

CS 240 Homework 1

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Reading code is every bit as important a skill as writing code. For this assignment, you will demonstrate your ability to read and understand Java code and the underlying algorithms employed.

1. Download the problem description and Dr. Rich's solution for the **Fall 2006** programming contest problem **Run of a Kind**.

`www.csupomona.edu/~carich/programming_contests/200604/run_of_a_kind.pdf`
`www.csupomona.edu/~carich/programming_contests/200604/run_of_a_kind.java`

2. You may find it helpful to download the input/output files and play around with the code—compile it, run it, look at how the output corresponds to the input, etc.
3. Read Dr. Rich's solution and submit (on paper, in class) a sufficiently detailed English description of how the program works; you will be graded on how well you convince me that you understand the code. Some steps that may help you achieve that:
 - Explain what each (non-trivial) line/block of code does.
 - More importantly, explain *why* things are being done in a certain way, especially if it's not immediately clear.
 - Illustrate how the program works on a given input. That is, show how the variables (in particular `last`, `run_length`, `run_start`, `max_run_length`, and `max_run_start`, but other variables are still important) change at each step of the program and influence the output, assuming a particular input (e.g., the provided sample input).
 - Avoid trivial/redundant explanations, like “this is a blank line”.