ZHANG Bo (张波)'s TA report for assignment06
SID: 12132713
Github: https://github.com/zhang98765432/ESE5023_Assignments_12132713
Responsible TA: HUANG Hao
Grade: 38

12132713 地球与空间科学系 张波
第六次作业

第一题 Correct answer and correct code. (15/15) It is better to show your answer directly in your report.
主程序 Main.f90,主程序读取两个文件夹里面的数据，调用子程序 Matrix_multip.f90 进行两个矩阵的乘法，然后生成一个新的文件 MN.dat
附件中上传了两个 fortran 脚本和 MN.dat，M.dat，N.dat

第二题
上传了三个 fortran 脚本，Declination_angle.f90，Solarhour_angle.f90

和 Solarhour_angle.f90，以及编译后的二进制文件 SEA_main.x，执行该文件后，结果如下

图所示

```
[ess-zhangb@login01 fortran_demo3]$ ifort SEA_main.f90 -o SEA_main.-L. -lsea
```

```
[ess-zhangb@login01 fortran_demo3]$ ./SEA_main.x
 2021-12-31
 day of the year   365.0000
 Declination angle is (degree):    23.35037
 Solar hour angle (degree) is :   -22.05000
 The solar elevation angle for Shenzhen at 10:32 2021-12-31 will be (degree):
   21.62326
 program finished
```

In three .f90 files, for a transformation from degree to radian, that should be *pi/180, not *pi/360.0. So, you did not get correct answer.

Second, if you wanted to calculate a sin(value) with the value in degree, I suggest you to use sind() directly.

Third, I think it is good to write the code for calculating the number of days before a given date, although that is beautiful enough. Please refer to this method for calculating the number of days: https://www.cnblogs.com/Pupa/p/10467523.html

2 points were deducted for incorrect answers.