APS106

EXAM REVIEW JEOPARDY

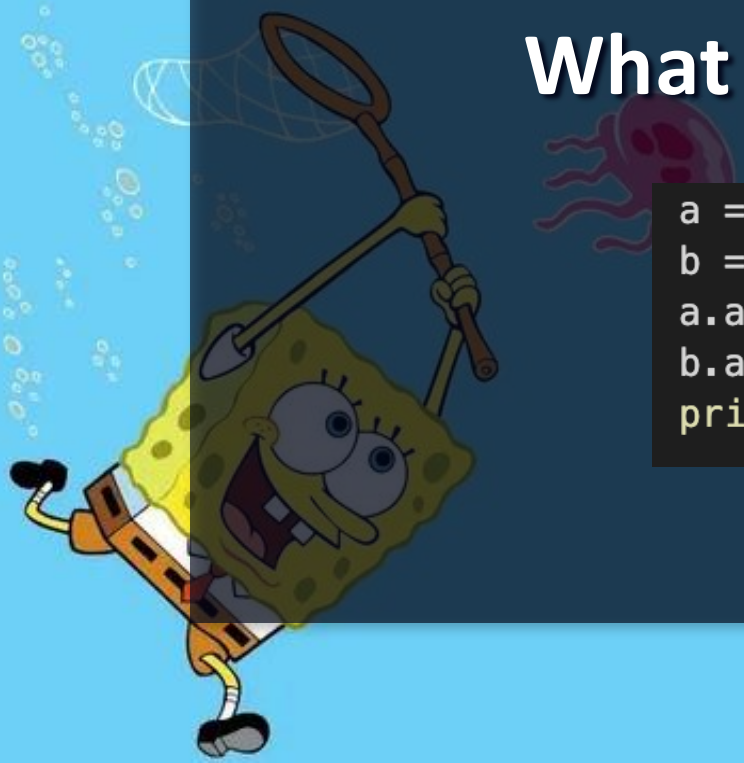
PANEL

SPONGECODE SQUAREPANTS	SCOOBY-DOOCODE	CODEBALL Z	THE SIMPSONS.PY	CODE RANGERS
$250	$250	$250	$250	$250
$500	$500	$500	$500	$500
$750	$750	$750	$750	$750
$1000	$1000	$1000	$1000	$1000

FINAL JEOPARDY

SPONGECODE SQUAREPANTS · $250

What is the result?



```
a = [1, 2, 3]
b = a
a.append(4)
b.append(5)
print(b)
```

Question board

SPONGECODE SQUAREPANTS · $500

d) **Assuming x is an integer, what best describes what the following function, `decide`, does?**

```
def decide(x):
    if x % 1 == 0:
        return 1
    if x % 2 == 0:
        return 2
    if x % 3 == 0:
        return 3
```

(i) returns 1

(ii) returns 1, 2, and 3

(iii) returns x if x is equal to 1, 2, or 3

(iv) returns x if x is divisible by 1, 2, or 3

(v) returns 1, 2, or 3, whichever is the largest factor of x

Question board

SPONGECODE SQUAREPANTS · $750

What is the output?

```
def fun1_iterative(n):
    while n >= 10:
        print(n)
        n //= 10
    print(n)

fun1_iterative(1000)
```

Question board

SPONGECODE SQUAREPANTS · $1000

What is the output?

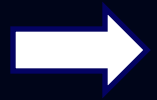
```
number_list = [40, 60, 80, 100, 120]

def calculator(s):
    "(list) -> list"
    divisor = len(s)
    new_list = [50, 70]
    i = 0

    while i < 4:
        value = s[i] / divisor
        new_list.append(s[i])
        i += 1

    return new_list

print(calculator(number_list))
```

Question board

SCOOBY-DOOCODE · $250

What is the missing line of code to write the names into names.txt?

```
names = ['Tina', 'Sue', 'Brad']
myfile = open("names.txt", "w")

for item in names:
    ...

myfile.close()
```

