Discussion 5: Concurrency

Concurrency

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

<table>
<thead>
<tr>
<th>Task</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make the dough</td>
<td>25 min</td>
</tr>
<tr>
<td>Make the sauce</td>
<td>25 min</td>
</tr>
<tr>
<td>Prepare the toppings</td>
<td>10 min</td>
</tr>
<tr>
<td>Assemble the pizza</td>
<td>10 min</td>
</tr>
<tr>
<td>Bake the pizza</td>
<td>50 min</td>
</tr>
</tbody>
</table>

a. Which of these tasks must be completed in serial?

b. Which of these tasks can be completed in parallel?

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?

Possible values of magic: ____________________________________________
3. Which of the following could be the value of `my_name` after the green flag is clicked?

Dan García
Dan Bear
Garcia Oski
Dan BearOski
Garcia Dan
Oski
Dan OskiBear

Challenge

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

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

Possible values of `grade`: