Hints for Rainbow Cats

- How should we store the colours of all the cats?

  - What is the maximum possible number of cats that can be present in the input?
  - Is it feasible to store the colour of each individual cat?
  - Can we store the colours of all the cats in a more compact way?
    - * Consider the techniques used to compute the heights of the columns in Lab 5 Wall...

- What should we do when we need to change a colour of a range of cats?

  - In Lab 5 Wall, we had to increase the heights of all the columns in a given range by 1. Can we use similar ideas here?

- How can we find the colour of a given cat a quickly?

  - Cat a must be present in some range of cats, where all cats in the range have the same colour as cat a.
  - We might not have stored the colour of cat a directly, so we need to look for the colour of *some other cat* in the same range as cat a.
    - * Which cat is the *some other cat* we should find?
    - * What data structure should we use to help us perform this search quickly?