Case Study 1

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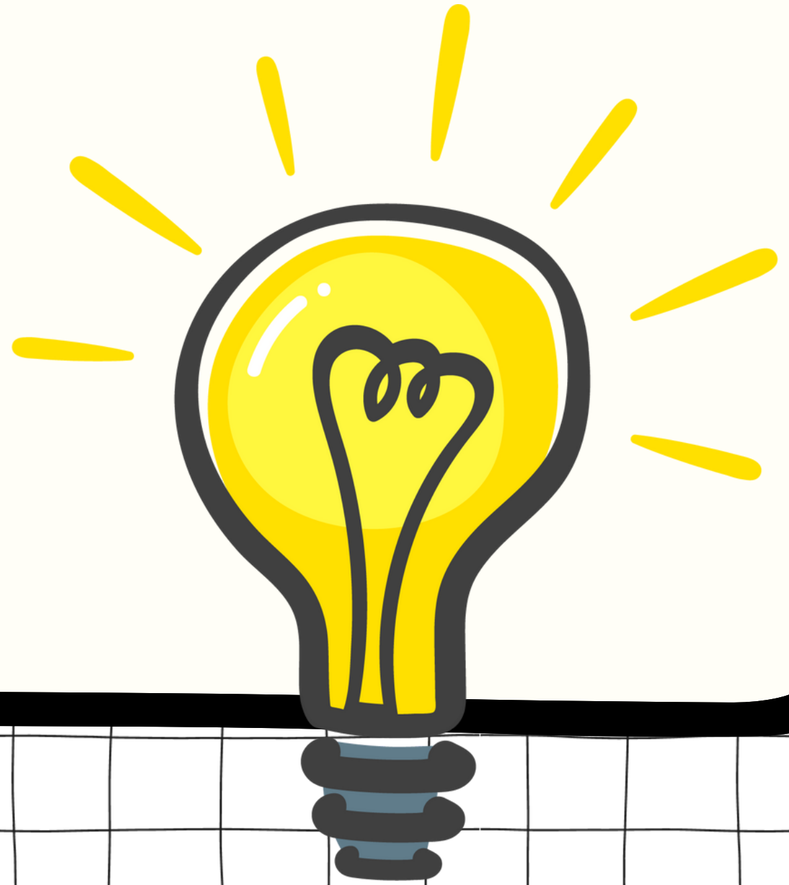

Problem

If you are given an assignment, how can you find the most number of days you can procrastinate before a deadline given that there is a constant rate of progress?

Decomposition

- Interface for User.
- Creating and Implementing Algorithm via Dynamic Programming.

Pattern Recognition

- As the deadline draws nearer, the maximum time to procrastinate decreases.

Abstraction

- Relevant Information: deadline, rate of progress, progress requirement.
- Less Relevant: name and nature of assignment.

Problem

How can the procrastination problem be implemented using dynamic programming techniques?

Decomposition

- Implement a bottom up approach.
- Create a list that will store the progress per day.
- The length of the list will be determined by the deadline.
- Start by calculating & storing the progress at day 1.

Pattern Recognition

- The addition of progress per day is repetitive and it can be compared to the required progress.

Abstraction

- Relevant Information: available programming techniques.
- Less Relevant: programming language.