

In the name of God

Department of Physics  
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ADVANCED METHODS ON COMPUTATIONAL PHYSICS

Exercise Set 1

(Date Due: 1398/12/22)

1. Bash file experiences: According to presented subjects regarding to Bash file and by using *listarrange* and *data* files, write a bash file for following tasks:

- A : Loops.
- B : Making directory and file.
- C : Reading from file and writing in another file.
- D : Run a simple program.

2. Rounding error in computer: Suppose to have single precision for floating point representation. In this case compute  $5.5+10^{-8}=?$  (Hint: to this end use floating point representation and then add two representations).

3. Floating point representation:

- A : For Single precision paradigm, compute minimum and maximum values of a positive number (except to "0" and "+∞")
- B : For Double precision paradigm, compute minimum and maximum values of a positive number (except to "0" and "+∞")

Good luck, Movahed

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