Overview:

Image processing is a method to perform required operations on an Image to extract useful features and information from that image. In order to perform analysis and extract data there are various operations we perform in order to manipulate the image according to our needs for example filtering, smoothing, noise reductions etc.

References:

1. You can use libraries like opencv,PIL,simplecv, mahotas etc. Try using libraries other than opencv
2. You can refer to https://docs.opencv.org/3.0-beta/doc/py_tutorials/py_imgproc/py_table_of_contents_imgproc/py_table_of_contents_imgproc.html#py-table-of-content-imgproc

Refer to the link for getting familiar with opencv functions if working with opencv

Task:

The task is to calculate the number of embryos/cells in the given image.

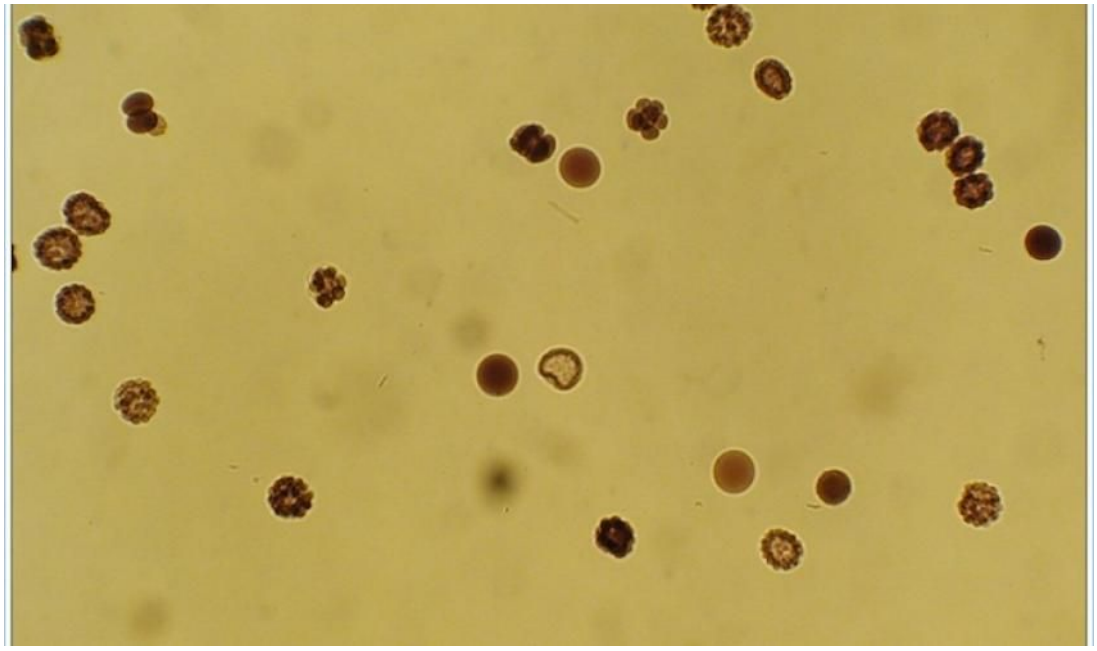
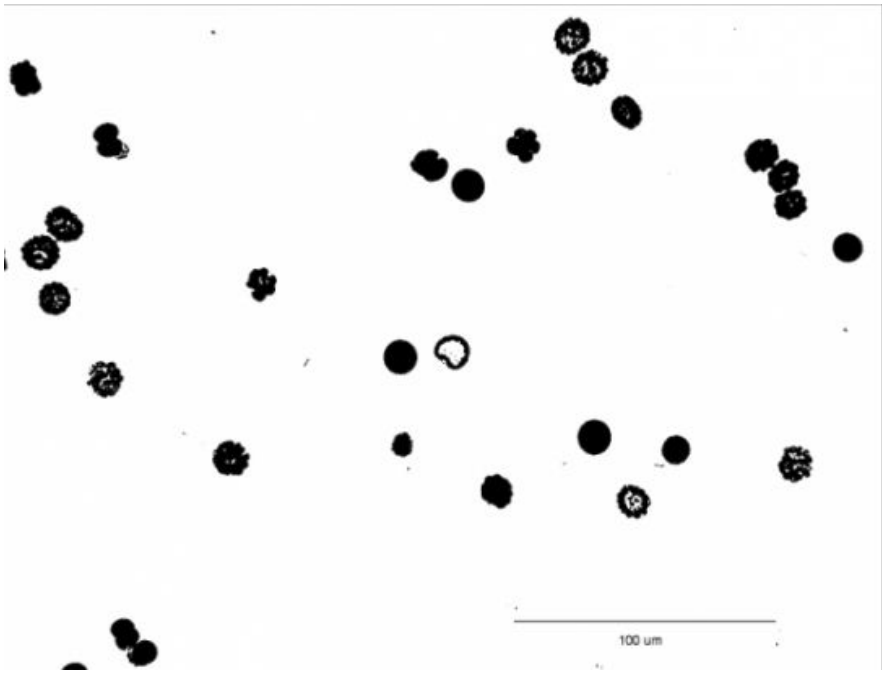


