Screen Capture #1

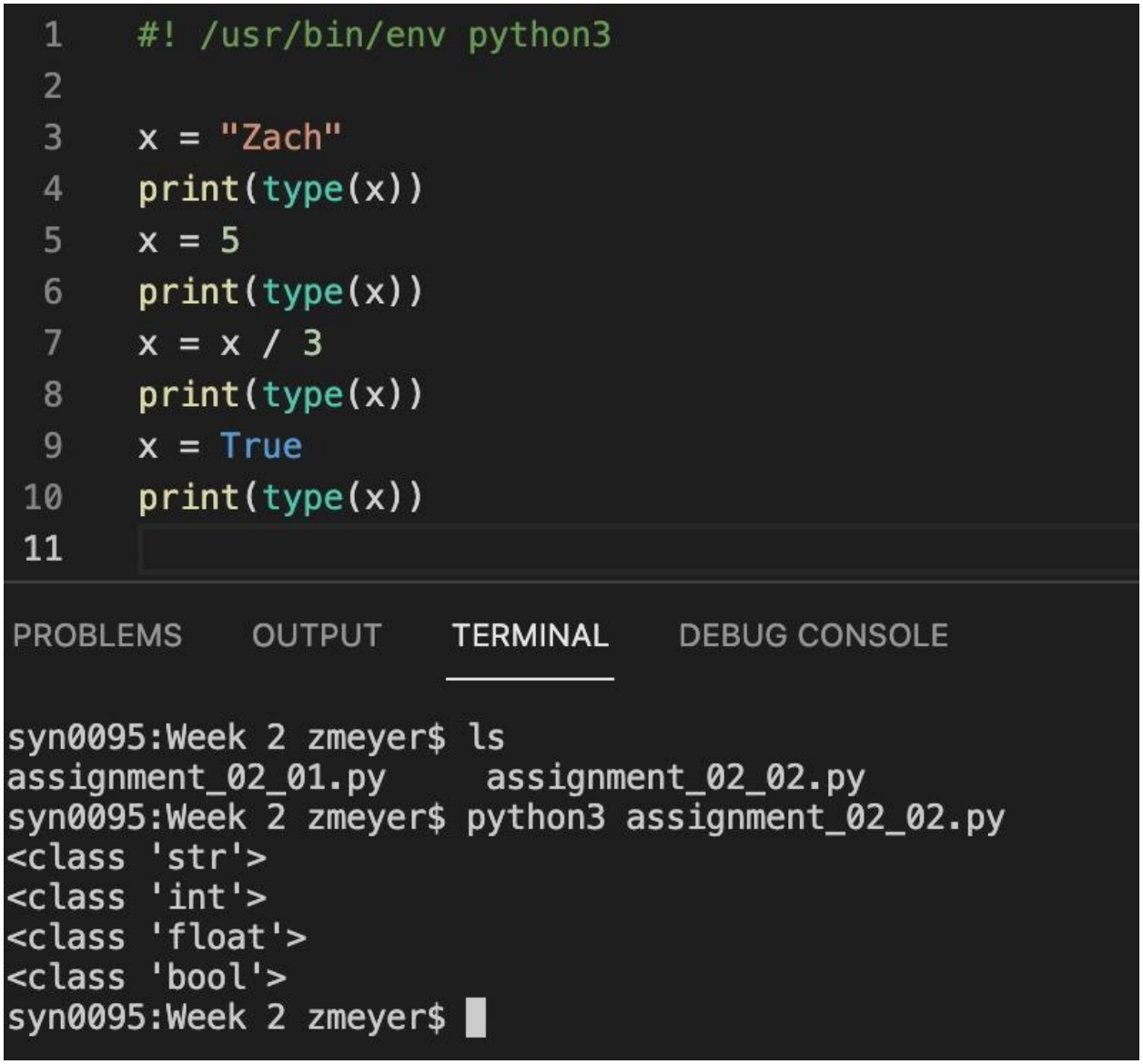
```python
#! /usr/bin/env python3

import random

randomNumber = random.randint(1, 9)
yourGuess = 0
count = 0

while yourGuess != randomNumber and yourGuess != "exit":
    yourGuess = input("Enter a guess between 1 and 9 or exit to end the game ")

    if yourGuess == "exit":
        break

    yourGuess = int(yourGuess)
    count += 1

    if yourGuess < randomNumber:
        print("Too low")
    elif yourGuess > randomNumber:
        print("Too high")
    else:
        print("Right!")
        print("You took only", count, "tries!")
input()
```

```
The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
syn0095:CIMP8A zmeyer$ /usr/local/bin/python3 "/Users/zmeyer/Documents/projects/CIMP8A/Week 2/assignment_02.py"
Enter a guess between 1 and 9 or exit to end the game 5
Too high
Enter a guess between 1 and 9 or exit to end the game 2
Too low
Enter a guess between 1 and 9 or exit to end the game 3
Too low
Enter a guess between 1 and 9 or exit to end the game 4
Right!
You took only 4 tries!
```

Screen Capture #2

```
#! /usr/bin/env python3

import random

# Get a random number between 1 and 9
randomNumber = random.randint(1, 9)
yourGuess = 0
count = 0

# Continue guessing until the guess is correct or the user types 'exit'
while yourGuess != randomNumber and yourGuess != "exit":
    yourGuess = input("Enter a guess between 1 and 9 or exit to end the game ")

    # If the user types 'exit', end the application
    if yourGuess == "exit":
        break

    # Cast the user's guess to an integer so it
    # can be used in the comparison below
    yourGuess = int(yourGuess)
    count += 1

    if yourGuess < randomNumber:
        print("Too low")
    elif yourGuess > randomNumber:
        print("Too high")
    else:
        print("Right!")
        print("You took only", count, "tries!")
input() # This will pause the app from exiting when running from command line
```

Screen Capture #3



```
#! /usr/bin/env python3

x = "Zach"
print(type(x))
x = 5
print(type(x))
x = x / 3
print(type(x))
x = True
print(type(x))

PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE

syn0095:Week 2 zmeyer$ ls
assignment_02_01.py     assignment_02_02.py
syn0095:Week 2 zmeyer$ python3 assignment_02_02.py
<class 'str'>
<class 'int'>
<class 'float'>
<class 'bool'>
syn0095:Week 2 zmeyer$
```