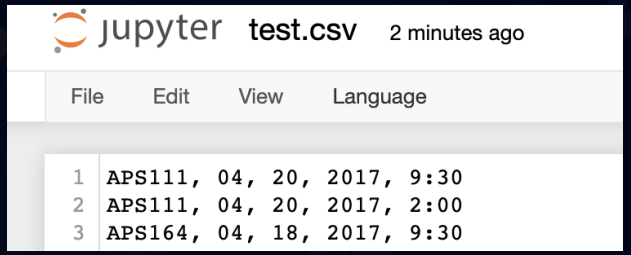


```
1  Tina
2  Sue
3  Brad
```

Question board

SCOOBY-DOOCODE · $ 500

What is the output?




```
import csv

with open('test.csv', newline='') as csvfile:
    filereader = csv.reader(csvfile)
    for row in filereader:
        print(row[0] + ' exam on ' + row[2] + 'th at ' + row[-1])
```

Question board

SCOOBY-DOOCODE · $750

What is the output?

```
for i in range(5):
    if i % 2 == 0:
        file = open('my_file.txt', 'w')
        file.write('Seb')
    else:
        file = open('my_file.txt', 'a')
        file.write('Seb')
    file.close()

file = open('my_file.txt', 'r')
print(file.read())
```

Question board

SCOOBY-DOOCODE · $1000

Is the output of the below codes same?

```
x = 'abcdef'
i = 'a'

# Question 1
while i in x:
    x = x[:-1]
    print(i, end = ' ')
```

```
x = 'abcdef'
i = 'a'

# Question 2
while i in x[:-1]:
    print(i, end = ' ')
```

Question board

CODEBALL Z · $250

What is the output?

```
d = {"a": 1, "b": 2}
print(d.get("c", d.get("a") + d.get("b")))
```

Question board

CODEBALL Z · $500

What will this code output?

```
my_string = "hello"
my_list = [1, 2, 3, 4, 5]

result = my_string[1:4] + str(my_list[-2]) + str(my_list[1:3])
print(result[::-1])
```

Question board

CODEBALL Z · $750

What will the code output?

```
x = [1, 2]
y = (x, x)
x.append(3)
print(y)
```

A. `([1, 2, 3], [1, 2, 3])`
B. `([1, 2], [1, 2])`
C. `([1, 2, 3], [1, 2])`
D. `([1, 2], [1, 2, 3])`

Question board

CODEBALL Z · $1000

What is the output?

```
message = "Hi!"
indices = [0, 2]

my_map = {}
for idx in indices:
    my_map[idx] = message[idx]

for idx in range(len(message)):
    print(idx, end=" ")
    if idx in my_map:
        print(my_map[idx])
    else:
        print("N/A")
```

Question board

THE SIMPSONS.PY · $250

What is the output?

```
class Animal:
    def __init__(self, name):
        self.weight = 16
        self.name = name
        self.age = 10

    def __str__(self):
        return self.name + " meows"

    def speak(self):
        print(self.name + " says hi", end = '')
        return 'skers'

cat = Animal("Whiskers")
print(cat.speak())
```

Question board

THE SIMPSONS.PY · $500

What is the output?

```python
class CityCounter:
    def __init__(self, people):
        self.people = people

    def count_city(self, city_name):
        count = 0
        for person in self.people:
            if person[2].lower() == city_name.lower():
                count += 1
        return count

# Example data and usage
people = [
    ("Alice", "Female", "London"),
    ("Bob", "Male", "Paris"),
    ("Charlie", "Male", "London")
]

counter = CityCounter(people)
print("People from London:", counter.count_city("London"))
```

