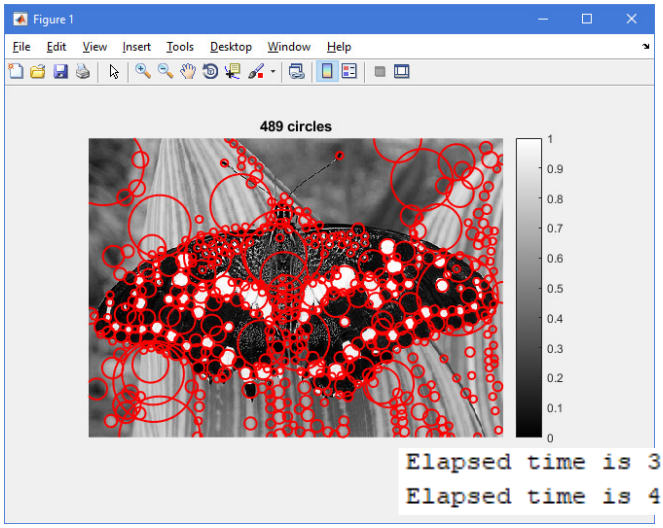
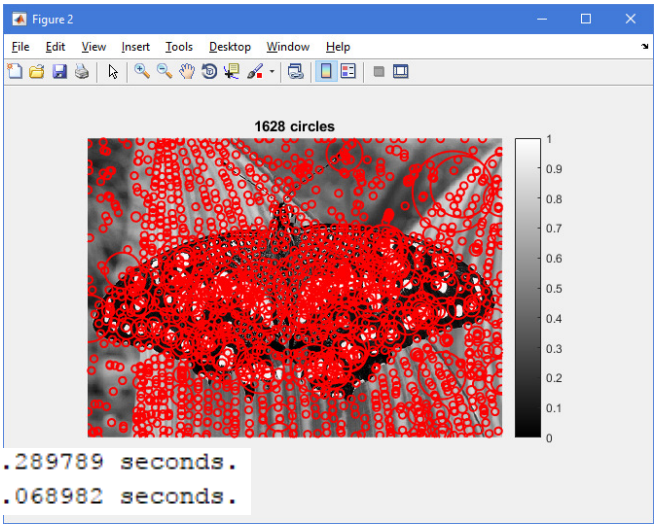
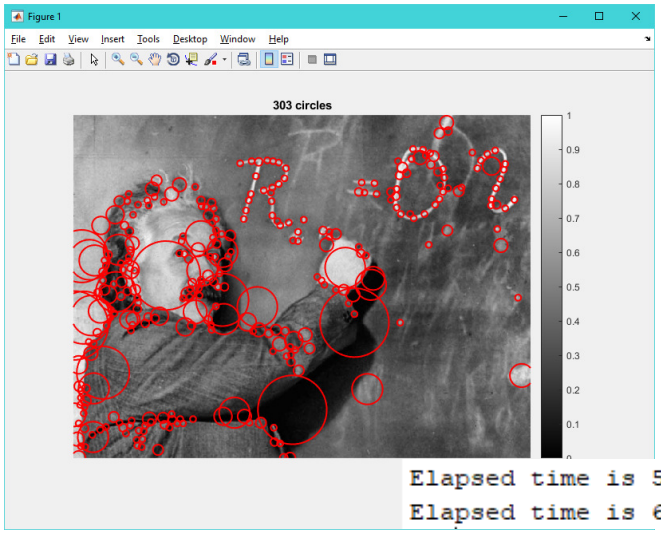
Assignment 2

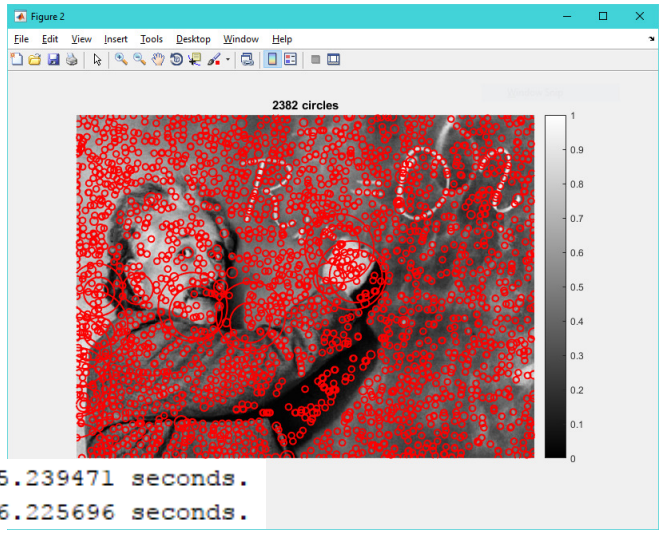
1.