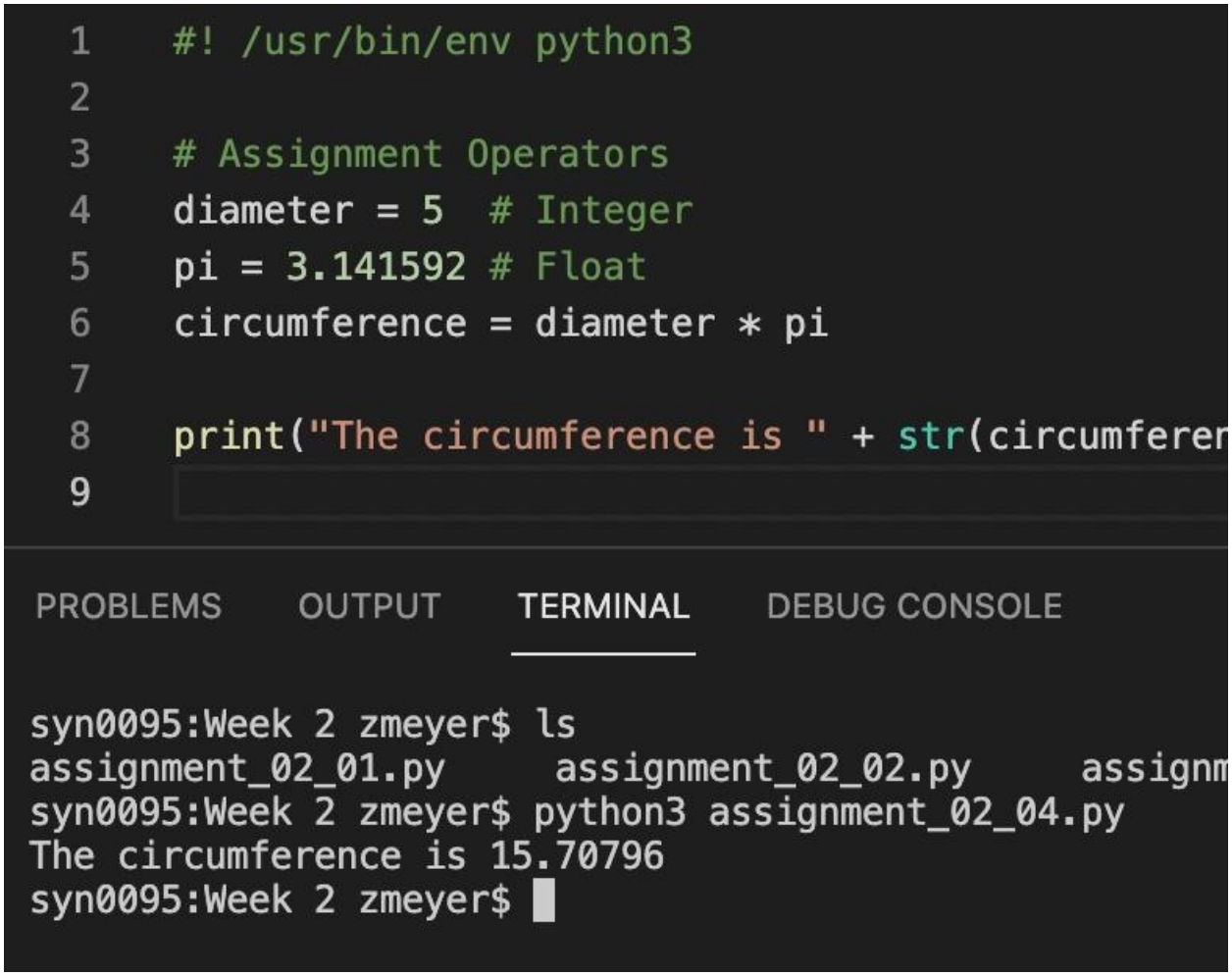
Screen Capture #4

```
1   #! /usr/bin/env python3
2
3   # Basic arithmetic operators
4   print(7 + 3)
5   print(7 - 3)
6   print(7 * 3)
7   print(7 / 3)
8
9   # Two operands
10  print(7 // 3) # Truncates decimal
11  print(7 ** 3) # Raises to the power of
12
13  # Modulus operator
14  print(7 % 3) # Returns the remainder of
15
16  # Order of precedence (Default)
17  # Multiplication and division will happen first
18  print(7 + 3 * 5)
19
20  # User specified order
21  print((7 + 3) * 5) # User () to specify order
22
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
syn0095:Week 2 zmeyer$ ls
assignment_02_01.py     assignment_02_02.py     assignment_02_03.py
syn0095:Week 2 zmeyer$ python3 assignment_02_03.py
10
4
21
2.3333333333333335
2
343
1
22
50
```

