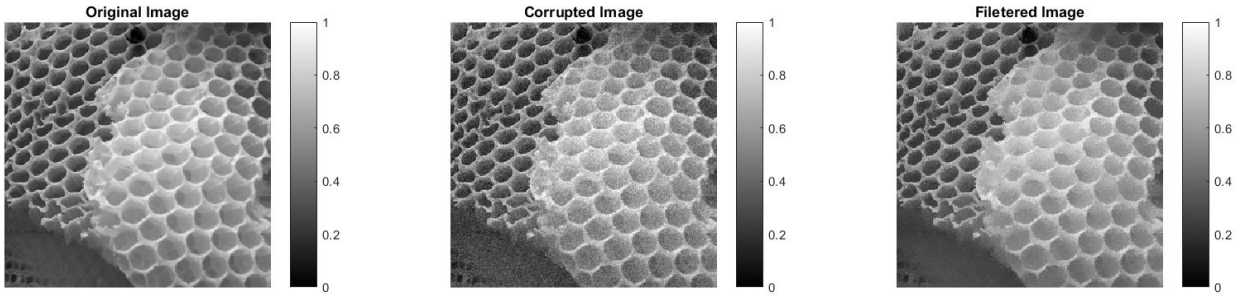
Question 2 Report

170050043 170050044 170050078

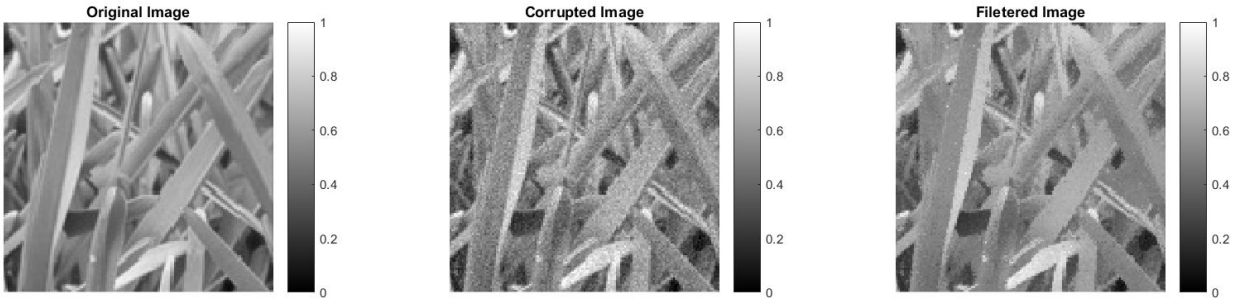
honeyCombReal.png



Optimal values of σ^*_{space} = 1.5 and $\sigma^*_{intensity}$ = 0.065.
Optimal RMSD = 0.0331

RMSD value for :
0.9 σ^*_{space} and $\sigma^*_{intensity}$ = 0.333
1.1 σ^*_{space} and $\sigma^*_{intensity}$ = 0.336
σ^*_{space} and 0.9 $\sigma^*_{intensity}$ = 0.334
σ^*_{space} and 1.1 $\sigma^*_{intensity}$ = 0.338

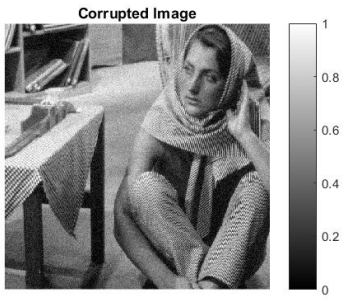
grass.png

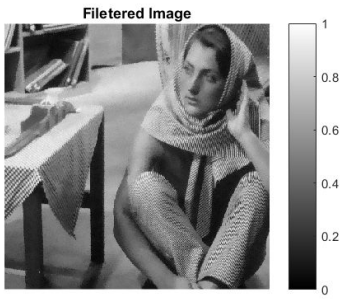


Optimal values of σ^*_{space} = 1.5 and $\sigma^*_{intensity}$ = 0.060.
Optimal RMSD = 0.0336

RMSD value for :
0.9 σ^*_{space} and $\sigma^*_{intensity}$ = 0.338
1.1 σ^*_{space} and $\sigma^*_{intensity}$ = 0.340
σ^*_{space} and 0.9 $\sigma^*_{intensity}$ = 0.337
σ^*_{space} and 1.1 $\sigma^*_{intensity}$ = 0.338

barbara.mat



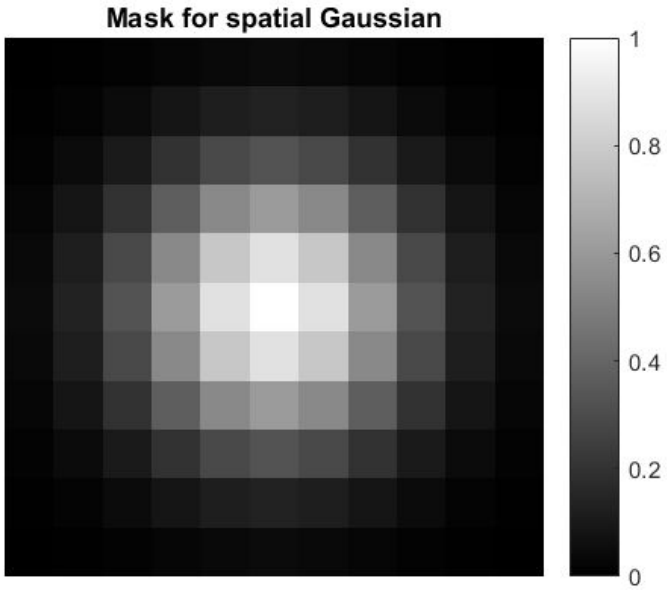


Optimal values of σ^*_{space} = 1.6 and $\sigma^*_{intensity}$ = 0.065.
Optimal RMSD = 0.0341

RMSD value for :
0.9 σ^*_{space} and $\sigma^*_{intensity}$ = 0.345
1.1 σ^*_{space} and $\sigma^*_{intensity}$ = 0.348
σ^*_{space} and 0.9 $\sigma^*_{intensity}$ = 0.344
σ^*_{space} and 1.1 $\sigma^*_{intensity}$ = 0.346

We can see that increasing/decreasing values of σ^*_{space} and $\sigma^*_{intensity}$ results in increase in RMSD. But as the values are really close, the difference is not that much and changes according to the Gaussian error. If we check it with 2σ, then we can see the difference is large.

Spatial Mask



The window size is 11x11 and the value of σ^*_{space} = 2.