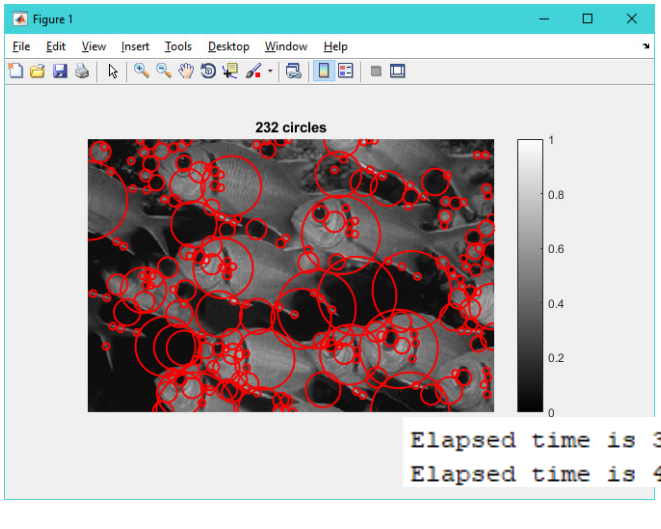


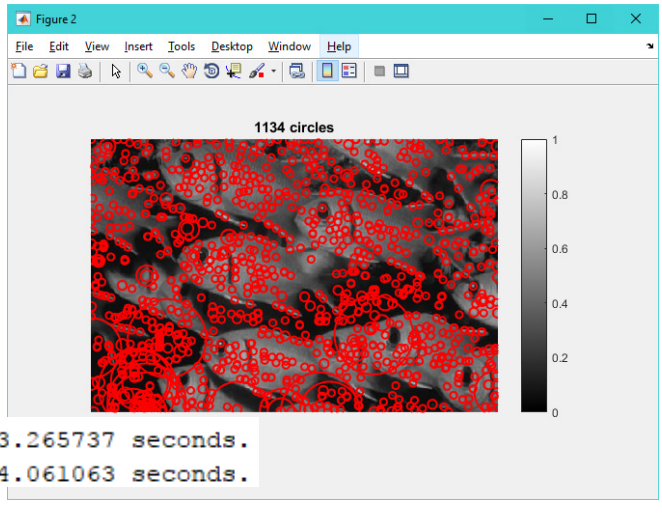

```
Elapsed time is 3.289789 seconds.
Elapsed time is 4.068982 seconds.
```



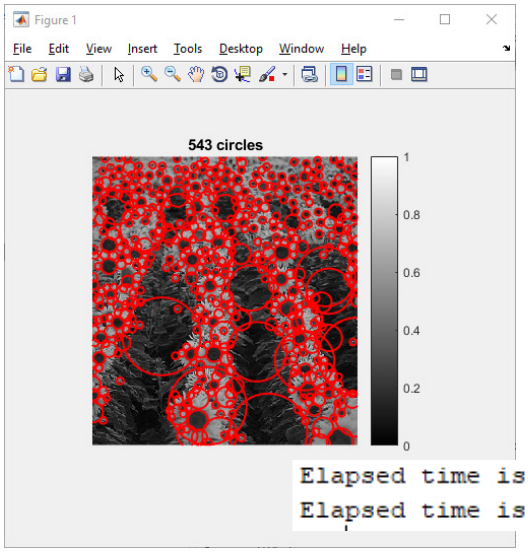


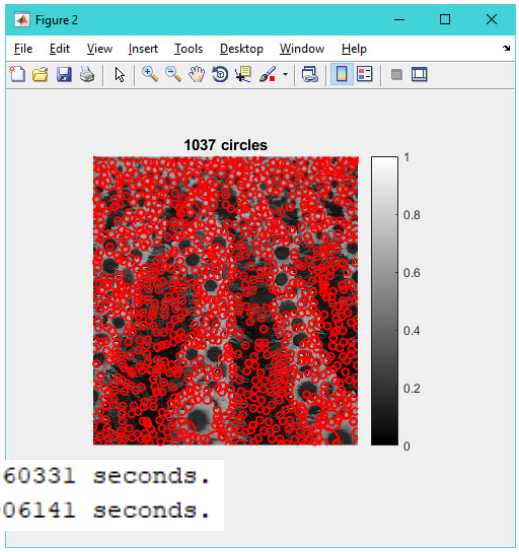

```
Elapsed time is 5.239471 seconds.
Elapsed time is 6.225696 seconds.
```



