Fundamentals of Programming

The assignments are Short Answer 1.6 on page 27, Programming Exercises 2.1 on page 104, and 3.3 on page 154 of the textbook (Chapters 1-3). For your convenience, the exercises are shown below. Please copy here your source codes, including your input and output screenshots. Please upload this document along with your source files (i.e., the .py files) on Canvas by the due date.

1.6 (*Short Answer*) What is the difference between a compiler and an interpreter?

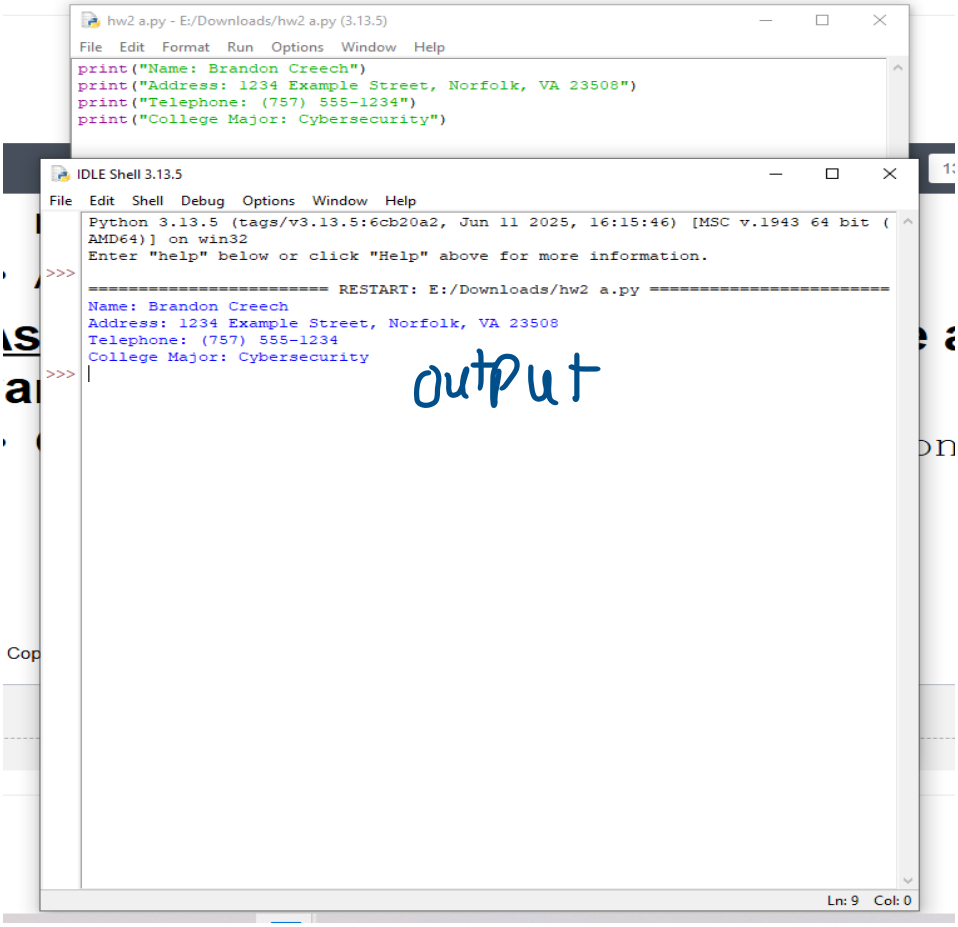
The main difference between a compiler and an interpreter is that a compiler can read a translate a whole coding program at once, while an interpreter must translate code line-by-line. This makes an interpreter slower, but also any syntax error it encounters prevents the entire code from being executed. A compiler, however, can identify errors before the execution.

2.1 (*Personal Information*) Write a program that displays the following information:

- Your name
- Your address, with city, state, and ZIP
- Your telephone number
- Your college major

Result:

Output:



Source code:

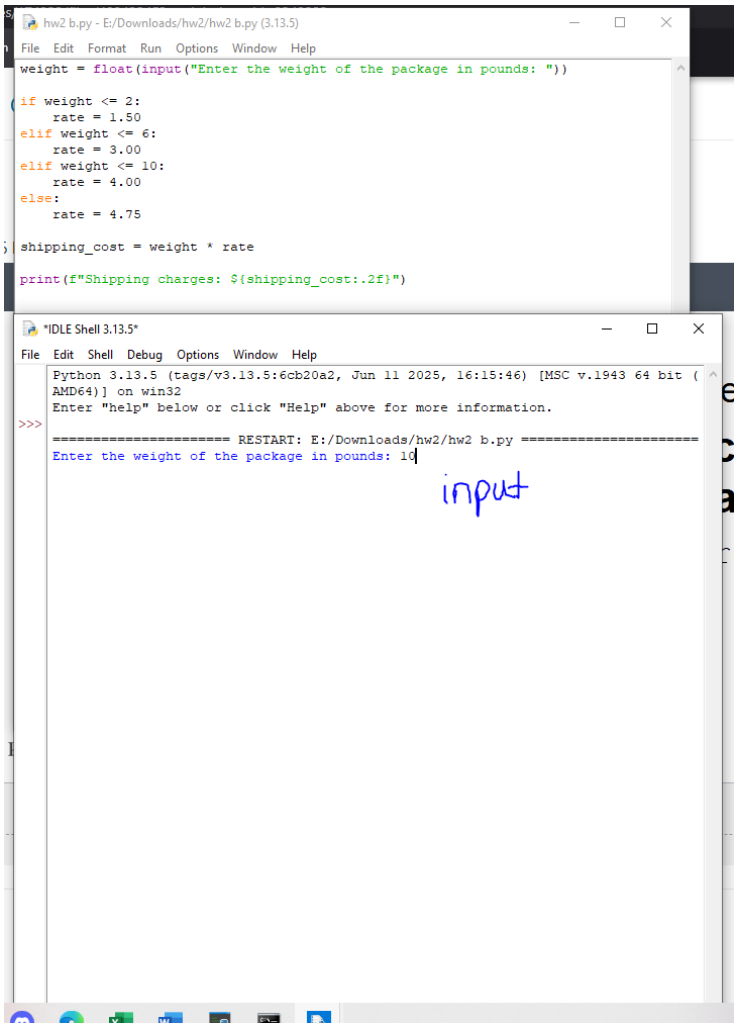
```
print("Name: Brandon Creech")
print("Address: 1234 Example Street, Norfolk, VA 23508")
print("Telephone: (757) 555-1234")
print("College Major: Cybersecurity")
```

