Computer Graphics – Assinment No.1 – Image processing
Results

1. **Grayscale**

2. **Canny Edge Detector**

In our implementation of the algorithm, we incorporated two approaches for defining the kernel matrix:

- **Predefiend Kernel Matrix:**
  This option allows the use of a predefined matrix, specifically one that was discussed in class.

- **Dynamic Gaussian Kernel Generation:**
  Leveraging the Gaussian function, we enable the generation of the kernel matrix with customisable key parameters:
  - **Sigma (σ):** Controls the standard deviation of the Gaussian function, influencing the degree of smoothing.
  - **Kernel Size (k-size):** Determines the dimensions of the matrix (block size), affecting the scope of the smoothing operation.

These options offer adaptability to various edge detection scenarios and enhancing the precision of the preprocessing step.

Option 1: (predefiend matrix)

Option 2: (k=3, sigma=1)

Option 2: (k=5, sigma=1)

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