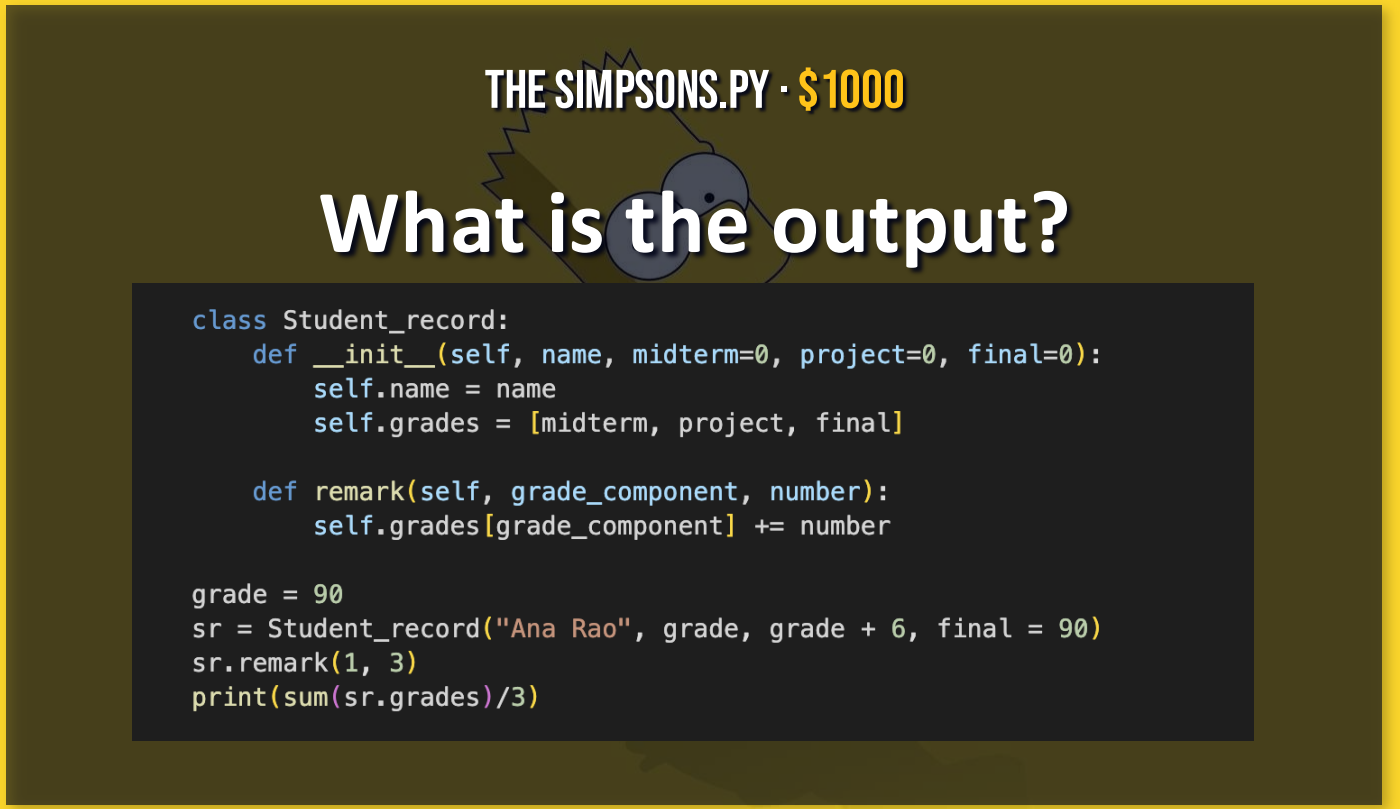
Question board

THE SIMPSONS.PY · $750

What is the output?