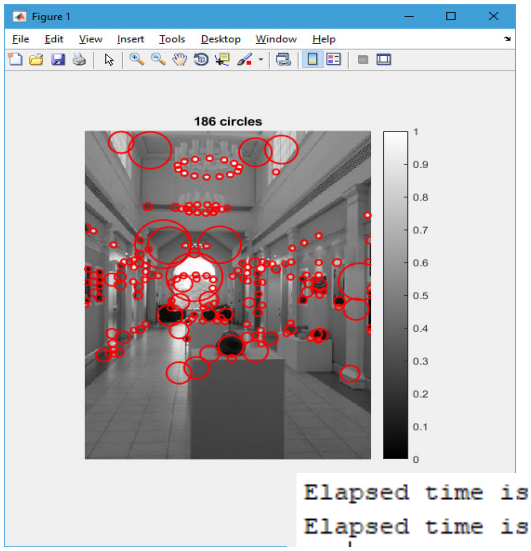


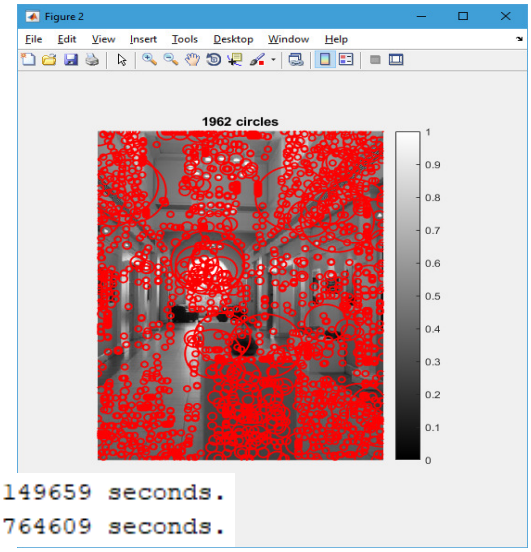

```
Elapsed time is 3.265737 seconds.
Elapsed time is 4.061063 seconds.
```



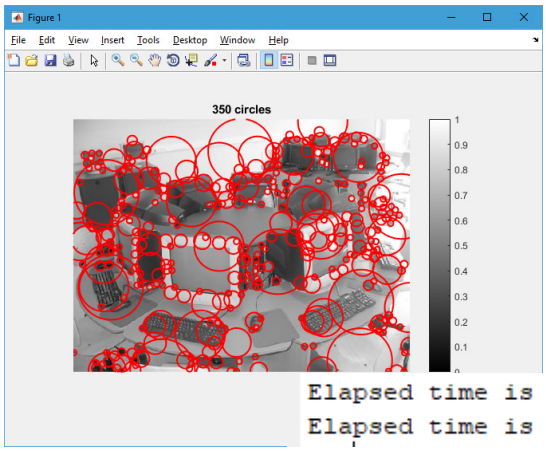


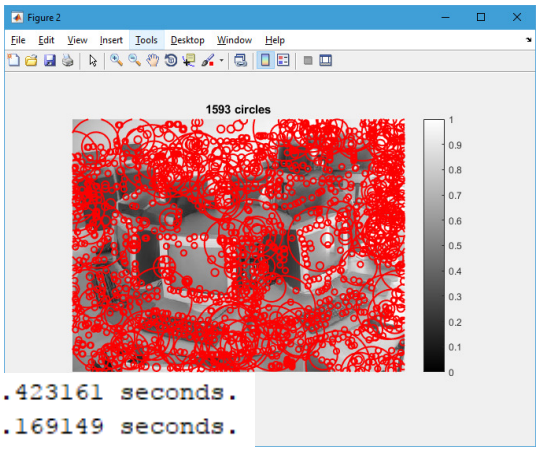

```
Elapsed time is 2.260331 seconds.
Elapsed time is 2.906141 seconds.
```