Screen Capture #5



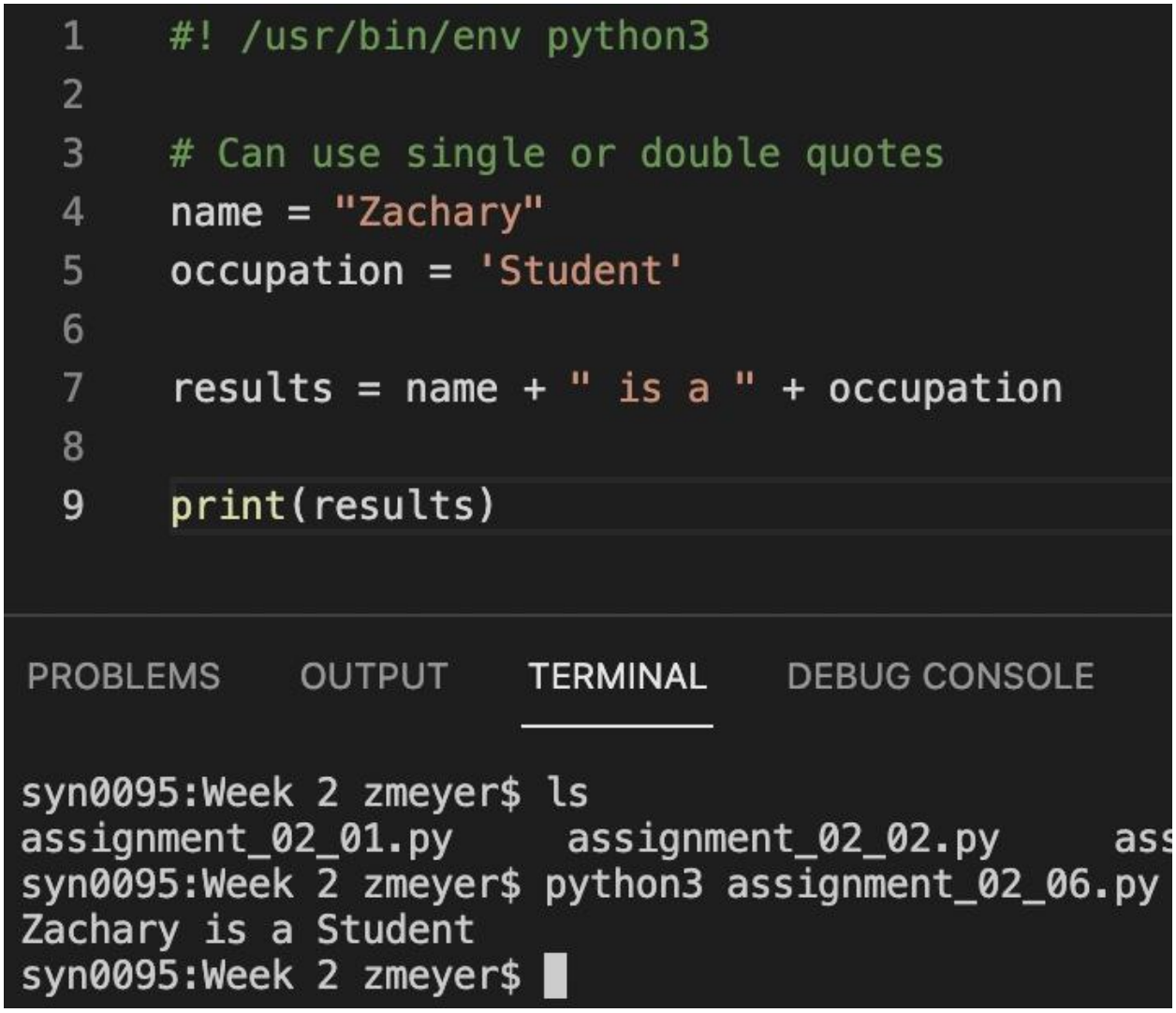
Screen Capture #6

```
 1  #! /usr/bin/env python3
 2
 3  # Incrementing
 4  counter = 0
 5  print("Incrementing starting point: " + str(counter))
 6  counter = counter + 1
 7  print("counter = " + str(counter))
 8  counter += 1
 9  print("counter = " + str(counter))
10
11  # Decrementing
12  count = 10
13  print("Decrementing starting point: " + str(count))
14  count = count - 1
15  print("counter = " + str(count))
16  count -= 1
17  print("counter = " + str(count))
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
syn0095:Week 2 zmeyer$ ls
assignment_02_01.py     assignment_02_02.py     assignment_02_
syn0095:Week 2 zmeyer$ python3 assignment_02_05.py
Incrementing starting point: 0
counter = 1
counter = 2
Decrementing starting point: 10
counter = 9
counter = 8
syn0095:Week 2 zmeyer$
```

Screen Capture #7

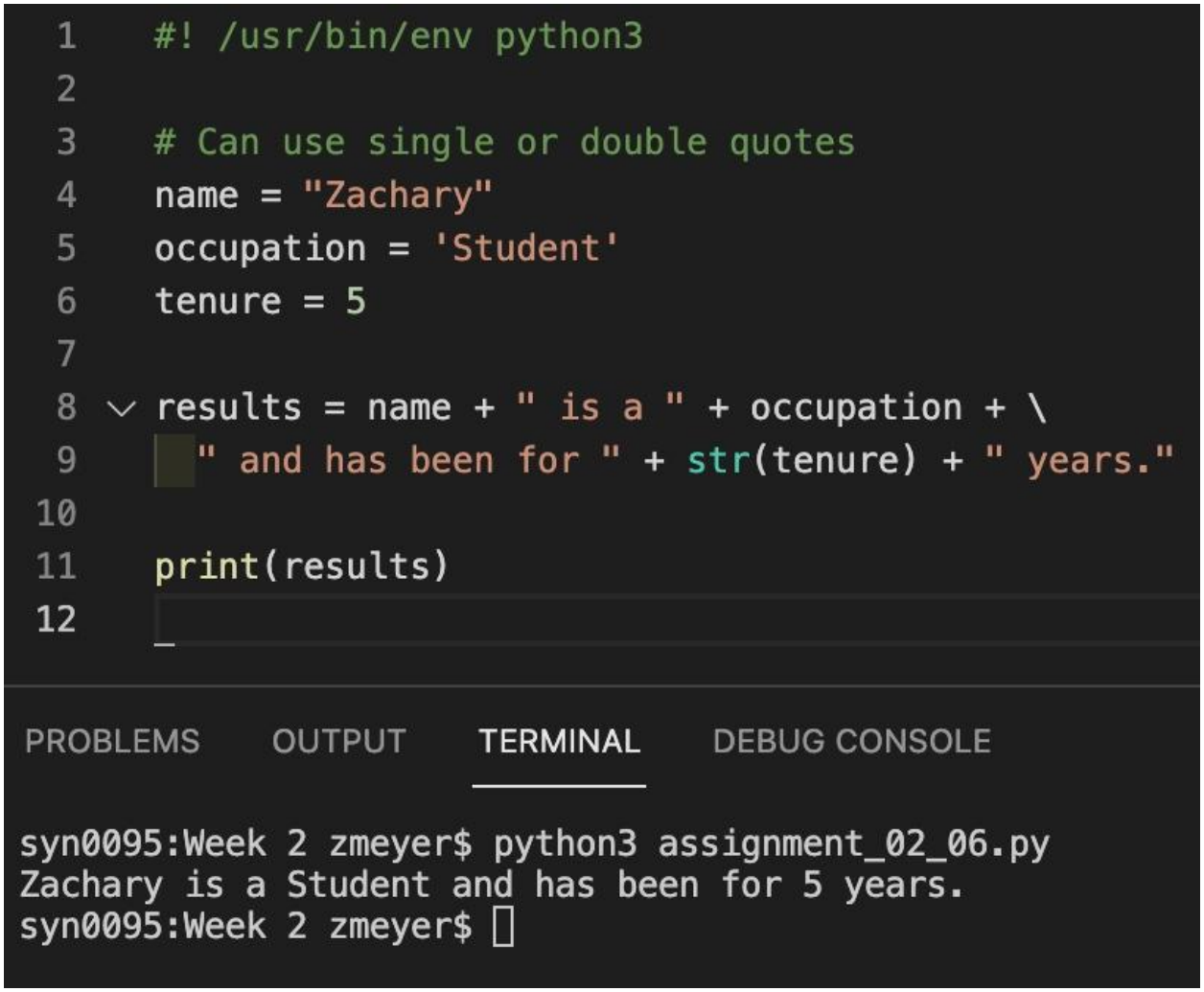


```
1   #! /usr/bin/env python3
2
3   # Can use single or double quotes
4   name = "Zachary"
5   occupation = 'Student'
6
7   results = name + " is a " + occupation
8
9   print(results)
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
syn0095:Week 2 zmeyer$ ls
assignment_02_01.py     assignment_02_02.py     ass
syn0095:Week 2 zmeyer$ python3 assignment_02_06.py
Zachary is a Student
syn0095:Week 2 zmeyer$
```

