

21/3/22

* Beginner - Module *

21.03.24

5. Beginner Logical Thinking - 1.

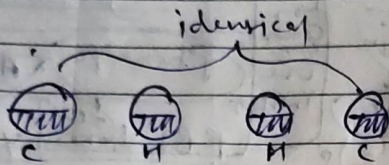
- Praveek Harang

Logistics

- ✓ Live
 - ✓ Assi + HW (Dashboard)
 - ✓ Notes PDF
 - ✓ Mentor
- TA | Help | Slack

Puzzle-1

(4)



2 cold

2 headache

- { Morning - 1C + 1H
- { Evening - 1C + 1H

$$\frac{1}{2}C + \frac{1}{2}H + \frac{1}{2}H + \frac{1}{2}C$$

1C
1H

Disolve in water (drink half of it)
Powder

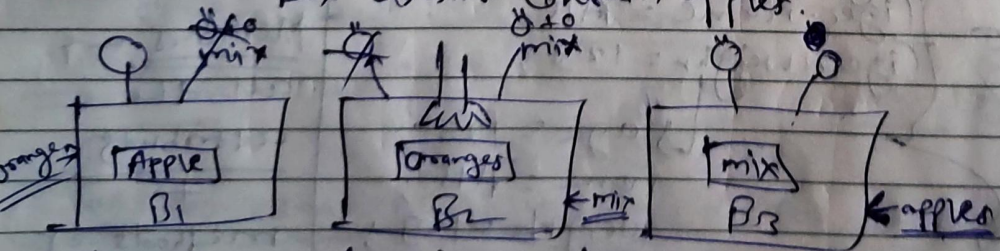
Puzzle-2

Fruit puzzle

You are given 3 boxes of Fruit

- Apples
- Oranges
- Mix of Apple and oranges

Labels on the boxes are Completely shuffled (incorrect). If the label Says Apples, Then box doesn't Contain apples.



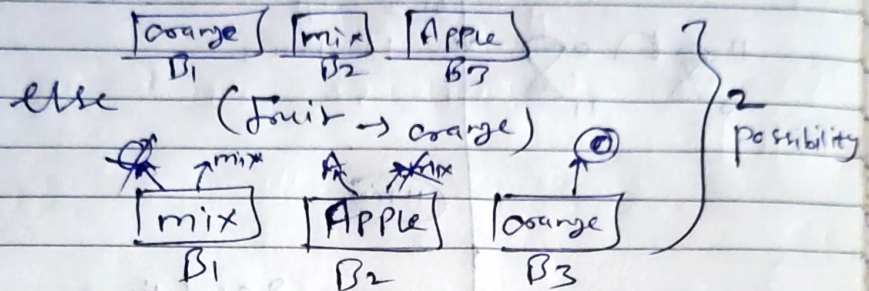
You Cannot ^{any} look inside box, but you can draw only 1 fruit from one box and the goal is to identify what box contains what?

→ Breaking into half is the most efficient way to do any task

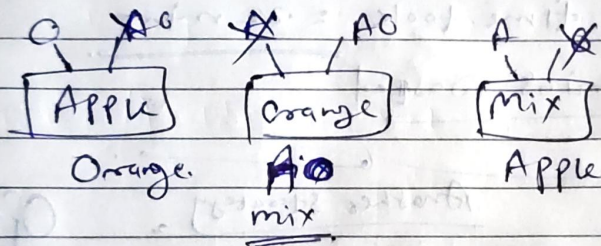
[Apple Box] ⇒ orange × No idea

[Orange Box] ⇒ Apple × No idea

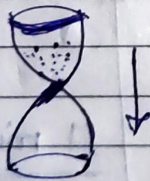
Solⁿ [Mix box] if (Fruit → Apple)



