

CPSC 231 (Winter 2017)

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Problem statement 1

- Write a program that can calculate **geometric mean, arithmetic mean, sum and median** of n numbers.
- **Use 6 functions to do the task:**
 - one function to **read the input and return a list of numbers**
 - one function that gets passed the list and returns the **geo mean**
 - one function that gets passed the list and returns the **median**
 - one function that gets passed the list and returns the **arithmetic mean**
 - one function that gets passed the list and returns the **sum of numbers**
 - Lastly, **main function** to use above functions to fulfill your program task

Problem statement 1

- Run with input redirected in from a file and provide **one valid function name as command line argument** (corresponding function would be invoked)
 - `python3 tutorial.py geomean < datafile`
 - `python3 tutorial.py median < datafile`
 - `python3 tutorial.py arithmeticmean < datafile`
 - `python3 tutorial.py allsum < datafile`

Problem statement 1

- Add error checking for the command-line arguments when:
 - `python3 tutorial.py foo < datafile` (Undefined functions)
 - `python3 tutorial.py < datafile` (No function invoked)
 - `python3 tutorial.py mean foo < datafile` (Too many functions invoked)
- Meaningful error message should be printed

Example input 1

- Content of a datafile can be as follows

1.23

42.0

12.8

999.9

EOF

Example input 2

- Content of a datafile can be as follows

1.0

2.0

3.0

4.0

5.0

EOF

Thank you