Card Shuffling using Riffle Shuffling (Part 2)

This is the second part of two assignments. This part asks you to shuffle a deck of cards multiple times.

Learning Goals

- Use recursion to solve a problem.
- Understand how to modify a program (you wrote) for a slightly different problem

Count Unique Outputs

The previous assignment tells you to use `sort` to order outputs so that they can be compared. You can extend this further by going through multiple programs. After `sort`, you can use `uniq` to keep only unique lines.

```
./hw8 4 2 | sort | uniq
```

gives you the unique lines. You need to use `sort` before `uniq` because `uniq` merge agencent identical lines. If two identical lines are not adjacent, `uniq` does not merge them.

You can add `wc` to count the number of lines.

```
./hw8 6 2 | sort | uniq | wc
```

tells you how many unique lines are generated.

Check how many unique orders ./hw8 8 2 can generate. Do they cover all possible orders of 8 cards?

Why is there no `ifdef` and `endif` in shuffle.c?

This assignment requires only one function `shuffle`. Thus, there is no need using `ifdef` and `endif`. It is likely that you need to add additional functions called by `shuffle`.