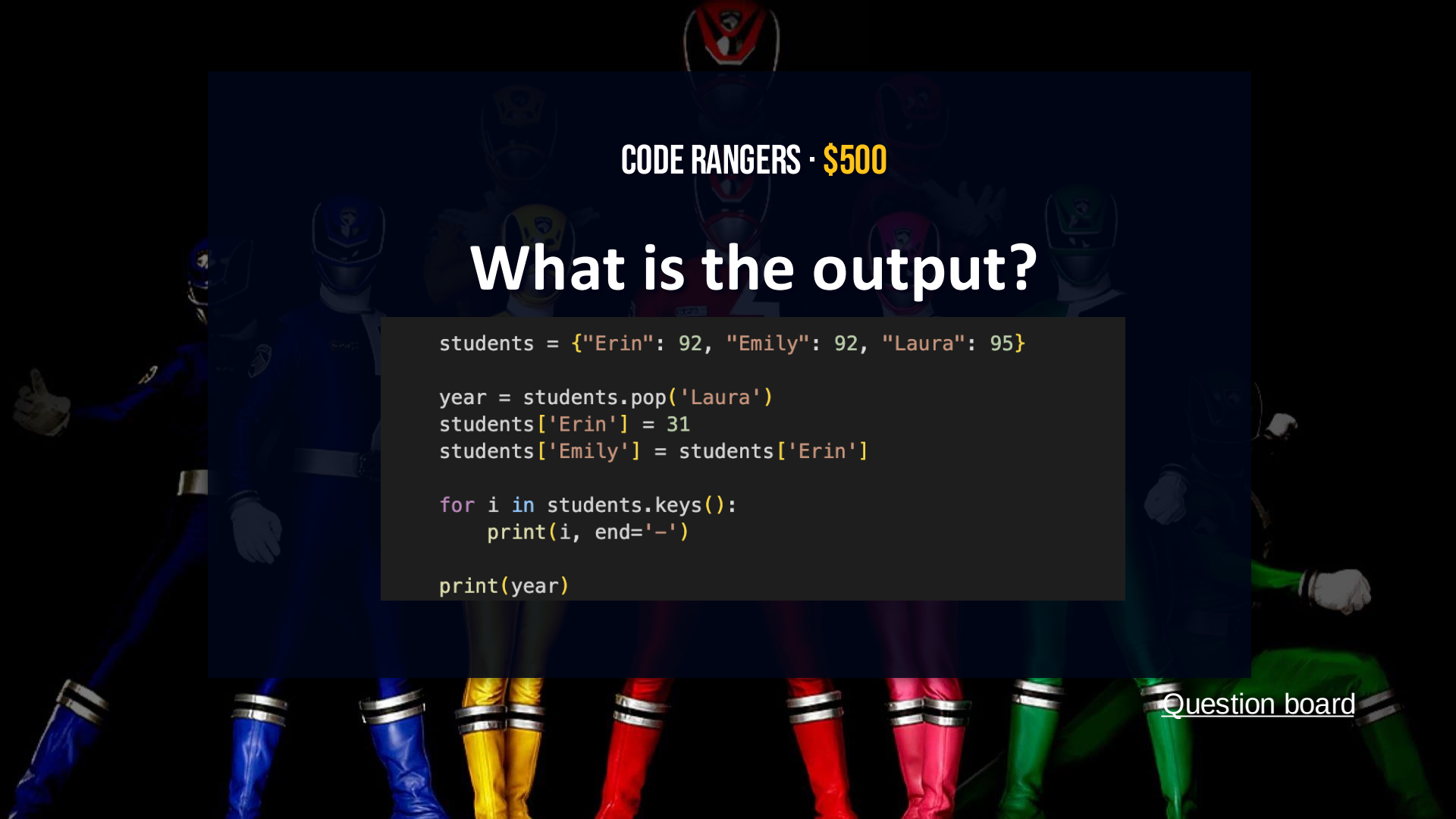
```
class Journey:
    def __init__(self, origin, destination, duration):
        self.origin = origin
        self.destination = destination
        self.duration = duration

journeys = [Journey('X', 'Y', 2.5), Journey('Y', 'Z', 1.8)]

times = []
for journey in journeys:
    times.append(journey.duration)

times.sort()
times.reverse()

print(times[0], times[1], sep='!', end='!!!')
```

Question board



Question board


CODE RANGERS · $250
What is the output?
andy = 'python'
andy[0] = 'r'
print(andy)
Question board

