S&T2024 Advanced C Programming Lab 1

Command Line

Unzip **AC_Lab1.zip**.

Part-I

The **encode.c** is given. A file called **unknown.inf** contains the ciphered text generated by encode.c. Write a C program called **decode.c** that takes unknown.inf as an input file from the command line and deciphers the contents. The resulting plain text should be stored in a text file called **known.ouf**. You should make use of encode.c in decode.c.

unknown.inf

```
Prev rnkligzmg gsrmth nfhg yv wlmv vevib wzb:
- gl zkkivxrzgv
- gl kizrhv
- gl ivdziw
- gl zkloltrav
- gl ivkzri
~ YMD 1996

Oevib tznv szh rgh ifovh zmw ivtfozgrlmh.
Kmw vevm gsv mzgfiv szh z ozd gl uloold.
Dsviv rh ml uivv kozb rm gsrh dliow.
~ YMD 1996

Su dv dzmg kvlkov gl gifhg fh dv nfhg wvorevi
  dszg dv szev kilnrhvw.
Su dv dzmg gl tzrm gsvri ivhkvxg dv nfhg wvorevi nliv gszm
  dszg dv szev kilnrhvw,
~ COZ 1996

Zirerovtv rh mlg gl yv zhpvw uli li gl yv xozrnvw zh zm vmgrgovnvmg.
Zirerovwv rh trevm fklm lfi xivwryrorgb.
~ Tfob 1997

Sg rh yvggvi gl yv ivhkvxgzyov gszm gl yv uznlfh.
~ Tfob 1999
```

Part-II

Write a program named as **compute.c** that accepts an arbitrary number of integers from the command line and displays their sum, mean, maximum and minimum on the screen as shown below. The number of arguments entered from the command line is assumed to be unknown. These are a few test cases:

```
C:\> compute 28

 Sum = 28
 Mean = 28.00
 Maximum = 28
 Minimum = 28
```

```
C:\> compute
 Error !! No Data.


C:\> compute -4 89 9 3987 -389
 Sum = 3692
 Mean = 738.40
 Maximum = 3987
 Minimum = -389
```

The following logic is suggested. If you have alternatives, please go ahead to code every thing in your own way.

```
if the number of arguments is less than 2
  print error messages and exit;

convert the first integer to a numerical value
  and initialize max, min, sum to the value;

if the number of arguments is greater than 2
  for the remaining integers
  {
     convert a remaining integer to a numerical value;
     accumulate the numerical value to sum;
     change max to the numerical value if necessary;
     change min to the numerical value if necessary;
  }

compute mean;
print sum, mean, max, min;
```