

## 金融编程与计算 week06 作业

1、用 VS Code 打开项目目录，新建一个 environment.yml 文件，指定安装 Python 3.12，然后运行 conda env create 命令创建 Conda 环境

```
(base)
lenovo@LAPTOP-UDBV5M8K MINGW64 ~/repo/week06 (main)
$ ll
total 24
-rw-r--r-- 1 lenovo 197121 18805  4月 15 14:47 LICENSE
-rw-r--r-- 1 lenovo 197121  2239  4月 15 14:47 README.md
(base)
lenovo@LAPTOP-UDBV5M8K MINGW64 ~/repo/week06 (main)
$ cp ../week04/environment.yml ./
(base)
lenovo@LAPTOP-UDBV5M8K MINGW64 ~/repo/week06 (main)
$ ll
total 28
-rw-r--r-- 1 lenovo 197121  1866  4月 15 14:50 environment.yml
-rw-r--r-- 1 lenovo 197121 18805  4月 15 14:47 LICENSE
-rw-r--r-- 1 lenovo 197121  2239  4月 15 14:47 README.md
(base)
lenovo@LAPTOP-UDBV5M8K MINGW64 ~/repo/week06 (main)
$
```

```
(base)
lenovo@LAPTOP-UDBV5M8K MINGW64 ~/repo/week06 (main)
$ conda env create
C:\Users\lenovo\anaconda3\Lib\argparse.py:2006: FutureWarning: 'remote_definition' is deprecated and will be removed in
25.9. Use 'conda env create --file=URL' instead.
  action(self, namespace, argument_values, option_string)
Retrieving notices: ...working... done
Warning: you have pip-installed dependencies in your environment file, but you do not list pip itself as one of your con
da dependencies. Conda may not use the correct pip to install your packages, and they may end up in the wrong place. P
lease add an explicit pip dependency. I'm adding one for you, but still nagging you.

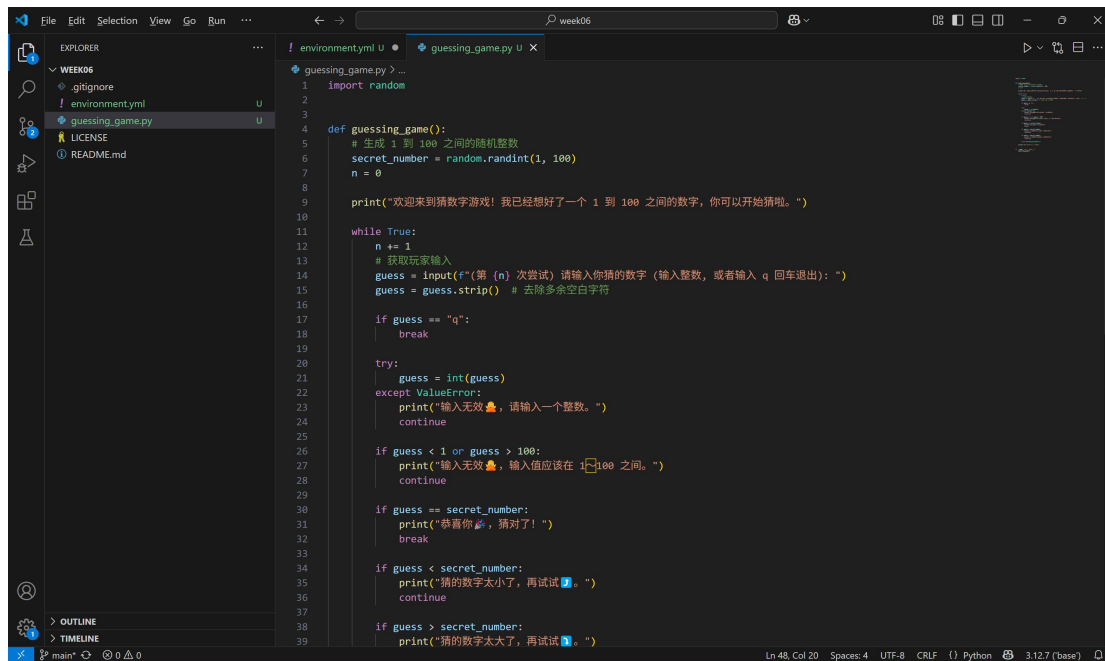
CondaValueError: prefix already exists: C:\Users\lenovo\anaconda3\envs\prj1
(base)
lenovo@LAPTOP-UDBV5M8K MINGW64 ~/repo/week06 (main)
$
```

```
(base)
lenovo@LAPTOP-UDBV5M8K MINGW64 ~/repo/week06 (main)
$ conda activate week06

EnvironmentNameNotFound: Could not find conda environment: week06
You can list all discoverable environments with 'conda info --envs'.

(base)
lenovo@LAPTOP-UDBV5M8K MINGW64 ~/repo/week06 (main)
$ conda list
# packages in environment at C:\Users\lenovo\anaconda3:
#
# Name                               Version           Build           Channel
_anaconda_depends                    2024.10            py312_mkl_0     defaults
aiobotocore                           2.12.3             py312haa95532_0 defaults
aiohappyeyeballs                     2.4.0              py312haa95532_0 defaults
```