Screen Capture #8

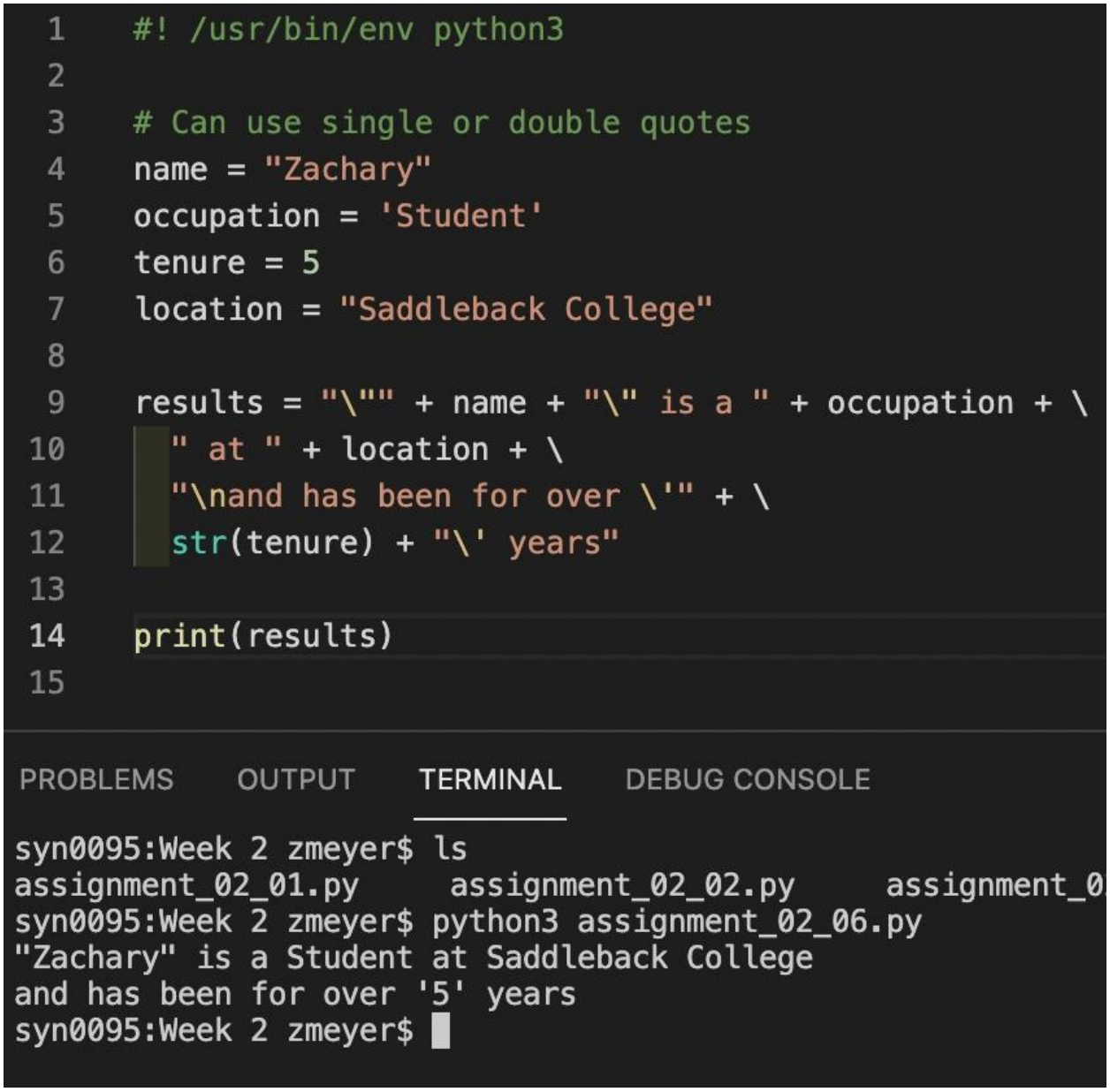


```
1   #! /usr/bin/env python3
2
3   # Can use single or double quotes
4   name = "Zachary"
5   occupation = 'Student'
6   tenure = 5
7
8   results = name + " is a " + occupation + \
9     " and has been for " + str(tenure) + " years."
10
11  print(results)
12
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
syn0095:Week 2 zmeyer$ python3 assignment_02_06.py
Zachary is a Student and has been for 5 years.
syn0095:Week 2 zmeyer$
```

