Python Data Science Homework #3

NOTICE

- PRINT OUT THE ANSWERS DIRECTLY WILL NOT BE SCORED
- Only python files (.py) are accepted. (.ipynb, pdf, word is not accepted)
- Please use studentID_HW3 as file name. (ex: 310704001_HW1)
- Please do not split your python file into multiple python file. You can do it only if you wrote your own functions or packages, but still you need to import it yourself in your main program.
- If you have any questions about the homework#3, please email to
  baby90522.iem09g@nctu.edu.tw

---

1. If you using undefined variables **X**, "NameError" will appear after you run the code **X**. Please deal with NameError exception, then print the following sentence without error. (20%)

   Output：

   ```
   you should define the variable
   ```

2. Please use the ***with*** keyword to read the attached csv file named**"file.csv"**, then print the following sentences. (20%)

   Output：

   ```
   ['Practice makes perfect. ']
   ['Look before you leap.']
   ['Knowledge is power.']
   ```
   `

3. Please implement __iter__() and __next__() methods to create an ***iterator*** that returns numbers, starting with 5, and each sequence will multiply the previous number by 2, besides, stop iteration until the number exceeds 50. (20%)

   Output :

   ```
   5
   10
   20
   40
   ```

4. Please create a class named **Midterm** with attributes (*name="Tony"*), and use **instance methods** to provide an extra arguments (*english, math*) to the function **grade,** creating object of the class and call the **grade** function for printing the grades of the two subjects(English and math*). (20%)

output：

```
Tony english grade is 100, math grade is 90
```

5. The unfinished code is shown below, please create the object of the class and revise the password to 5678. (20%)

```python
class bank:
    def __init__(self):
        self._password = 1234

    @property
    def password(self):
        return self._password

    @password.setter
    def password(self, value):
        self._password = value
```

Output：

```
lisa password : 5678
```