

Guess What the Code is Doing - Python Exercises

Code 1:

```
for i in range(1, 10):  
    if i % 2 == 0:  
        print(i * i)
```

Question:

What will this code print, and what does it do?

Code 2:

```
word = "hello"  
  
new_word = word[1:] + word[0]  
  
print(new_word)
```

Question:

What does this code output, and what is it doing to the string?

Code 3:

```
numbers = [1, 2, 3, 4, 5]  
  
squared_numbers = [n ** 2 for n in numbers if n % 2 == 1]  
  
print(squared_numbers)
```

Question:

What will be the output of this code, and what is the purpose of the list comprehension?

Code 4:

```
fruits = {"apple": 3, "banana": 5, "cherry": 2}  
  
total = 0  
  
for fruit in fruits:  
    total += fruits[fruit]
```

```
print(total)
```

Question:

What will this code print, and what is it calculating?

Code 5:

```
text = "Python"

result = ""

for char in text:

    result = char + result

print(result)
```

Question:

What will this code print, and what does it do to the string `text`?

Code 6:

```
set_a = {1, 2, 3}

set_b = {2, 3, 4}

result = set_a.symmetric_difference(set_b)

print(result)
```

Question:

What does this code output, and what does the `symmetric_difference` method do?

Code 7:

```
def greet(name="stranger"):

    print(f"Hello, {name}!")

greet()

greet("Alice")
```

Question:

What will this code print, and what is the purpose of the ``name="stranger"``` part in the function definition?

Code 8:

```
sentence = "This is a simple sentence."  
  
count = sentence.count("s")  
  
print(count)
```

Question:

What does this code output, and what is it counting?

Code 9:

```
x = 10  
  
y = 5  
  
z = x > y and y < 0 or x < 0  
  
print(z)
```

Question:

What will this code print, and how does the expression in ``z`` evaluate?

Code 10:

```
n = 1  
  
while n < 10:  
  
    print(n)  
  
    n += 3
```

Question:

What will be the output of this code, and how does the ``while`` loop control the flow?

Code 11:

```
values = (1, 2, 3)  
  
a, b, c = values
```

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

Question:

What will this code print, and what is happening with `a, b, c = values`?

Code 12:

```
data = [10, 20, 30, 40, 50]

print(data[-3])
```

Question:

What will this code output, and what is the purpose of `-3` in the list indexing?

Code 13:

```
info = {"name": "Alice", "age": 25}

info["age"] = 26

print(info)
```

Question:

What will this code print, and what does the line `info["age"] = 26` do?

Code 14:

```
matrix = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]

result = [row[1] for row in matrix]

print(result)
```

Question:

What will this code output, and what is the purpose of the list comprehension?