

Practice Question (15 min)

You are a research scientist, and you would like to run a simulation to calculate population growth of marmosets. For every male/female pair of marmosets, there are 0.32 females and 0.29 males born each year. If the population of males exceeds 100 in the colony, the rate of males born drops to 0.27. Truncate fractional births.

A marmoset colony can be defined with the following struct because each sample has a number of males and a number of females.

```
struct marmoset_colony{  
    int qty_females;  
    int qty_males};
```

Please complete the following function to update the amount of marmosets after the given number of years.

```
void simulate_marmosets(marmoset_colony colonies[], int num_colonies, int num_years);
```