Lab 2C: Which song plays next?

Directions: Record your responses to the lab questions in the spaces provided.

A new direction

Estimate what ... ?

- **Why do we *put a song back* each time we make a selection?**

- **What would happen in our little experiment if we did not do this?**

Calculating probabilities

Estimating probabilities

Getting ready

- **Use a similar line of code to simulate the rock songs in our playlist of 100.**

Put the songs in the playlist

Pick a song, any song

- **Once everyone in your class has computed their proportions, calculate the *range* of proportions (the largest proportion minus the smallest proportion) for your class and write it down.**

Now do() it some more

- **What is the variable name?**

- **Compute the proportion of "rap" songs for your 50 draws and find out if the *range* for your class' proportions is bigger or smaller than when we drew 10 songs.**

Proportions vs. Probability

Non-random Randomness

Playing with seeds

- **Are the proportions still the same? If so, can you find two different values for set.seed that give different answers?**

On your own

- **Answer this by estimating the probability that a randomly chosen student went to the movies using 500 simulations.**

    - **Write down both the estimated probability and the code you used to compute your estimate. You might find it helpful to write your answer in an R Script** *(File -> New File -> R Script)*

    - **Include set.seed(123) in your code before you do 500 repeated samples.**