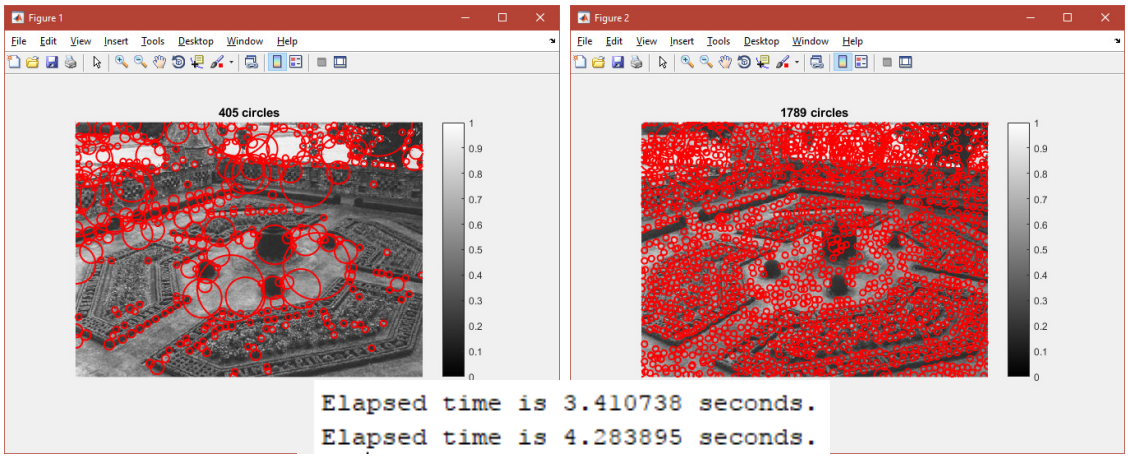


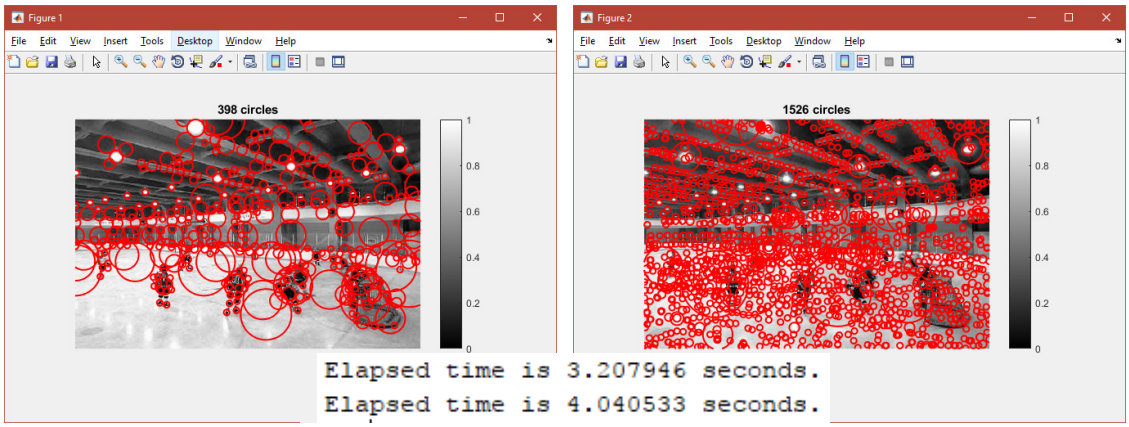

```
Elapsed time is 3.149659 seconds.
Elapsed time is 3.764609 seconds.
```






```
Elapsed time is 3.423161 seconds.
Elapsed time is 4.169149 seconds.
```





2. The only interesting implementation is the use of image resize function which helps streamline the image for further manipulation after application of normalized LoG filter. The filter can alter the size of the original image at the edges, which need to be filled out and thus, the image needs to be resized.

3. As we increase the sigma value, the number of the blobs in the final image increase due to increased co-relation with pixel values and the filter. A lower value is thus preferred for increasing the accuracy of detection but not sol low as to ignore the features that we want highlighted. Values ranged from 0.1 to 10 for sigma. K, which determines the size of the filter, on the other hand is very resource intensive which suggests that a balance needs to be maintained between computation time and size of the filter.