

In the name of God

ADVANCED METHODS ON COMPUTATIONAL PHYSICS

Quiz1

(Date Due: 1399/01/19, From 13:00 until 14:00 o'clock)

NOTE: Your answer accompanying your codes and plots must be compressed into a single zip file and sent to "goodarzipooyan@gmail.com" and cc to movahedsadegh@yahoo.com before 13:00 o'clock.

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

A : Make directories with the names written in *list.txt* file.

B : Reading data from the file entitled *data.txt* and compute the mean and σ_m of data and write them into the *output.txt* file, then copy the *output.txt* file in each folder made in part **A**.

C : Reading data from the file entitled *data.txt* and then multiply each data by 10, namely $x \rightarrow x \times 10$ and then write new value in a new file entitled *output10.txt*, then copy the *output10.txt* file in each folder made in part **A**.

2. Fitting function: Using *IRANCovid19.txt* file and compute the best fit values of the free parameters (n_0, λ) with corresponding statistical errors if the fitting function is given by $n(t) = n_0 e^{\lambda t}$. Plot the fitting function and compare it with data.

Good luck, Movahed
