

## HW7 Report

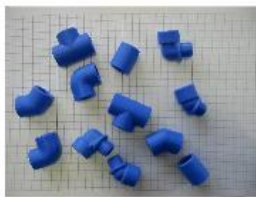
Tuoheng Zheng

### Design:

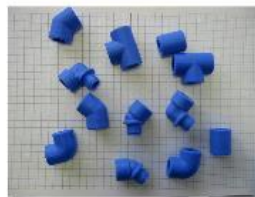
In my homework directory, I used two MATLAB files to fulfill the requirements. They are 'edge\_detect\_script.m' and 'edge\_detect\_algorithm.m'. 'edge\_detect\_algorithm.m' defines a function to apply the needed algorithm to a input image variable and returns the processed image. 'edge\_detect\_script.m' is a script to apply the 'edge\_detect\_algorithm()' function to the three images and display their results.

In 'edge\_detect\_algorithm.m', I first preprocessed the image, turning it into grey values. I then used a Sobel operator filter to detect the edges, and after that set an appropriate threshold to turn the image into binary.

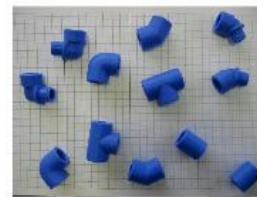
### Results:



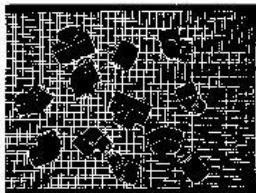
A



B



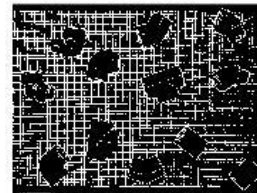
C



Edge Detect A



Edge Detect B



Edge Detect C

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**Conclusion:**

In this assignment, I wrote several test scripts to test out different ways to achieve the results. During the process, I applied many categories of methods. I had to read into and adjust every parameter on various MATLAB functions in order to test their effects. I had a much better understanding on these topics.

In general, the assignment leaves greater freedom to myself, allowing me to truly approach this problem on my own. That, in my opinion, is very helpful on developing the skill to solve real problems.