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[NPTEL \(https://swayam.gov.in/explorer?ncCode=NPTEL\)](https://swayam.gov.in/explorer?ncCode=NPTEL) » [Image Signal Processing \(course\)](#)
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## Programming assignment: k-means clustering

**Due on 2020-11-26, 23:59 IST**

Click here ([https://drive.google.com/file/d/1NJO\\_U05UqQ6AN8PJIQ436VBTEYugRDWL/view?usp=sharing](https://drive.google.com/file/d/1NJO_U05UqQ6AN8PJIQ436VBTEYugRDWL/view?usp=sharing)) for View the Question .

It is recommended to initially work on this assignment using Google Colaboratory ("Colab" for short is a free Jupyter notebook environment provided by Google that allows you to run Python in your browser). The introduction videos for Colab will be shared in discussion forum. Being said that, this is a recommended way to do the assignments. You can always directly work on NPTEL website.

Follow these instructions to work on the assignment in google-colab.

- Click on this Assignment-10 (<https://drive.google.com/file/d/1N1ObF9AxGtGfaWNgZF2jQ67AAsrltaql/view?usp=sharing>) file.
- Make a copy of it in your drive.
- Right click and open the file using Google Colaboratory(You first need to log in to your google account).

When you're ready to verify/submit your assignment, paste the missing code snippets below.

### Sample Test Cases

|             | Input          | Output |
|-------------|----------------|--------|
| Test Case 1 | k-means images | ok     |
| Test Case 2 | k-means images | ok     |

The due date for submitting this assignment has passed.  
As per our records you have not submitted this assignment.

### Course outline

#### How does an NPTEL online course work?

#### Week 1

#### Week 2

#### Week 3

#### Week 4

#### Week 5

#### Week 6

#### Week 7

#### Week 8

#### Week 9

#### Week 10

- Theory of Histogram Equalization and Modification (unit?unit=26&lesson=91)
- Histogram Equalization example (unit?unit=26&lesson=92)
- Image sequence and Single image filtering in Gaussian noise (unit?unit=26&lesson=93)
- Non-local Means Method (unit?unit=26&lesson=94)
- Non-local Means Filtering (Examples) (unit?unit=26&lesson=95)
- Impulse Noise Generator (unit?unit=26&lesson=96)
- Impulse noise filtering (unit?unit=26&lesson=97)
- Transform Domain Filtering (unit?unit=26&lesson=98)
- Illumination Handling (unit?unit=26&lesson=99)
- Programming assignment: k-means clustering (/noc20\_ee83/progassignment?name=126)**
- Image Signal Processing : Week 10 Feedback Form (unit?unit=26&lesson=154)
- Lecture Materials (unit?unit=26&lesson=184)

[Week 10 solutions \(unit? unit=26&lesson=189\)](#)

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**Week 11**

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**Week 12**

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**Tutorials**

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**Download Videos**

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**Live Session**

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**December 8 Programming test - Session 1(10AM-11AM)**

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**December 8 programming test - Session 2 (8PM to 9PM)**