

## Chapter 4:

### Exercise 4: What is the purpose of the “def” keyword in Python?

- a) It is slang that means “the following code is really cool”
- b) It indicates the start of a function
- c) It indicates that the following indented section of code is to be stored for later
- d) b and c are both true
- e) None of the above

-> Answer: d) b and c are both true

### Exercise 5: What will the following Python program print out?

```
def fred():  
    print("Zap")  
  
def jane():  
    print("ABC")  
  
jane()  
fred()  
jane()
```

- a) Zap ABC jane fred jane
- b) Zap ABC Zap
- c) ABC Zap jane
- d) ABC Zap ABC
- e) Zap Zap Zap

-> Answer: e) Zap Zap Zap

### Exercise 6: Rewrite your pay computation with time-and-a-half for overtime and create a function called `compute_pay` which takes two parameters (hours and rate).

**Enter Hours: 45**

**Enter Rate: 10**

**Pay: 475.0**

```
main.py > ...
1  def computepay (H, R):
2      if H>40:
3          pay=40*R+(H-40)*R*1.5
4      else:
5          pay=H*R
6      return pay
7  H=float(input("Enter Hours: "))
8  R=float(input("Enter Rate: "))
9  p=computepay(H, R)
10 print("Enter Hours:", H)
11 print("Enter Rate:", R)
12 print("Pay:", p)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
s\vscode-python> & C:/Users/qp301/AppData/Local/Programs/Python/Python313/python.exe c:/Users/qp301/Downloads/vscod
e-python/main.py
Enter Hours: 45.0
Enter Rate: 10.0
Enter Hours: 45.0
Enter Rate: 10.0
Pay: 475.0
PS C:\Users\qp301\Downloads\vscode-python>
```

Terminal tabs: powershell, Python

**Exercise 7: Rewrite the grade program from the previous chapter using a function called `computegrade` that takes a score as its parameter and returns a grade as a string.**

```
main.py X
main.py > ...
1 s=input("Enter Score: ")
2 def computegrade(s):
3     if s < 0.0 or s > 1.0:
4         print("Bad score")
5     elif s >= 0.9:
6         print("A")
7     elif s >= 0.8:
8         print("B")
9     elif s >= 0.7:
10        print("C")
11    elif s >= 0.6:
12        print("D")
13    else:
14        print("F")
15
16 try:
17     # check xem có phải số hay chữ
18     s = float(s)
19     print(f"Enter Score: {s}")
20     computegrade(s)
21 except ValueError:
22     print(f"Enter Score: {s}")
23     print("Bad score")

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\qp301\Downloads\vscode-python> & C:/Users/qp301/AppData/Local/Programs/Python/Python313/python.exe c:/U
sers/qp301/Downloads/vscode-python/main.py
Enter Score: 0.95
Enter Score: 0.95
A
PS C:\Users\qp301\Downloads\vscode-python> |
```

```
main.py > ...
1 s=input("Enter Score: ")
2 def computegrade(s):
3     if s < 0.0 or s > 1.0:
4         print("Bad score")
5     elif s >= 0.9:
6         print("A")
7     elif s >= 0.8:
8         print("B")
9     elif s >= 0.7:
10        print("C")
11    elif s >= 0.6:
12        print("D")
13    else:
14        print("F")
15
16 try:
17     # check xem có phải số hay chữ
18     s = float(s)
19     print(f"Enter Score: {s}")
20     computegrade(s)
21 except ValueError:
22     print(f"Enter Score: {s}")
23     print("Bad score")

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\qp301\Downloads\vscode-python> & C:/Users/qp301/AppData/Local/Programs/Python/Python313/python.exe c:/U
sers/qp301/Downloads/vscode-python/main.py
Enter Score: perfect
Enter Score: perfect
Bad score
PS C:\Users\qp301\Downloads\vscode-python> |
```

```
main.py > ...
1 s=input("Enter Score: ")
2 def computegrade(s):
3     if s < 0.0 or s > 1.0:
4         print("Bad score")
5     elif s >= 0.9:
6         print("A")
7     elif s >= 0.8:
8         print("B")
9     elif s >= 0.7:
10        print("C")
11    elif s >= 0.6:
12        print("D")
13    else:
14        print("F")
15
16 try:
17     # check xem có phải số hay chữ
18     s = float(s)
19     print(f"Enter Score: {s}")
20     computegrade(s)
21 except ValueError:
22     print(f"Enter Score: {s}")
23     print("Bad score")
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\qp301\Downloads\vscode-python> & C:/Users/qp301/AppData/Local/Programs/Python/Python313/python.exe c:/Users/qp301/Downloads/vscode-python/main.py

Enter Score: 10.0

Enter Score: 10.0

Bad score

PS C:\Users\qp301\Downloads\vscode-python> |

python

python