

Interactive Developer Take-Home Assignment

Thank you for your interest in the Interactive Developer role.

We ask that candidates submit an assignment as part of their interview process. This assignment simulates a task that you'll have as an interactive developer.

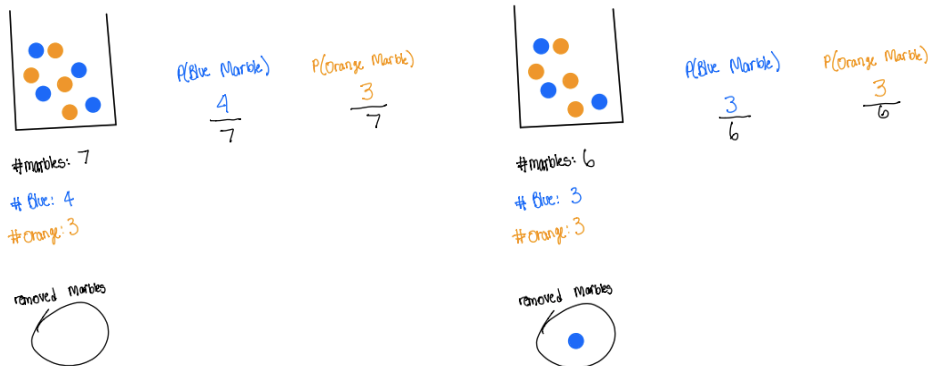
Assignment:

Create an interactive applet that simulates the concept of [conditional probability](#). Note that you do not need to know anything about probability to create this app. The applet should track the probability of choosing a blue marble vs. an orange marble after a user removes one by clicking.

The applet must include (see sketches below for reference):

- Visualization of existing blue and orange marbles in the bag
- Tracking of the probability of choosing a blue marble versus an orange marble:
 - $P(\text{Blue Marble}) = (\text{Number of remaining blue marbles}) / (\text{Total number of marbles in the bag})$
 - $P(\text{Orange Marble}) = (\text{Number of remaining orange marbles}) / (\text{Total number of marbles in the bag})$
- Tracking of the remaining total number of marbles, as well as blue and orange marbles
- Visualization of the removed marbles

Below, we've provided sketches to help envision different states of the applet.



Note that your applet does not have to visually look similar to the sketches. Use your own creative freedom to create the best user experience possible.

Submission instructions:

Within 3-5 business days of receiving this, you'll submit **a link to a GitHub repo** containing the code for the applet. If possible, include a link to a live view. Make sure that your code is well commented and organized. Please email the link to the repo to the member of the Codecademy team who sent you this document. Feel free to reach out to the member of the Codecademy team if you have any questions related to the assignment prompt.