Design Overview

Features:-

- You can both sharpen the image as well as smoothen the image.
- Once an image is filtered, it is stored in the RAM. Now we can get the filtered image using it (the pixels are stored in the lower half of the memory) and for re-use, we can load the pixels of another image into the RAM and when we again press the push button it will filter the newly loaded image. Thus the image filter can be used again and again.

Specifications:-

- The RAM is divided into two parts, The path contains the original image and the lower half will contain the filtered image.
- Room memory contains the coefficients which will be used for filtering the image.

Instructions to use:-

There is one switch button and one push button.

- The switch button is used to switch between two types of filter modes, the first one being the smooth filter and the second one is the sharp filter mode.
  - Switch =0 means the image will be smoothened.
  - Switch =1 means the image will be sharpened.
- On pressing the push button, the filter starts filtering the image according to the filter we have chosen, either smoothening or sharpening the image.