Basic Algorithm

- Search
- Graph
- Dynamic
- Programing
- Data Structure
- …

Example

- F[0] = 0
- F[1] = 1
- F[n] = F[n - 1] + F[n - 2], if n > 1

- F[10]?
- F[100]?
- F[1000000000]?

Fast To Get F[n]

- {[F[0],f[1]]} * {[0, 1];[1,1]} = {F[1], F[2]}
- {[F[n-2],f[n-1]]} * {[0, 1];[1,1]} = {F[n-1], F[n-2]}, if n > 1
- Multiply (n-1) Times?

Think it Easy

- Using 0 and 1...
- 5 = 2 ^ 2 + 2 ^ 0
- 7 = 2 ^ 2 + 2 ^ 1 + 2 ^ 0
- n = ???
- U get it!!!

Algorithm Competition

- Personal
  - Topcoder,TCO,Codeforces,Google Code Jam,Baidu A*,Facebook Hacker Cup...
- Team
  - ACM(CCPC,ICPC,Regional,EC-Final,Final)

How To Learn

- Books
  - 挑战程序设计竞赛（第2版）
  - 算法竞赛入门经典：训练指南
- OJ
  - http://codeforces.com/
- Zhihu
  - ACM 竞赛
  - 算法

Thanks!