Midterm

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week 6

Announcement

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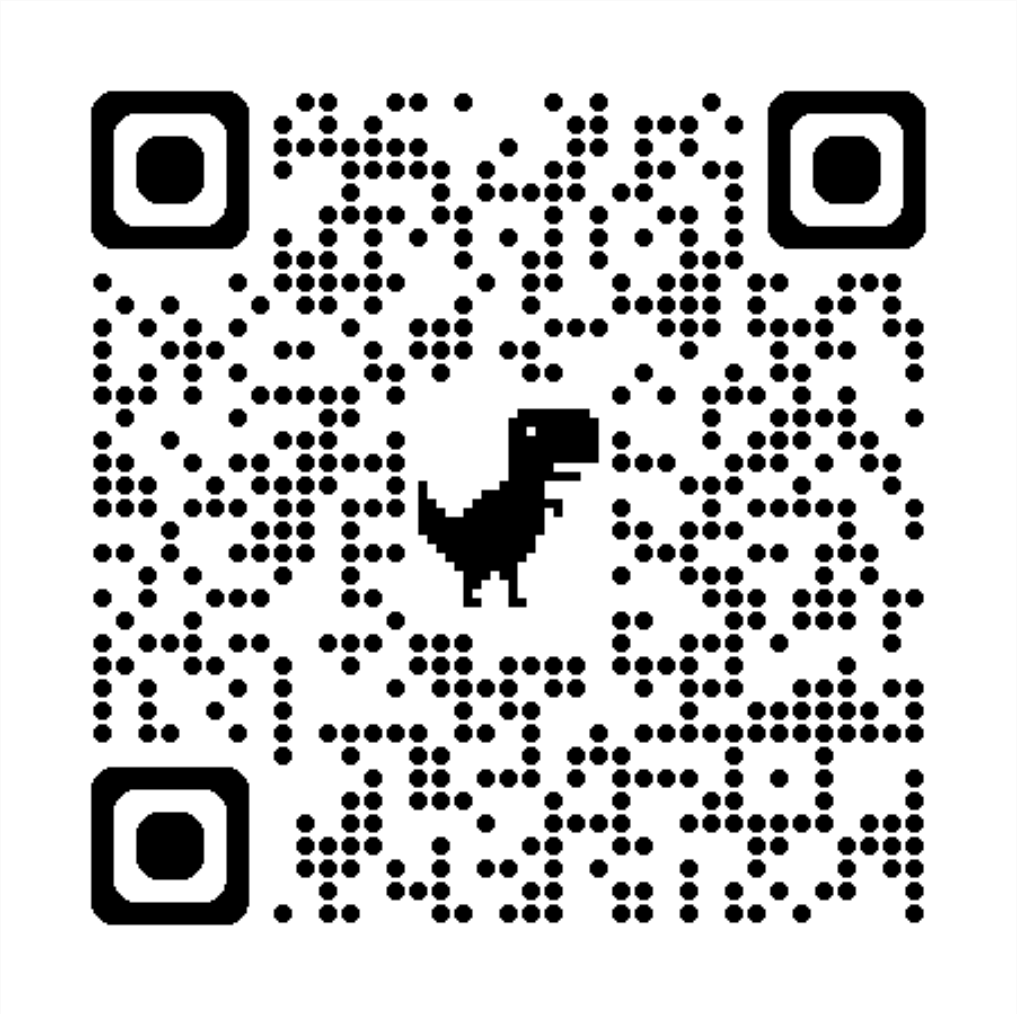
Course Materials



Outline

1. Exam Rule

2. Simple Solutions

Exam Rule

Exam Rule

- Open book, open internet, open discussion.
- Having trouble? Raise your hand, and I will come to help.
- LLM is not allowed.
- Time limit: 90 minutes(From 18:25 to 19:55).
- Top 3 participants will get cookies.

Simple Solutions

Overview

While joining a competition, quickly overview the problem first and find simple questions to solve first. Remember to solve subtasks first if there are any.

Problem	Concept
1. Evil Ceremony	Selection statement
2. Calculate Practice	Basic I/O
3. Star Tree	Nested Loop
4. Sum	Loop
5. Safe-Pro	Array

Table 1: Problem Overview

Evil Ceremony

There are lots of restrictions in this problem, but we can summarize them first:

- Not a leap year.
- `mm%dd != 0`
- `dd` is even and not equal to 13.

With the summarized restrictions, we can easily implement the solution with selection statements.

Calculate Practice

This problem is straightforward. Just read two integers and output their sum, difference, product, quotient, and remainder. Remember that there's no space between the operator and operands in the output. Thus, you neew to read an integer, a character, and another integer.

Besides, the result may be larger than the range of `int`, so we need to use `long long` to store the result.

Star Tree

This problem seems complicated, but it can be decomposed into a triangle and a bar. You need to optput a triangle on the top and a bar at the bottom. The triangle can be implemented with nested loops, and the bar can be implemented with a single loop.

Sum

This problem is straightforward. You just need to calculate the nth fibonacci number and accumulate the sum of the digits. This is why you need to overview all problems first.

Safe-Pro

This problem is very complicated but not hard. You need several arrays to store the data. Just think clearly and implement it step by step.