

## Lab 5 Comments

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- auto-format!
- wrap long lines – put in line breaks before 80 characters
- include your name and a description of the program in comments at the beginning of every program
- choose descriptive variable names

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- #1 – histogram
  - be careful of off-by-one problems when generating random numbers
  - formatting of histogram should match the example exactly
    - missing spaces or not using `System.out.printf` to pad one-digit numbers with a space were the most common issues
- #2 – magic 8 ball
  - be careful of off-by-one problems when generating random numbers
  - the problem said to write the code so that changing the initialization of the array was the only thing needed to change the number or content of the magic 8 ball responses
    - use the `.length` syntax to get the length of the array instead of manually counting and using that number

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- #3 – pig
  - scoring
    - rolling a 1 should only set the points earned on that turn to 0, not the entire score
    - rolling a 1 should also end that turn – the player should not be able to continue to roll and earn points
  - be sure to display all of the elements asked for
  - remember that if you use `Scanner's nextLine()` after something else like `nextInt()`, consume the remaining new line first (with `nextLine()`) or else the `nextLine()` that you want to read a line will instead skip past having read only an empty line

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- #4 – prize collector
  - the number of prizes should be read from the user, not hardcoded
  - the goal is to compute the *average* number of purchases needed to get all the prizes
    - first write code to pick prize numbers until all the prizes have been obtained
    - then put that whole process into a loop to be repeated a large number of times in order to compute the average number of purchases needed
  - it is valid to check the prizes array for a false after each prize number is picked in order to determine if all of the prizes have been obtained yet, but easier is to keep a count of the number of prizes obtained