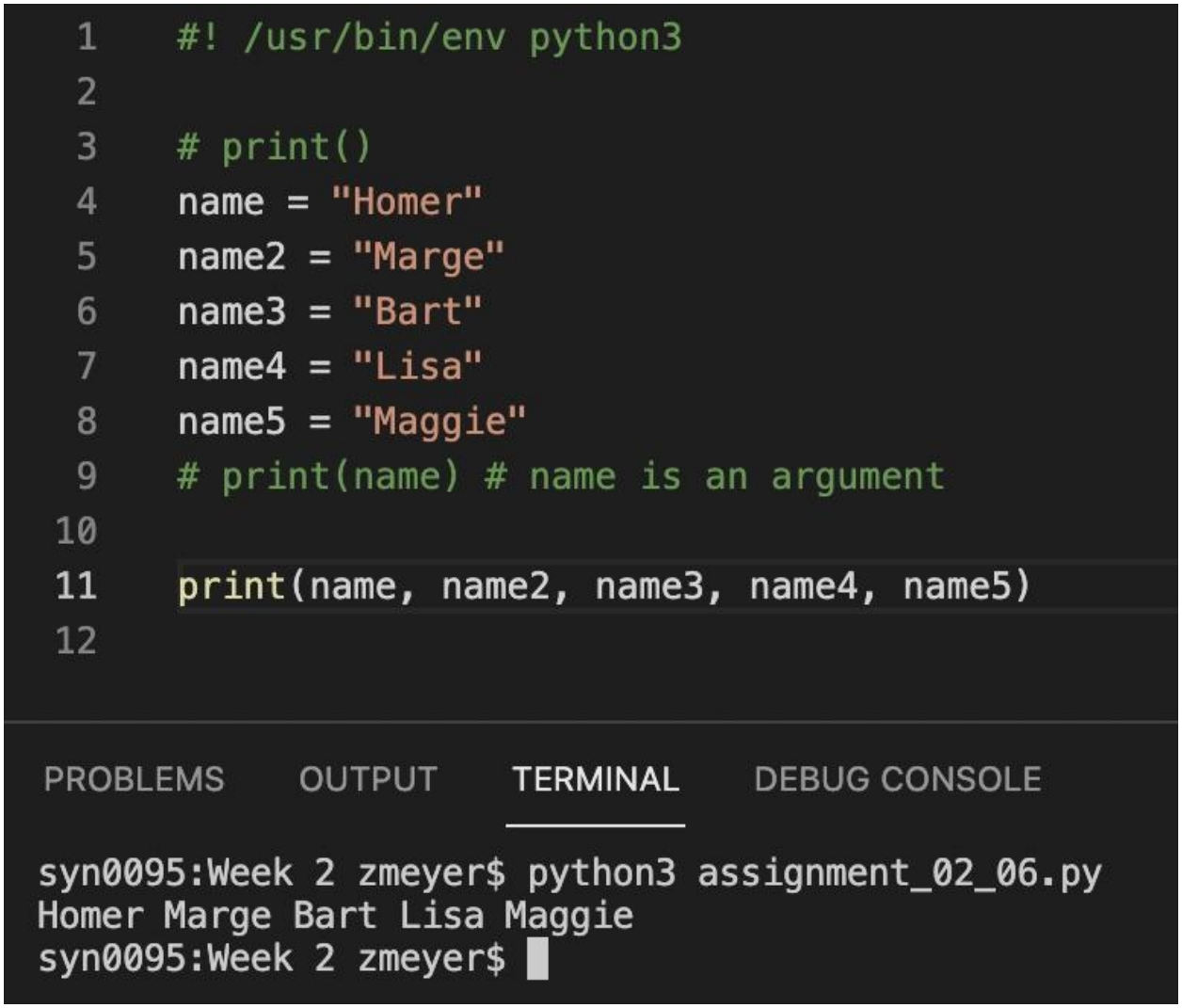
Screen Capture #9



```
#! /usr/bin/env python3

# Can use single or double quotes
name = "Zachary"
occupation = 'Student'
tenure = 5
location = "Saddleback College"

results = "\"" + name + "\" is a " + occupation + \
  " at " + location + \
  "\nand has been for over \'" + \
  str(tenure) + "\' years"

print(results)
```

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE

syn0095:Week 2 zmeyer$ ls
assignment_02_01.py     assignment_02_02.py     assignment_0
syn0095:Week 2 zmeyer$ python3 assignment_02_06.py
"Zachary" is a Student at Saddleback College
and has been for over '5' years
syn0095:Week 2 zmeyer$
```

Screen Capture #10



```
1   #! /usr/bin/env python3
2
3   # print()
4   name = "Homer"
5   name2 = "Marge"
6   name3 = "Bart"
7   name4 = "Lisa"
8   name5 = "Maggie"
9   # print(name) # name is an argument
10
11  print(name, name2, name3, name4, name5)
12
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
syn0095:Week 2 zmeyer$ python3 assignment_02_06.py
Homer Marge Bart Lisa Maggie
syn0095:Week 2 zmeyer$
```

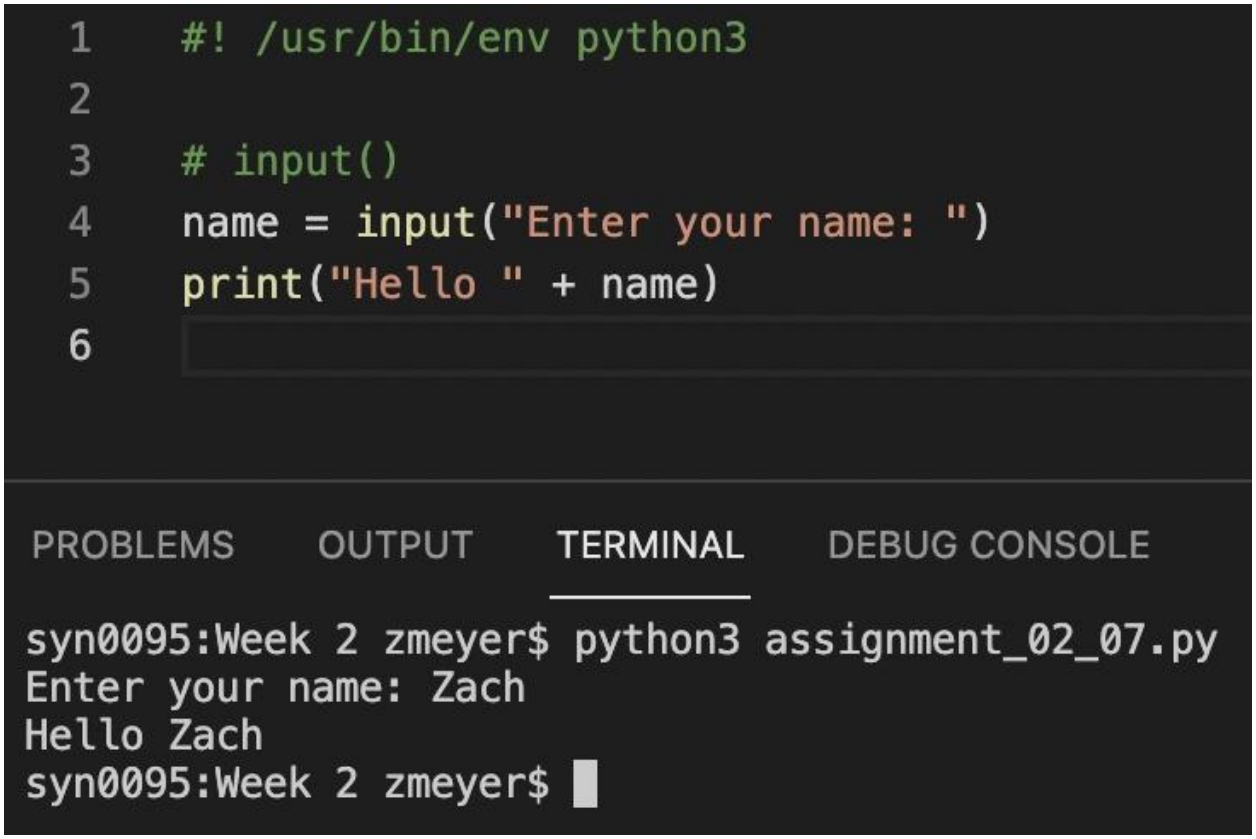
Screen Capture #11