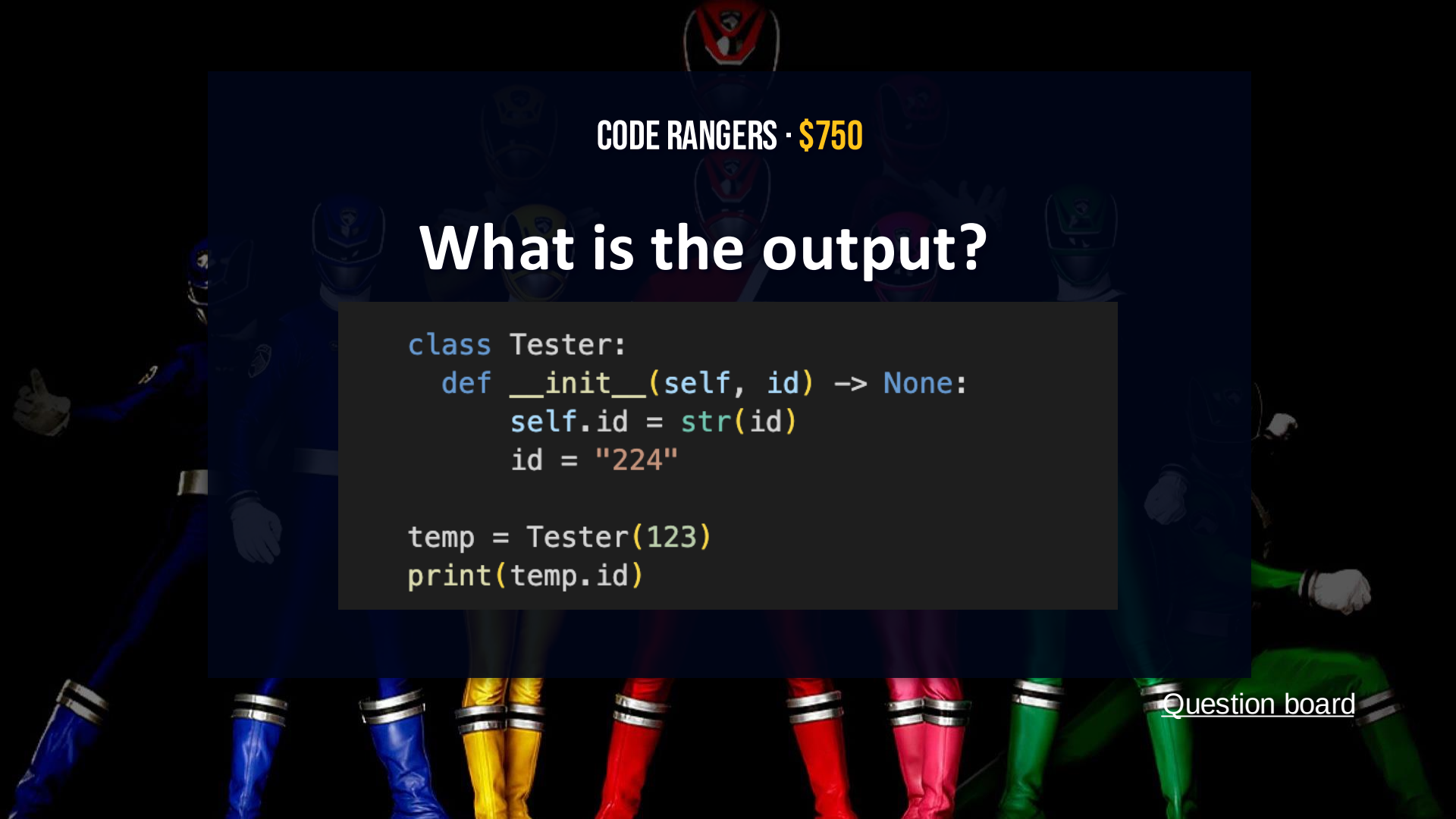


CODE RANGERS · $500

What is the output?

```
students = {"Erin": 92, "Emily": 92, "Laura": 95}

year = students.pop('Laura')
students['Erin'] = 31
students['Emily'] = students['Erin']

for i in students.keys():
    print(i, end='-')

print(year)
```

Question board



CODE RANGERS · $750

What is the output?

```
class Tester:
  def __init__(self, id) -> None:
      self.id = str(id)
      id = "224"

temp = Tester(123)
print(temp.id)
```

Question board

CODE RANGERS · $1000

What is the output?

```
count = {}
count[(1, 2, 4)] = 5
count[(4, 2, 1)] = 7
count[(1, 2)] = 6
count[(4, 2, 1)] = 2
tot = 0

for i in count:
    tot += count[i]
print(len(count) + tot)
```

a. 25
b. 17
c. 16
d. Tuples can't be made keys of a dictionary

Question board

FINAL JEOPARDY

Question 6 [10 marks] – *Write the Code*

Part A [5 marks]: Write a function `scramble_items` that takes as input a list of strings, ints, floats or a combination of the three types and returns a list of strings with their characters scrambled. The scrambling process will be performed on each item in the list based on indices: characters with even indices are *all* placed after the characters with odd indices. For example, if the string is "Engineers!" then the scrambled string will be "nier!Egnes".

indices									
0	1	2	3	4	5	6	7	8	9
characters									
E	n	g	i	n	e	e	r	s	!

indices									
1	3	5	7	9	0	2	4	6	8
characters									
n	i	e	r	!	E	g	n	e	s

The function `scramble_items` will perform the string scrambling process on each item in the list. If an item is not a string, it will be converted to a string before scrambling. For example:

- **Python code:**
```
sample_list = ['Elon Tusk', 420, 'Mars Rd.', 343521]
new_list = scramble_list(sample_list)
print(new_list)
```

- **Output:** `['lnTsEo uk', '240', 'asR.Mr d', '451332']`