Assignment –1

1. Write a C program to compute the value of *y* at *x*=1.6 from the following table

x	1.0	1.5	2.0	2.5	3.0
y	0.11246	0.14032	0.16800	0.19547	0.22270

2. The population of a town in the decennial census was as given bellow. Write a C program to estimate the population for the year 1895, using Newton's Forward Interpolation formula.

Year	1891	1901	1911	1921	1931
Population	46	66	81	93	103

3. Write a C program to compute the value of *y* at *x*=2.8 from the following table using Newton's Backward interpolation formula.

x	0.0	1.0	2.0	3.0
y	1	2	11	34

4. Write a C program to compute the value of *y* at *x* = 1.1 from the following table (using Lagranges' Interpolation formula)

x	0.5	1.0	1.5	2.0	2.5
y	0.22245	0.25031	0.27799	0.30546	0.33269

5. Write a C program to compute the value of *y* at *x* = 0.33 from the following table

x	0.30	0.32	0.34	0.36	0.38	0.40
y	1.7596	1.7698	1.7804	1.7912	1.8024	1.8139

6. Write a C program to compute the value of *y* at *x*=102 from the following table

x	93.0	96.2	100.0	104.2	108.7
y	11.38	12.80	14.70	17.07	19.91