```
1   #! /usr/bin/env python3
2
3   # print()
4   name = "Homer"
5   name2 = "Marge"
6   name3 = "Bart"
7   name4 = "Lisa"
8   name5 = "Maggie"
9   # print(name) # name is an argument
10
11  print(name, name2, name3, name4, name5, sep=" | ")
12
```

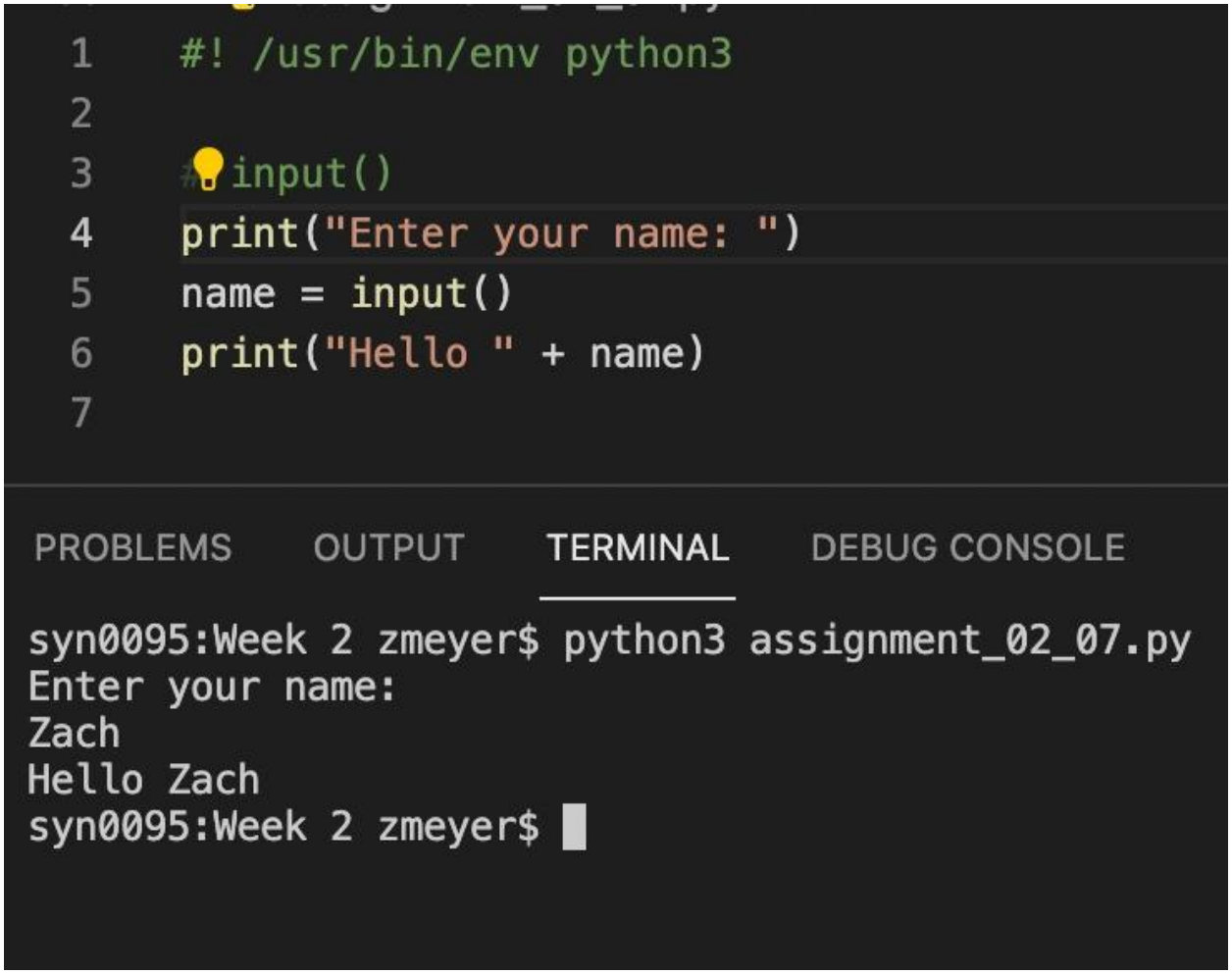
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
syn0095:Week 2 zmeyer$ python3 assignment_02_06.py
Homer Marge Bart Lisa Maggie
syn0095:Week 2 zmeyer$ python3 assignment_02_06.py
Homer | Marge | Bart | Lisa | Maggie
syn0095:Week 2 zmeyer$
```