Repeat

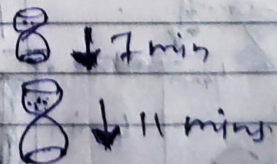


Puzzle-3 Hour Glass puzzle



Given : 2 Hour glasses

↳ 1 measure 7 min
↳ another measure 11 mins



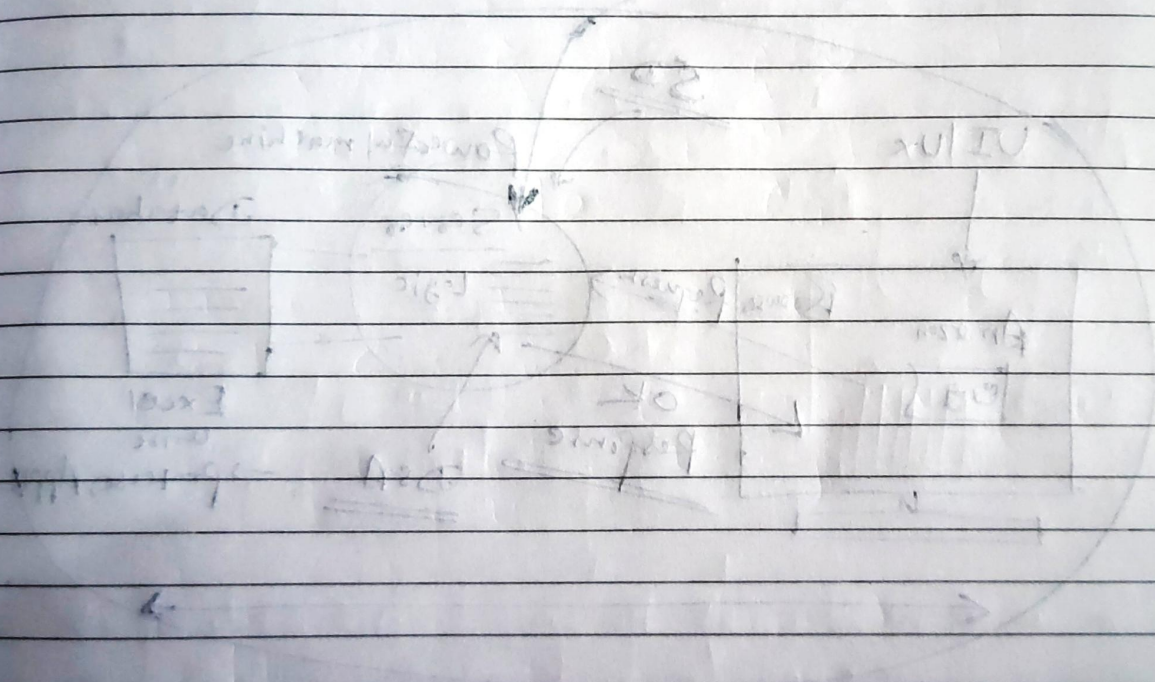
Goal : measure 15 mins

(Play)

