Assignment 2

Numerical Analysis by Maqsood Alam

Due date: 27/11/2020

Q1:- Consider the following table

x	*f(x)*
1940	*17*
1950	*20*
1960	*27*
1970	*32*
1980	*36*
1990	*38*

1. Approximate value of f(x) when x = 1945 using newton's forward difference formula.
2. Approximate value of f(x) when x = 1985 using newton's forward difference formula
3. Approximate value of f(x) when x = 1964 using guass forward formula.
4. Approximate value of f(x) when x = 1976 using guass backward formula.

Q2:- Consider the following table

x	*f(x)*
10	*0.23967*
11	*0.28060*
12	*0.31788*
13	*0.35209*
14	*0.38368*

1. Approximate the value of f(x) when x = 12.2 using guass forward formula.
2. Approximate the value of f(x) when x = 12.2 using guass backward formula.
3. Approximate the value of f(x) when x = 12.2 using stirling's formula.
4. Approximate the value of f(x) when x = 12.2 using bessel's formula.

Q3:- Implement the following programs in python

1. Guass backward formula
2. Bessel's formula
3. Sterling's formula.

Q4:- Solve Q1 and Q2 using phyton.