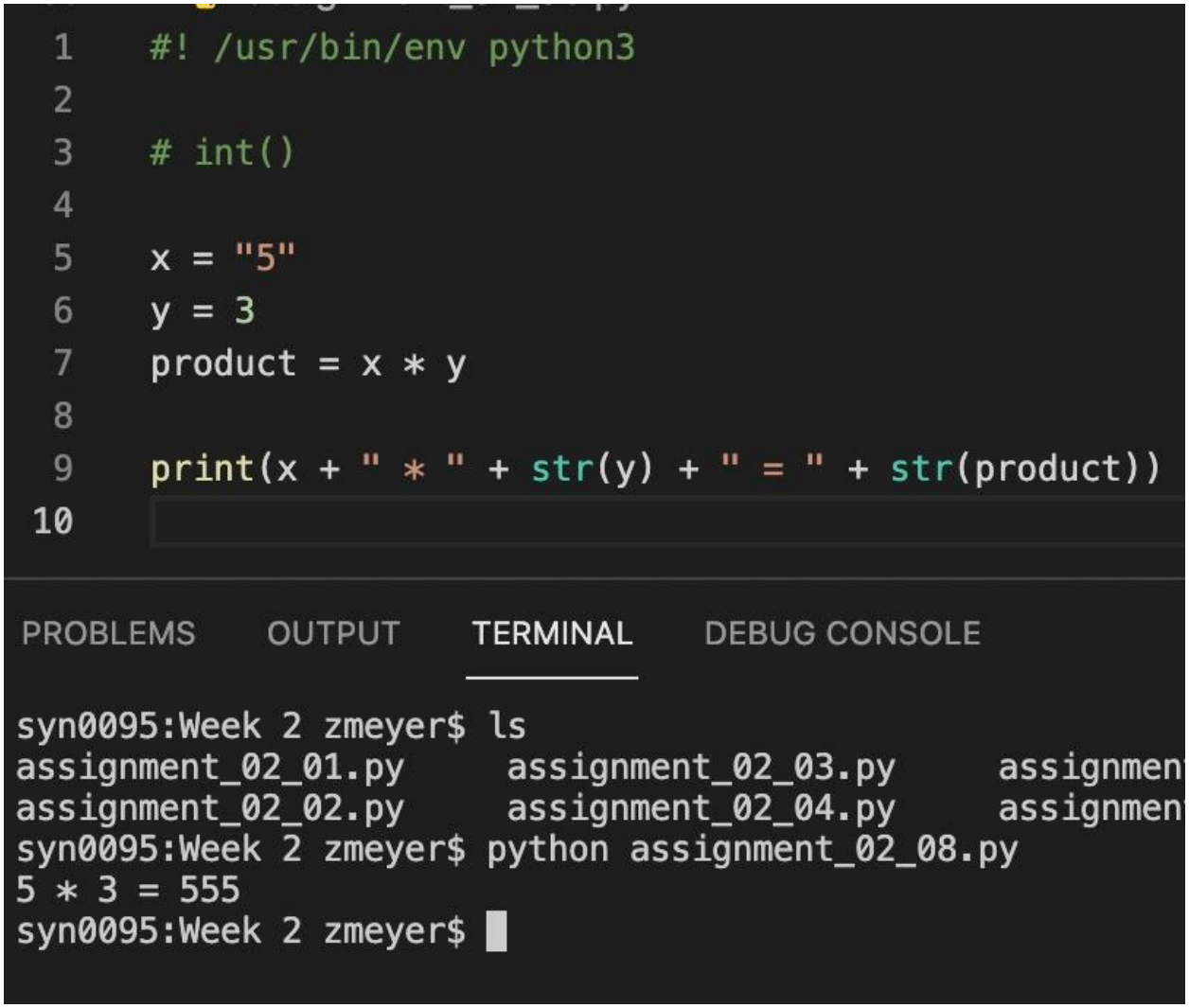
Screen Capture #12



Screen Capture #13



Screen Capture #14

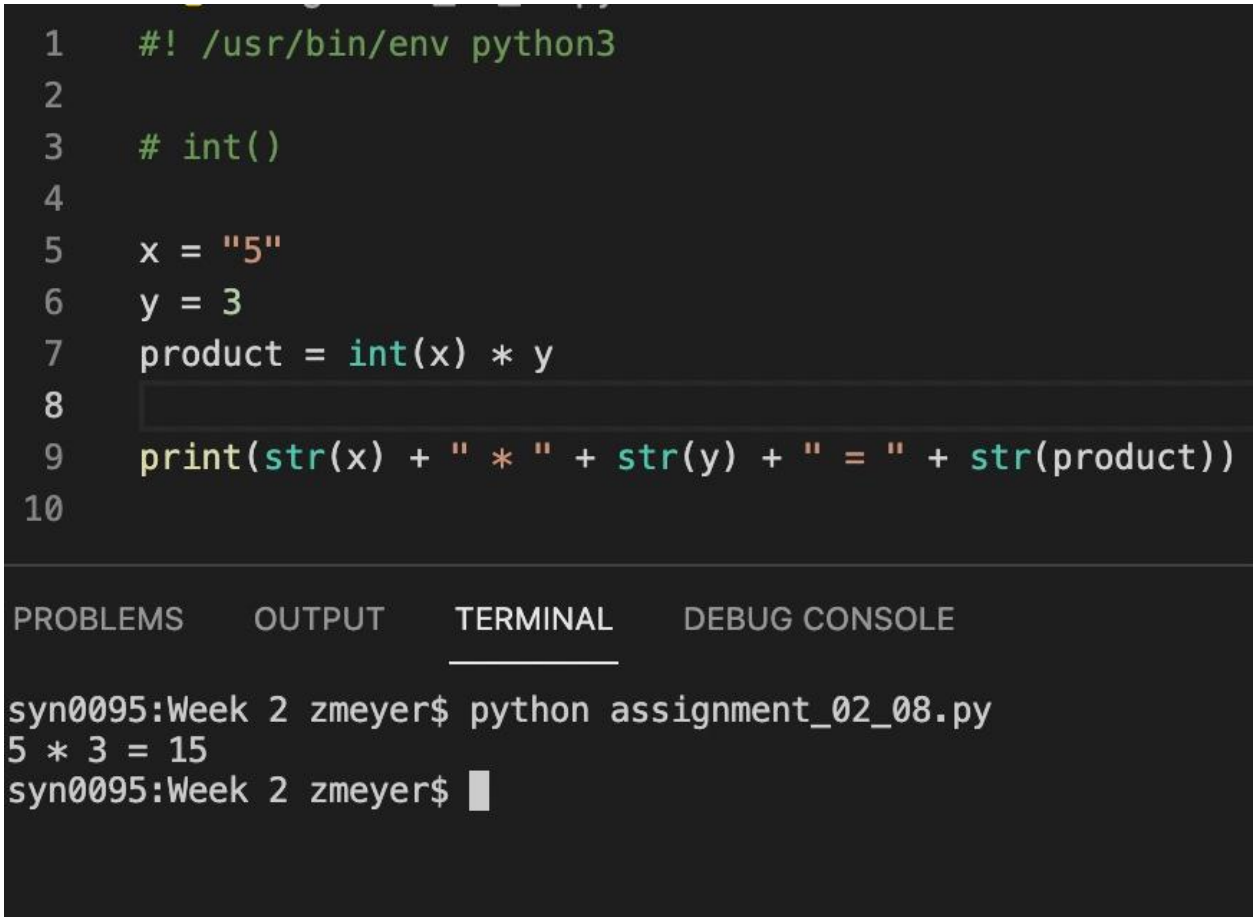


```
1   #! /usr/bin/env python3
2
3   # int()
4
5   x = "5"
6   y = 3
7   product = x * y
8
9   print(x + " * " + str(y) + " = " + str(product))
10
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
syn0095:Week 2 zmeyer$ ls
assignment_02_01.py     assignment_02_03.py     assignmen
assignment_02_02.py     assignment_02_04.py     assignmen
syn0095:Week 2 zmeyer$ python assignment_02_08.py
5 * 3 = 555
syn0095:Week 2 zmeyer$
```