3.3 (*Shipping Charges*) The Fast Freight Shipping Company charges the following rates:

Weight of Package	Rate per Pound
2 pounds or less	$1.50
Over 2 pounds but not more than 6 pounds	$3.00
Over 6 pounds but not more than 10 pounds	$4.00
Over 10 pounds	$4.75

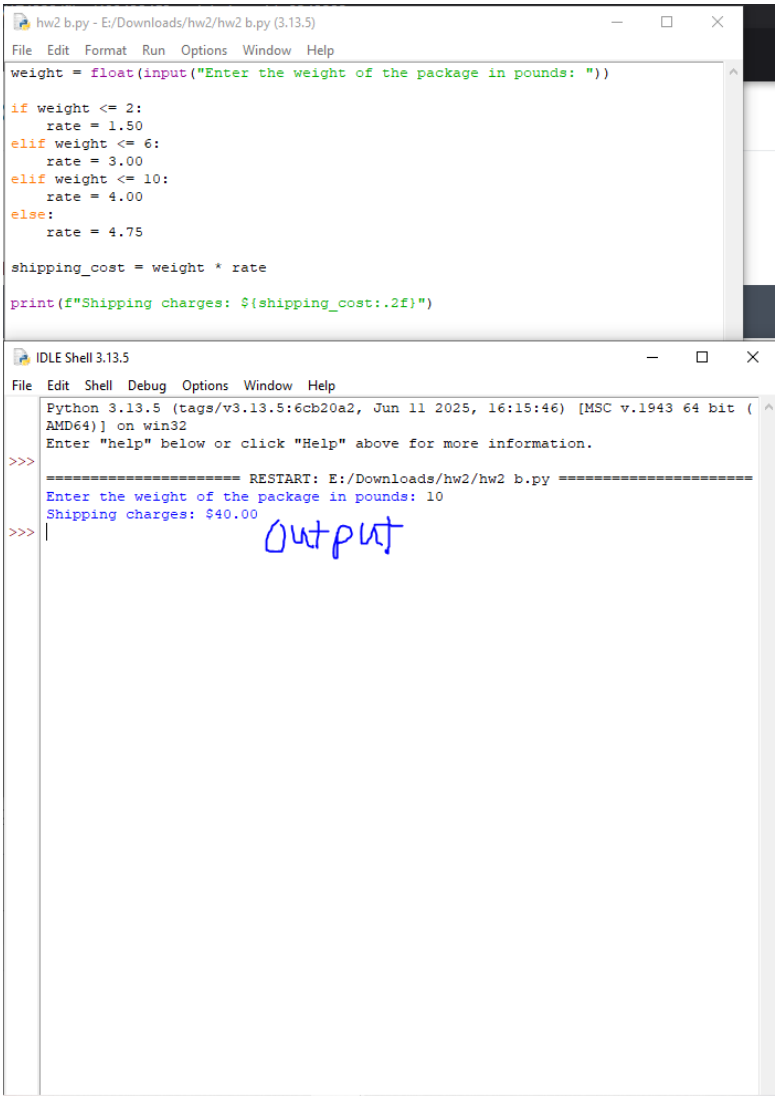
Write a program that asks the user to enter the weight of a package then displays the shipping charges.

Result:



Input:

Output:


hw2 b.py - E:/Downloads/hw2/hw2 b.py (3.13.5)
File Edit Format Run Options Window Help
weight = float(input("Enter the weight of the package in pounds: "))
if weight <= 2:
rate = 1.50
elif weight <= 6:
rate = 3.00
elif weight <= 10:
rate = 4.00
else:
rate = 4.75
shipping_cost = weight * rate
print(f"Shipping charges: ${shipping_cost:.2f}")
IDLE Shell 3.13.5
File Edit Shell Debug Options Window Help
Python 3.13.5 (tags/v3.13.5:6cb20a2, Jun 11 2025, 16:15:46) [MSC v.1943 64 bit (
AMD64)] on win32
Enter "help" below or click "Help" above for more information.
>>>
========== RESTART: E:/Downloads/hw2/hw2 b.py ==========
Enter the weight of the package in pounds: 10
Shipping charges: $40.00
>>>
Output

Source code:

```
weight = float(input("Enter the weight of the package in pounds: "))

if weight <= 2:
    rate = 1.50
elif weight <= 6:
    rate = 3.00
elif weight <= 10:
    rate = 4.00
else:
    rate = 4.75

shipping_cost = weight * rate

print(f"Shipping charges: ${shipping_cost:.2f}")
```