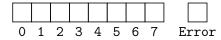
Question 1: Loops In this series of questions, you will trace code that modifies a boolean list a. You will respond beneath each code listing by completely shading in the squares of items whose value is assigned True. If an error occurs during the evaluation of the loop, fill in the Error box and stop evaluating. If any item's value was assigned True prior to the error, keep its value shaded in.

You can assume a is initialized with 8 False elements, as shown below, and that each question is independent of the next.

```
1 f: bool = False
2 a: list[bool] = [f, f, f, f, f, f]
```

1.1. Loop 1

```
1  i: int = 0
2  while i < len(a):
3   if i % 2 == 1 and i >= 3:
4    a[i] = True
5   i += 1
```



1.2. Loop 2

```
1    i: int = 1
2    while i < len(a):
3     a[i] = True
4     if i % 2 == 1:
5         i -= 1
6     else:
7     i += 2</pre>
```



1.3. Loop 3

```
1   i: int = len(a)
2   while i > 0:
3    a[i] = True
4   i -= 1
```

```
0 1 2 3 4 5 6 7 Error
```

Question 3: Identifying Elements of a Python Class Consider the following class definition.							
class Pet: name: str age: int # in years	ame: str						
<pre>def greet(self) -> str: return f"{self.name} says hello"</pre>							
def ages(self, n: int) -> None: """Increase the pet's age by n years.""" self.age += n							
3.1. On what line(s) is a return type declared? Write None if none.	3.4. On what line(s) are docstrings found? Write None if none.						
3.2. List the names of the <i>methods</i> defined in class Pet. Write <i>None</i> if none.	3.5. On what line(s) are comments found? Write None if none.						
3.3. On what line(s) are arguments found? Write None if none.	3.6. What is another name for the definition ofinit?						
	e code listing above, you will make use of the Pet named pup, explicitly of data type Pet, and assign nitialized name attribute value of "Ada" and age at-						

- tribute value of 2.
- 4.2. Continuing from the previous sub-question, write one line of code that will cause the pup variable's age attribute to change to 3 using a method call on the pup object.
- 4.3. Continuing from the previous sub-question, write one line of code to declare an explicitly typed variable named x. Initialize x to the result of calling greet on pup.

1		

Question 5: Identifying Elements of a Python Program Consider the following code listing:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	s en re p: def i:	<pre>main() -> None: ""Entrypoint of program.""" tart: int = int(input("Start: ")) nd: int = int(input("End: ")) esult: int = mystery(start, end) rint(f"Result: {result}") mystery(i: int, n: int, x: int = 0) f i >= n: return x + i lse: return mystery(i + 1, n, x + i) name == "main": ain()</pre>	-> i	nt:				
	5.1.	On what line(s) is a base case declared? Write None if none.		Ignoring function calls to built-in functions, what 2 line(s) contain function calls with arguments?				
	5.2.	On what line(s) is a recursive case declared? Write None if none.	5.4.	On what line(s) are default parameter(s) found? Write None if none.				
Qı	ıesti	on 6: Evaluating Functions These question	ns conti	inue from the code listing above.				
6.1. What value returns from mystery(6, 6, 9)? Write Error if an error occurs.								
	6.2. What value returns from mystery(5, 6, 4)? Write Error if an error occurs.							
	6.3. What value returns from mystery(4, 6)? Write Error if an error occurs. 6.4. What value returns from mystery(1, 3)? Write Error if an error occurs.							