SUDHANSHU KUMAR	201010	SECTION J9

ESO208

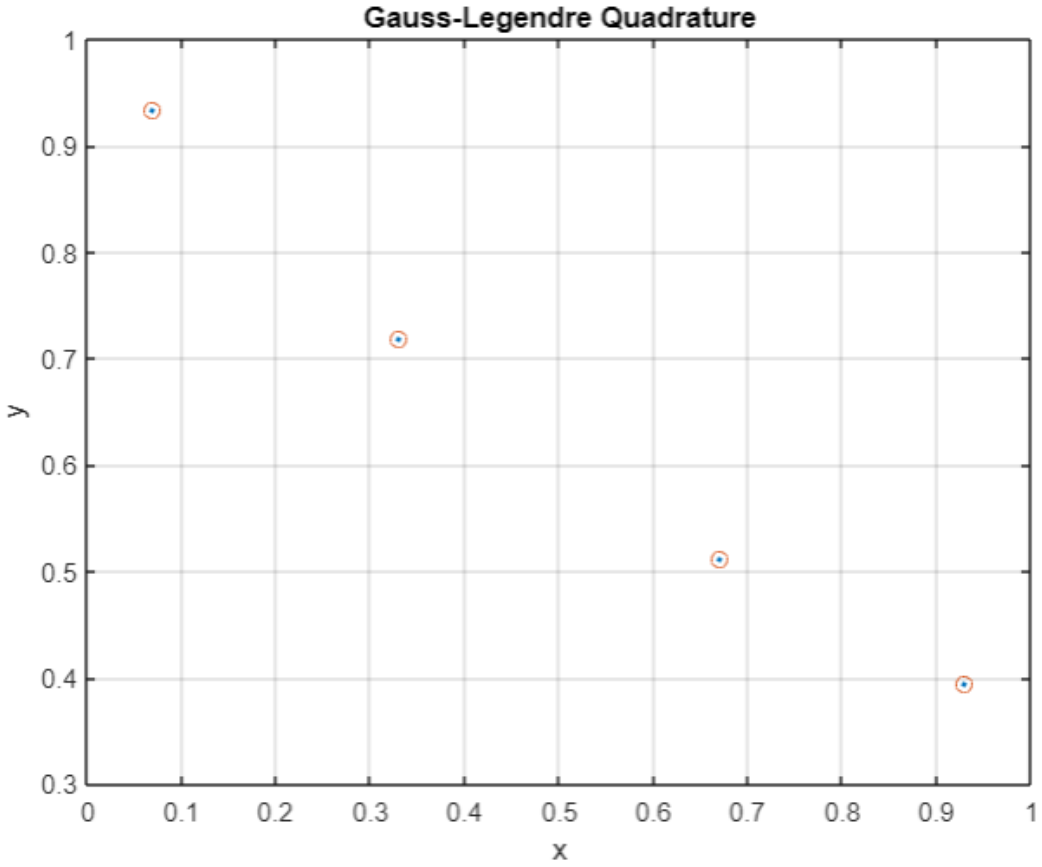
ASSIGNMENT #4

Q1

```
Give the function in x :
exp(-x)
Enter lower limit of integration
0
Enter upper limit of integration
1
Enter the maximum allowable approximate relative error
0.01
```

```
Romberg Integration
```

```
Gauss-Legendre quadrature
I = 0.632121
Number of Guass Points : 3.000000
Approximate relative error : 0.000048
```



Q2

```
Give the function in t and y :
-y*y*t
Enter initial value of t0
0
Enter initial value of y0
1
Final value of tf
1
interval size
0.1

t, y
0.000000 1.000000
0.100000 1.000000
0.200000 0.990000
0.300000 0.970398
0.400000 0.942148
0.500000 0.906642
```

```
0.600000 0.865542
0.700000 0.820592
0.800000 0.773456
0.900000 0.725598
1.000000 0.678213
```