

Concurrency and Paradigms

Con-What-Curr-Is-En-My-Cy-Name

(a) Which of the following could be the value of the variable `my_name` when the green flag is clicked?

Yifat	Steven	Yifat Bear	Steven Oski	Yifat BearOski	Steven Yifat	Oski	Yifat OskiBear
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For the next two problems, suppose we have these three scripts and eight blocks:

Car:

Pedestrian:

Traffic Light:

(b) Fill in the code for the car and the pedestrian such that there will be a deadlock where the pedestrian and the car rely on each other to know when to drive or walk, respectively. You may not need to fill all the cells.

	car	pedestrian
waits until...		
broadcasts...		

(c) Now fill in the code for the car and the pedestrian so that they function properly, relying only upon the traffic light. You may not need to fill in all the cells.

	car	pedestrian
waits until...		
broadcasts...		

Paradigm City

(a) Match each of the following to one of the four programming paradigms (functional, OOP, declarative, imperative).

One sprite tells a second sprite to run some code. The second sprite does it.

You input a board into a copy_of_board block. The block outputs a new board without changing the original board.

You give a program a condition as an input and it uses this condition to remove numbers from a list. You input a list and it removes items.

You have a global variable set to a secret word. You change the secret word every time you ask a player for a new secret word.

(b) Match each of the following scripts to a programming paradigm.

Assume sum is a global variable in the second script

```
when clicked
  create a clone of myself
```

```
+ Scaled + Sum + of + List
script variables sum
set sum to 0
for i = 1 to length of List
  for j = 1 to length of List
    change sum by item j of List
report sum
```

```
+ Scaled + Sum + of + List
set sum to 0
for i = 1 to length of List
  for j = 1 to length of List
    change sum by item j of List
report sum
```

```
when I start as a clone
script variables sum
set sum to 0
for i = 1 to length of List
  for j = 1 to length of List
    change sum by item j of List
report sum
```