**2012 Question 4: Grey Image (9 points)**

| Total Scored out of 9 |  |
| --- | --- |

**Part A: countWhitePixels (4 points)**

Intent: Return the number of white pixels in the image

+1 Accesses all entries in pixelValues (no bounds errors)

+1 Compares an entry of array with WHITE or with 255 in context of iteration

+1 Initializes and increments a counter

+1 Returns correct count of number of white pixels in pixelValues

**Part B: processImage (5 points)**

Intent: Process elements of pixelValues and apply specified formula

+1 Accesses all necessary elements in at least one row or one column of pixelValues

+1 Accesses all necessary elements of pixelValues (no bounds errors)

+1 Decrements element at index [a][b] by the original value found In element at index [a+2][b+2]

+1 Modifies all and only appropriate elements of pixelValues

(changes must not affect last two rows and columns)

+1 Assigns BLACK or 0 to elements of pixelValues that would otherwise have a value less than BLACK (negative value)

**Question-Specific Penalties**

-1 (z) Attempts to return a value from processImage