2、创建一个 guessing\_game.py 文件，复制粘贴以下代码，运用 pdb 调试器理解其运行流程：

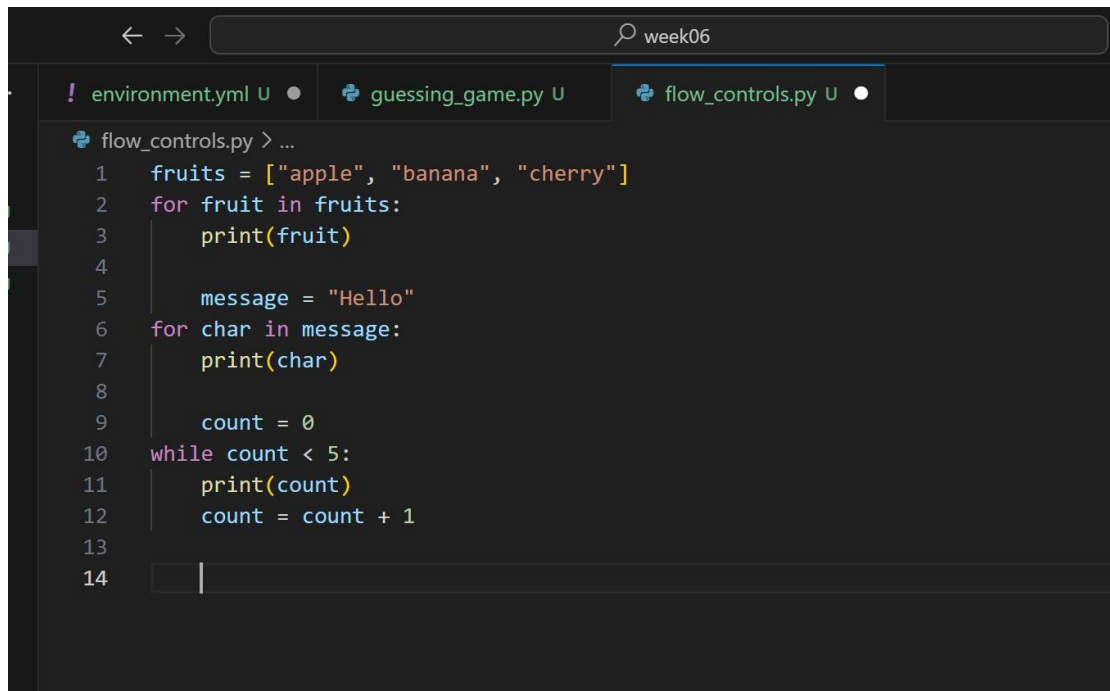


The screenshot shows a code editor with a file explorer on the left and a Python script in the main window. The script is a guessing game that generates a random number between 1 and 100 and allows a user to guess it. It includes comments in Chinese and uses various flow control statements like `while`, `if`, `break`, `continue`, `try/except`, and `print`.

```
1 import random
2
3
4 def guessing_game():
5     # 生成 1 到 100 之间的随机整数
6     secret_number = random.randint(1, 100)
7     n = 0
8
9     print("欢迎来到猜数字游戏！我已经想好了一个 1 到 100 之间的数字，你可以开始猜啦。")
10
11     while True:
12         n += 1
13         # 获取玩家输入
14         guess = input(f"第 {n} 次尝试 请输入你猜的数字（输入整数，或者输入 q 回车退出）：")
15         guess = guess.strip() # 去除多余空白字符
16
17         if guess == "q":
18             break
19
20         try:
21             guess = int(guess)
22         except ValueError:
23             print("输入无效，请输入一个整数。")
24             continue
25
26         if guess < 1 or guess > 100:
27             print("输入无效，输入值应该在 1~100 之间。")
28             continue
29
30         if guess == secret_number:
31             print("恭喜你，猜对了！")
32             break
33
34         if guess < secret_number:
35             print("猜的数字太小了，再试试。")
36             continue
37
38         if guess > secret_number:
39             print("猜的数字太大了，再试试。")
```


3、创建一个 `flow_controls.py` 文件，让豆包 (或 DeepSeek 等任何大模型) 生成例子，尝试运行，体会理解以下 Python 流程控制语句：

<code>for</code>	迭代循环 (iteration loop)
<code>while</code>	条件循环 (conditional loop)
<code>break</code>	打断跳出循环
<code>continue</code>	跳至下一轮循环
<code>for...else</code>	循环未被打断的处理
<code>if</code>	条件分支
<code>if...elif...elif</code>	多重条件分支
<code>if...else</code>	未满足条件的处理
<code>try...except[...except...else...finally]</code>	捕捉异常的处理
<code>raise</code>	主动抛出异常



```
1 fruits = ["apple", "banana", "cherry"]
2 for fruit in fruits:
3     print(fruit)
4
5     message = "Hello"
6 for char in message:
7     print(char)
8
9     count = 0
10 while count < 5:
11     print(count)
12     count = count + 1
13
14
```

4、创建一个 mylib.py 模块 (module)，在里面定义以下函数，再创建一个 myjob.py 脚本 (script)，从 mylib.py 导入函数并尝试调用：



```
1 def func1():
2     x = 50
3     y = x * 0.5 - 7
4     print(y)
5
```

5、把 mylib 模块转变为 软件包 (package) 安装进当前的 Conda 环境来使用

把 myjob.py 脚本移动至 scripts/myjob.py，再次尝试运行，会发现 import mylib 失败，这是由于 mylib 并没有打包成 软件包 (package) 安装