Screen Capture #15



Screen Capture #16

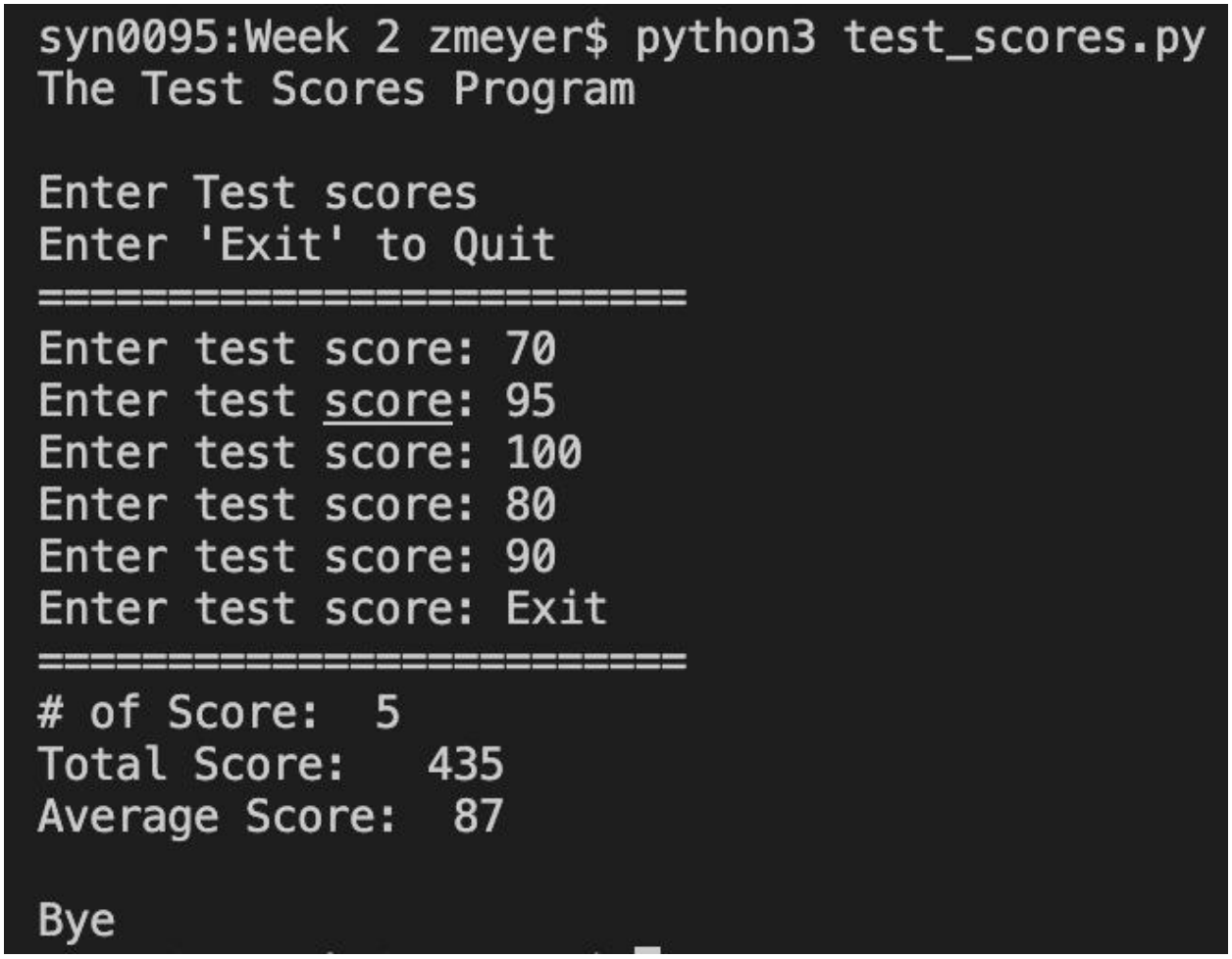
```
 1   #! /usr/bin/env python3
 2
 3   # Display welcome message
 4   print("The Test Scores Program\n")
 5   print("Enter 3 test scores")
 6   print("=" * 25)
 7
 8   # Get scores from user
 9   test_score = 0
10   test_score += int(input("Enter test score: "))
11   test_score += int(input("Enter test score: "))
12   test_score += int(input("Enter test score: "))
13
14   # Calculate average
15   average_score = round(test_score / 3)
16
17   # Format and display results
18   print("=" * 25)
19   print("Total Score:  ", str(test_score),
20         "\nAverage Score: ", str(average_score))
21
22   # End application
23   print("\nBye")
24
```

```
PROBLEMS    OUTPUT    TERMINAL    DEBUG CONSOLE

syn0095:Week 2 zmeyer$ ls
assignment_02_01.py     assignment_02_03.py     assignment_02_05.py
assignment_02_02.py     assignment_02_04.py     assignment_02_06.py
syn0095:Week 2 zmeyer$ python3 test_scores.py
The Test Scores Program

Enter 3 test scores
=========================
Enter test score: 90
Enter test score: 100
Enter test score: 80
=========================
Total Score:   270
Average Score:  90

Bye
```

Screen Capture #17-1 (EC)

```
#! /usr/bin/env python3

# Display welcome message
print("The Test Scores Program\n")
print("Enter Test scores\nEnter \'Exit\' to Quit")
print("=" * 25)

# Get scores from user
total = 0
count = 0
test_score = 0
while test_score != "exit":
    test_score = input("Enter test score: ")

    if test_score.lower() == "exit":
        break

    count += 1
    total += int(test_score)

# Calculate average
average_score = round(total / count)

# Format and display results
print("=" * 25)
print("# of Score: ", str(count),
      "\nTotal Score:  ", str(total),
      "\nAverage Score: ", str(average_score))

# End application
print("\nBye")
```

Screen Capture #17-2 (EC)



Screen Capture #18 (EC)

```python
#! /usr/bin/env python3

print("Registration Form\n")

first_name = str(input("First name:\t"))
last_name = str(input("Last name:\t"))
birth_year = int(input("Birth year:\t"))

print(
    f"\nWelcome {first_name} {last_name}!",
    "\nYour registration is complete.",
    f"\nYour temporary password is: {first_name}*{birth_year}",
)

```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
syn0095:Week 2 zmeyer$ python3 student_registration.py
Registration Form

First name:     Zachary
Last name:      Meyer
Birth year:     1993

Welcome Zachary Meyer!
Your registration is complete.
Your temporary password is: Zachary*1993
```

Screen Capture #19 (EC)

```
1   #! /usr/bin/env python3
2
3   print("Travel Time Calculator\n")
4
5   miles = int(input("Enter miles: "))
6   mph = int(input("Enter miles per hour: "))
7
8   print(
9       "\nEstimated travel time",
10      f"\nHours: {str(int(miles/mph))}",
11      f"\nMinutes: {str(int(miles%mph))}",
12  )
13
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
syn0095:Week 2 zmeyer$ python3 travel_time_calculator.py
Travel Time Calculator

Enter miles: 200
Enter miles per hour: 65

Estimated travel time
Hours: 3
Minutes: 5
syn0095:Week 2 zmeyer$
```