



Nutan Maharashtra Vidya Prasarak Mandal's (NMVPM's)  
**NUTAN MAHARASHTRA INSTITUTE OF  
 ENGINEERING AND TECHNOLOGY (NMIET)**

Under Administrative Support - Pimpri Chinchwad Education Trust (PCET)



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## DEPARTMENT OF COMPUTER ENGINEERING

### INNOVATIVE TEACHING AND LEARNING

AY-2022-23 (SE)

<b>Semester</b>	<b>IV</b>
<b>Subject Coordinator</b>	<b>Prof. Rohini Hanchate</b>
<b>Methodology</b>	<b>V LAB /simulation</b>
<b>Activity</b>	<b>Session on COCOMO Estimation model</b>
<b>Objective</b>	<b>To Estimate the program complexity and effort required</b>
<b>Outcome</b>	<ul style="list-style-type: none"> <li>• Students have gain the knowledge of categorized projects using COCOMO, and estimate effort and development time required for a project</li> <li>• Estimate the program complexity and effort required to recreate it using Halstead's metrics</li> </ul>

#### Description:

#### Project Estimation Techniques

A software project is not just about writing a few hundred lines of source code to achieve a particular objective. The scope of a software project is comparatively quite large, and such a project could take several years to complete. However, the phrase "quite large" could only give some (possibly vague) qualitative information. As in any other science and engineering discipline, one would be interested to measure how complex a project is. One of the major activities of the project planning phase, therefore, is to estimate various project parameters in order to make proper decisions. Some important project parameters that are estimated include:

*[Handwritten Signature]*


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- Planning
  - Design
  - Development
4. Complete COCOMO considers a software as a
- Homogeneous system
  - Heterogeneous system
5. Consider you are developing a web application, which would make use of a lot of web services provided by Facebook, Google, Flickr. Would it be wise to make estimates for this project using COCOMO?
- Yes, of course
  - Not at all

Reference: <http://vlabs.iitkgp.ernet.in/se/2/simulation/>

  
Course Coordinator

  
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## DEPARTMENT OF COMPUTER ENGINEERING

### INNOVATIVE TEACHING AND LEARNING

AY-2022-23 (BE)

<b>Semester</b>	<b>VIII</b>
<b>Subject Coordinator</b>	<b>Dr. Saurabh Saoji</b>
<b>Methodology</b>	<b>Virtual Lab</b>
<b>Activity</b>	<b>Image Segmentation on Virtual Lab</b>
<b>Objective</b>	<b>To understand the challenges in extracting objects/regions of interest from a given image.</b>
<b>Outcome</b>	<b>Students learn the concepts of histogram and image Segmentation</b>

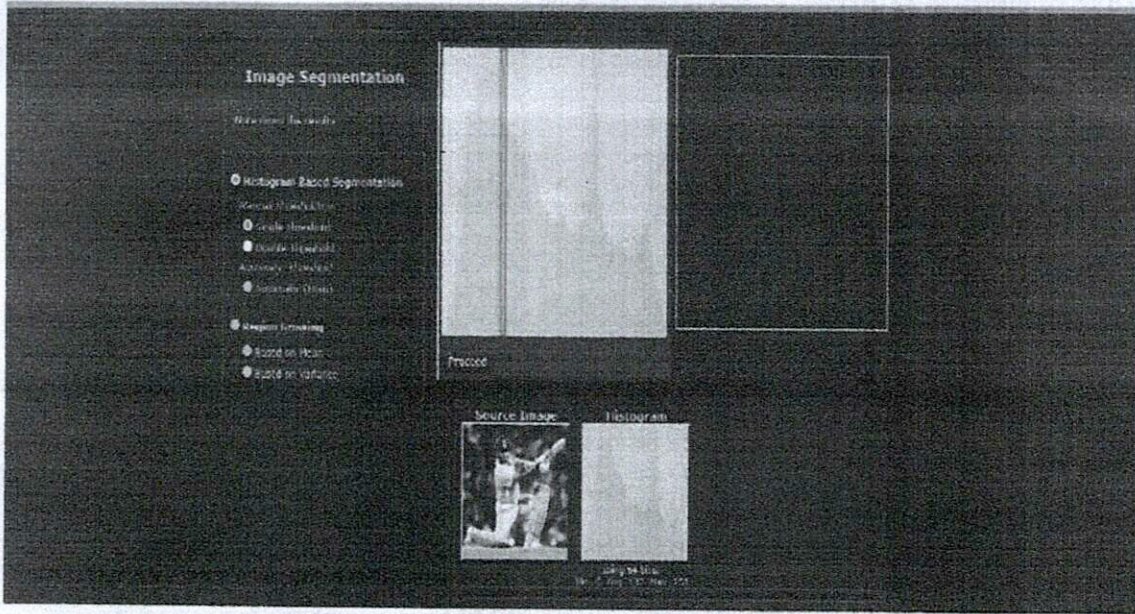
#### Description:

Image segmentation is a common task which arises in many situations such as extracting a face or a character in a text from an image before performing automatic recognition. Generally, it is used to separate the foreground pixels belonging to the object(s) of interest, from the background pixels. Segmentation aims to partition a given image into a set of regions having following properties: connectivity and homogeneity in terms of color or texture.

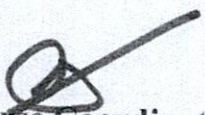
An object or region can be characterized using multiple low-level features such as brightness, colour, texture, etc. In this experiment, we will restrict ourselves to objects defined by brightness. We will aim to partition a given image into two (foreground and background) and study two techniques namely, histogram-based thresholding and region growing, to perform this partitioning. Students have implemented all three types of Graph traversals in the virtual lab.

  
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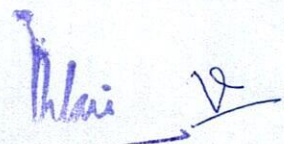




Reference: <https://cse19-iiith.vlabs.ac.in/exp/image-segmentation/simulation.html>

  
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