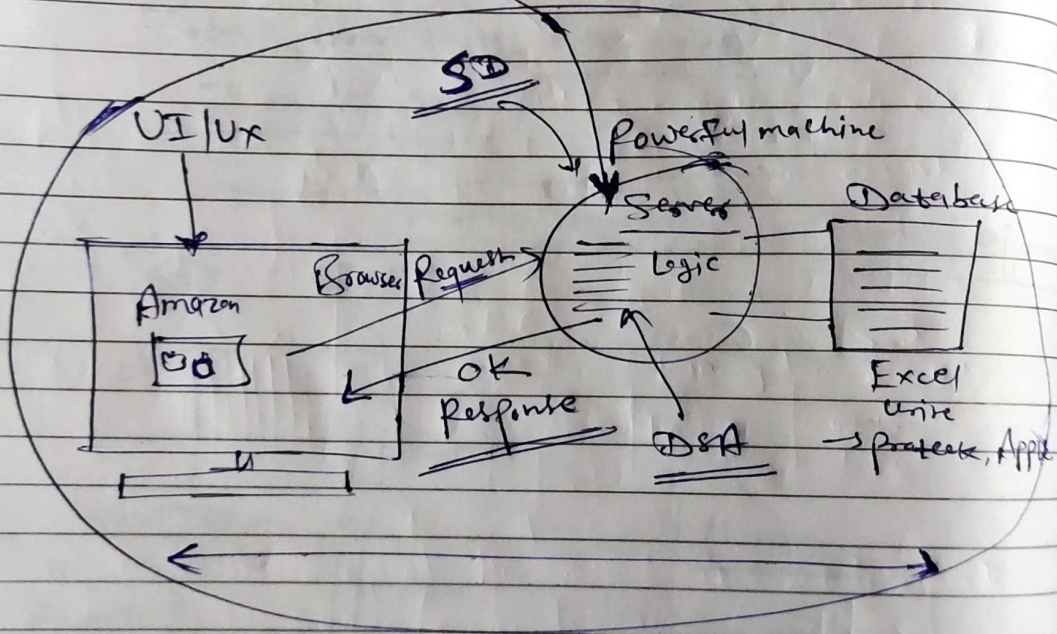
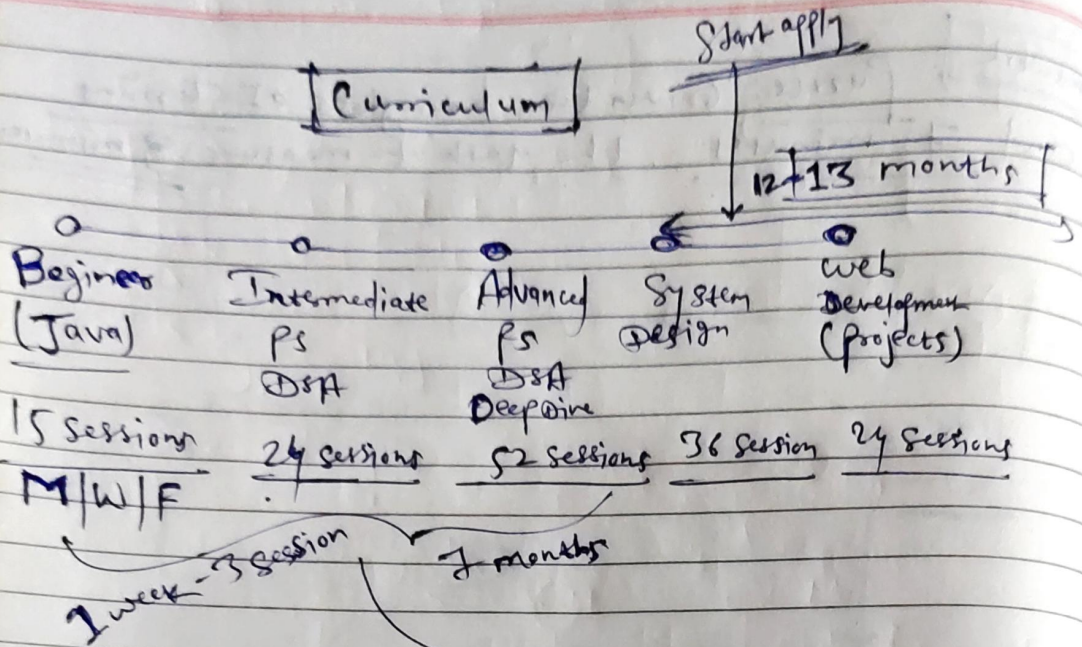


Strategy: List of steps (Algorithm)

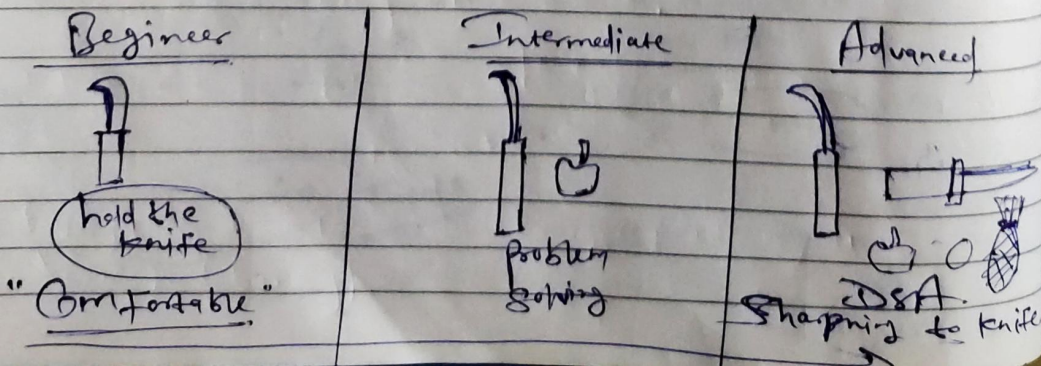
Homework: Puzzle: Given two hourglasses of 4 min
and 7 minutes, the task to measure 9 minutes.



System Design → More More Important.



Programming lang → Tool



Puzzle:- Google

[Books: Head First Java]
(Optional) Supplementary Reading Material

- L0 : Done
- L1 : Basics (Operators / print / Datatypes)
- L2 : Conditionals (IF-else)
- L3 : ~~for~~ Scoping / Nested IF else / I/O
- L4 : Looping
- L5 : Pattern printing
- L6 : Pattern printing
- L7 : Functions
- L8-L11: Array, 2D Array, Array Lists
- L12-L13 : Strings
- L14-L15: OOPs Basics & Memory Management.