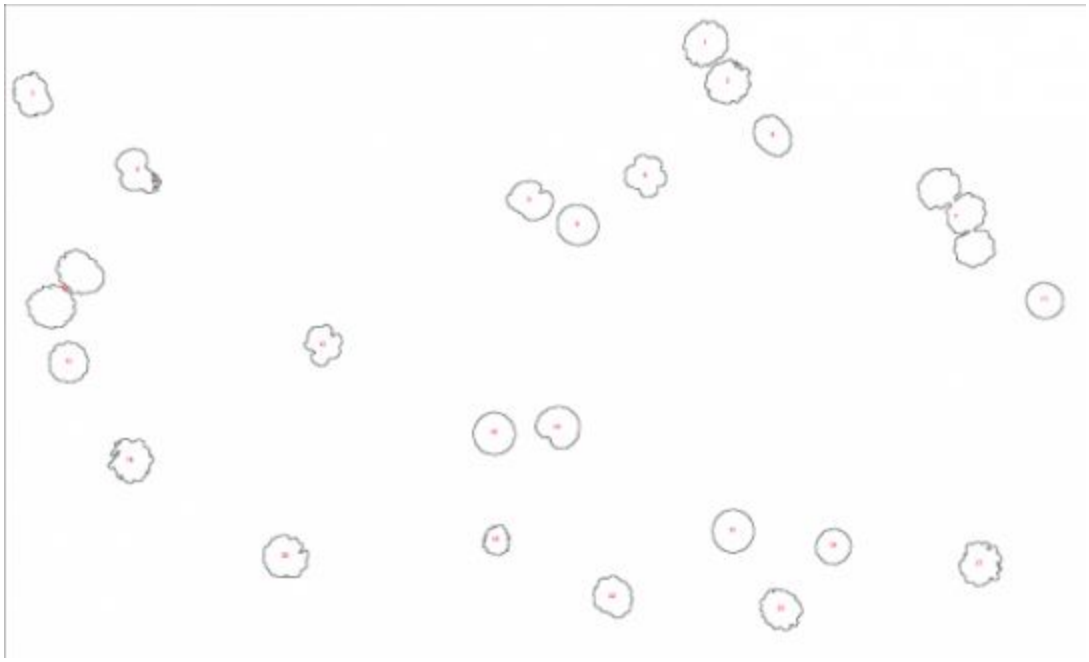
Fig 1: Input Image

You have to calculate only the fully grown embryos/cells i.e, the the less visible and underdeveloped embryos should be referred to as noise and hence should be avoided.
This can be done using various image smoothing, filtering or noise reduction algorithms.
Once the noise is removed you can go for masking. For masking, you can consider parameters like shape and color (shape is preferred). You can either go for shape, color or both it's your choice.

After the masking the image should look something like the below:



Once done with the masking, to count the number of objects in the image. For example I here red dots are drawn on the below image and the number of dots are counted.



For me the output received is 26. While the actual number should be 25. THe closer you are to the actual number, the precise is our output.