## **Discussion 5: Concurrency**

## Concurrency

1. CS10 has decided to open a pizzeria! To make a pizza, the following tasks must be completed:

Task	Time
Make the dough	25 minutes
Make the sauce	25 minutes
Prepare the toppings	10 minutes
Assemble the pizza	10 minutes
Bake the pizza	50 minutes

a.	Which	of these	tasks	must	be co	mplete	d in s	erial?

b.	Which of	these	tasks	can	be (	comp	leted	in p	aralle	: ?

```
c. How fast can we make a single pizza?
```

```
d. How many employees would the pizzeria need to make a pizza this fast? ______
```

2. Assume we click the green flag to run the code below, then wait 60 seconds. What are all the possible values of magic after 60 seconds have elapsed?

```
when clicked
set magic to X
broadcast Magic Show
```

```
when I receive Magic Show wait pick random 1 to 5 secs

repeat until magic = B or magic = C

broadcast Magic Show set magic to A
```

```
when I receive Magic Show wait pick random 1 to 5 secs

repeat until magic = A or magic = B

broadcast Magic Show waste magic to C
```

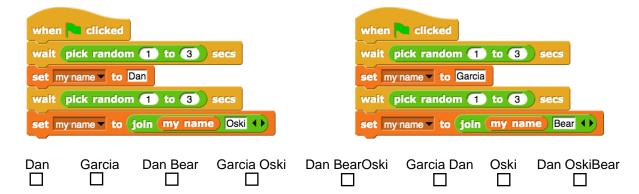
```
when I receive Magic Show wait pick random 1 to 5 secs

repeat until magic = A or magic = C

broadcast Magic Show wait magic with a set magic
```

Possible values of magic: \_\_\_\_\_

3. Which of the following could be the value of my name after the green flag is clicked?



## Challenge

1. List all possible values of grade after the green flag is clicked.

```
when clicked

set Grade to 10

broadcast Apply Final Grading 

when I receive Apply Final Grading 

when I receive Apply Final Grading 

set Grade to Get Grade × Get Grade
```

Here are the definitions of the blocks used in the above scripts:

```
+Apply+EPA+points +

wait pick random 1 to 10 secs

change Grade ▼ by points

+Get+Grade+

wait pick random 1 to 5 secs

report Grade
```

Possible values of grade: