use Python 2 to run the programs that contains cv2 code. Its' worth mentioning that Python 2 is installed by default on Mac, so no need to install Python 2. Here are the steps to correctly install OpenCV:

1. Install brew:

Open your terminal and execute the following:

```

/usr/bin/ruby -e "$(curl -fsSL
https://raw.githubusercontent.com/Homebrew/install/master/install)"

```

2. OpenCV depends on GTK+, so please install that dependency first with brew (always from the terminal):

```
brew install gtk+
```

Activate Windows  
Go to Settings to activate Windows.



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## Solution

```
import cv2
import glob

images=glob.glob("*.jpg")

for image in images:
    img=cv2.imread(image,0)
    re=cv2.resize(img,(100,100))
    cv2.imshow("Hey",re)
    cv2.waitKey(500)
    cv2.destroyAllWindows()
    cv2.imwrite("resized_"+image,re)
```

I first created a list containing the image file paths and then iterated through the aforementioned list.

The loop: reads each image, resizes, and displays the image; waits for the user input key, closes the window once the key is pressed, and writes the resized image. The name of the resized image will be "resized" plus the existing file name of the original image.

Activate Windows  
Go to Settings to activate Windows.

