Solution 03: Python String Basics

1) What is a string?

A **string** is **text** in Python.

Examples:

```
"hello"
"ABC123"
```

2) Create four string variables

```
name = "Alice"
pet = "bunny"
greeting = "Hello, world!"
empty_string = ""
```

3) Which one is the empty string?

1. The **empty string** variable is: `b`
2. The string that has **one space** inside is: `c`

4) What does this print?

```
print("Py" + "thon")
```

Output:

```
Python
```

5) Add a space in the middle

One correct answer:

```
full_name = first_name + " " + last_name
```

6) Join three words

```
a = "I"
b = "love"
c = "Python"

print(a + " " + b + " " + c)
```

Output:

```
I love Python
```

7) One character by index

```
word = "ABCDEF"
print(word[0])
print(word[2])
print(word[5])
```

Output:

```
A
C
F
```

8) Index practice with `"bunny"`

```
pet = "bunny"
print(pet[0])
print(pet[1])
print(pet[4])
```

Output:

```
b
u
y
```

9) Slice warm-up

```
word = "ABCDEF"
print(word[0:2])
print(word[2:6])
```

Output:

```
AB
CDEF
```

10) More slices

```
word = "ABCDEF"
print(word[1:4])
print(word[3:5])
```

Output:

```
BCD
DE
```

11) Slice + concatenation

```
word = "ABCDEF"
part1 = word[0:3]   # "ABC"
part2 = word[3:6]   # "DEF"
print(part2 + part1)
```

Output:

```
DEFABC
```

12) Fix the TypeError (string + number)

One correct answer:

```
age = 11
message = "I am " + str(age) + " years old."
print(message)
```

13) Fill in the blank

```
apples = 5
message = "I have " + str(apples) + " apples."
print(message)
```

14) What does this print?

```
age = 11
age_text = str(age)

print(type(age))
print(type(age_text))
```

Output:

```
<class 'int'>
<class 'str'>
```

15) Make a full name and a message

One correct answer:

```
full_name = first_name + " " + last_name

print("My name is " + full_name + ".")
print("I am " + str(age) + " years old.")
```

16) Challenge: Fix the broken program

One correct answer:

```
first = "Harry"
last = "Potter"
age = 11

print("Name: " + first + " " + last)
print("Age: " + str(age))
```