HE Jinling (何金玲)'s TA report for assignment06
SID: 12132199
Github: https://github.com/Lingll96/ESE5023_Assignments_12132199
Responsible TA: HUANG Hao
Grade: 40

Good, but your report is less detailed. I read your code, I just have one comment that you can use sind and asind to calculate the values in degree.

1. At this question, my codes are named as Main.f90 and Matrix_multip.f90. The results are:

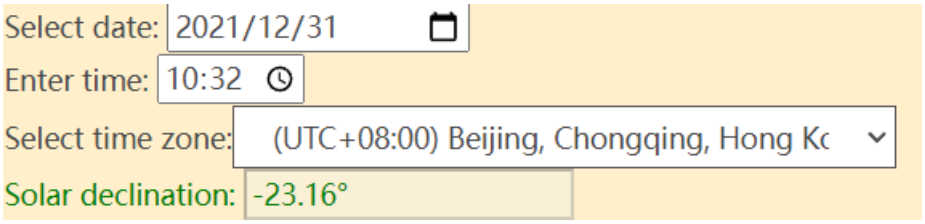
```
-bash-4.2$ gfortran Main.f90 Matrix_multip.o -o Main.x
-bash-4.2$ ./Main.x
 M matrix
  19.48   15.79   19.28
  19.28   12.92   15.86
  15.86   11.29   14.04
  11.93   18.60   18.23
  19.28   12.92   15.86
 N matrix
  7.72   4.11   1.44   4.80   5.55
  5.55   4.80   4.04   0.59   8.58
  0.59   8.58   2.26   7.72   4.11
 The result
  249.40   229.90   193.38   206.09   229.90
  321.28   277.34   239.84   294.73   277.34
  135.42   115.80   100.18   133.52   115.80
  251.66   222.61   191.18   208.97   222.61
  322.83   283.04   242.60   300.72   283.04
```

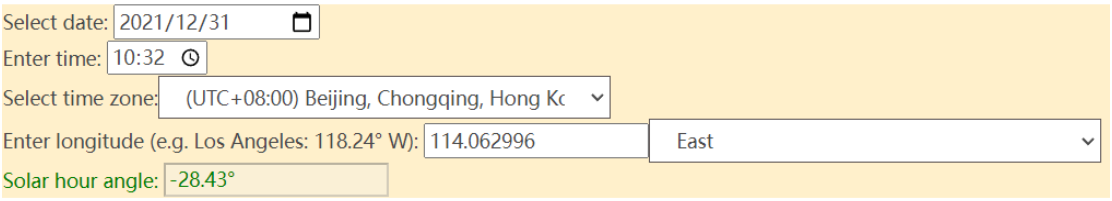
```
  GNU nano 2.3.1                    File: MN.dat

  249.40   229.90   193.38   206.09   229.90
  321.28   277.34   239.84   294.73   277.34
  135.42   115.80   100.18   133.52   115.80
  251.66   222.61   191.18   208.97   222.61
  322.83   283.04   242.60   300.72   283.04
```

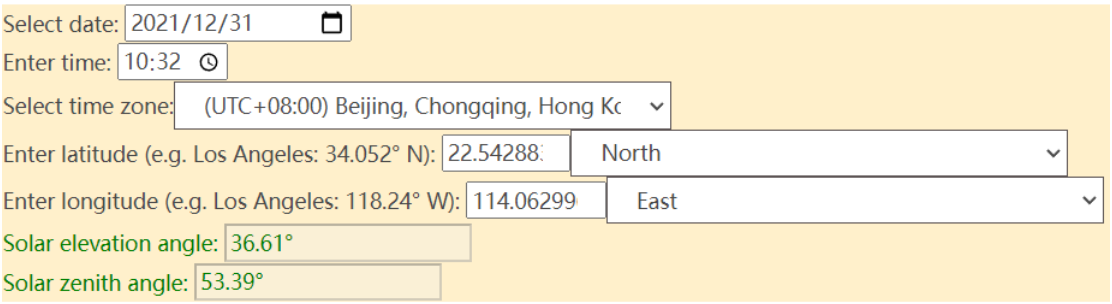
2. At this question, my codes are named as Declination_angle.f90, Solar_hour_angle.f90, and Solar_elevation_angle.f90. The results are:

```
-bash-4.2$ ar rcvf libsea.a Declination_angle.o Solar_hour_angle.o
r - Declination_angle.o
r - Solar_hour_angle.o
-bash-4.2$ gfortran Solar_elevation_angle.f90 -o Solar_elevation_angle.x -L. -lsea
-bash-4.2$ ./Solar_elevation_angle.x
 Please enter the year:
2021
 Please enter the month:
12
 Please enter the date:
31
 Please enter the hour:
10
 Please enter the minute:
32
 Please enter the longitude:
114.062996
 Please enter the latitude:
22.542883
  The solar elevation angle is    36.574228351186356
  The solar declination angle is   -23.0964355
  The solar hour angle is   -28.5503616
```

The results on the website are:







It seems that something is wrong causing the error. However, I have checked the codes and cannot find any errors. In my opinion, it might be attributed to the precision of the numeric datatype.

It is good to validate your answer by website.