Curriculum

Refresher → Rewising   1month
          → learn Java

DSA

Refresher
  ↓
Intermediate → Basic DSA   1month
  ↓
Advance → Implementation   4-5months
           DSA
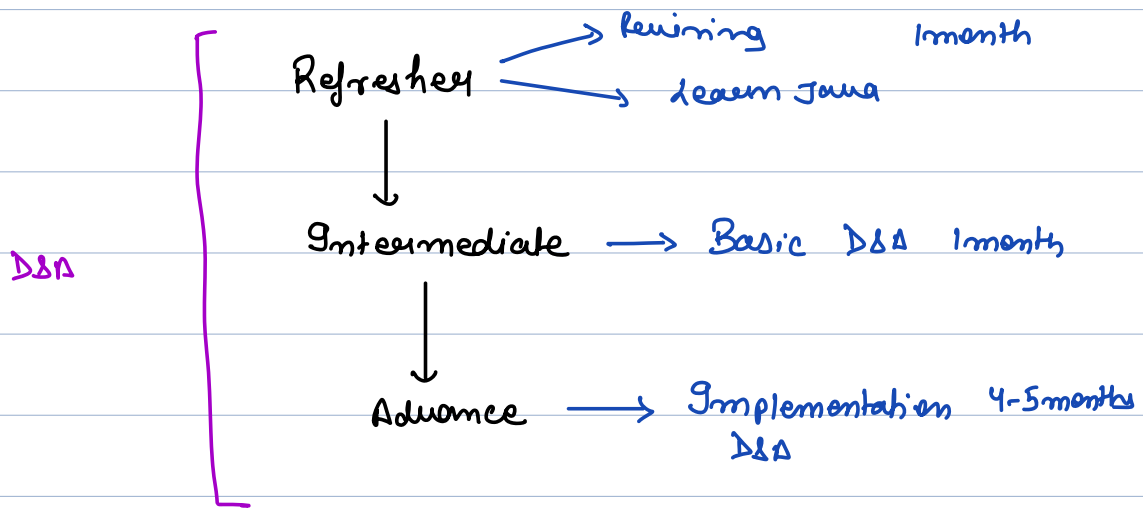
language, Project, LLD, HLD, Sql
  ↓
Electives .

Refresher

1) Intro
2) if-else
3) while
4) for
5) Patterns
6) functions
7) 1D Arrays
8) 2D Arrays

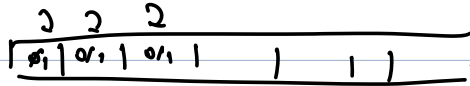9)   Array List
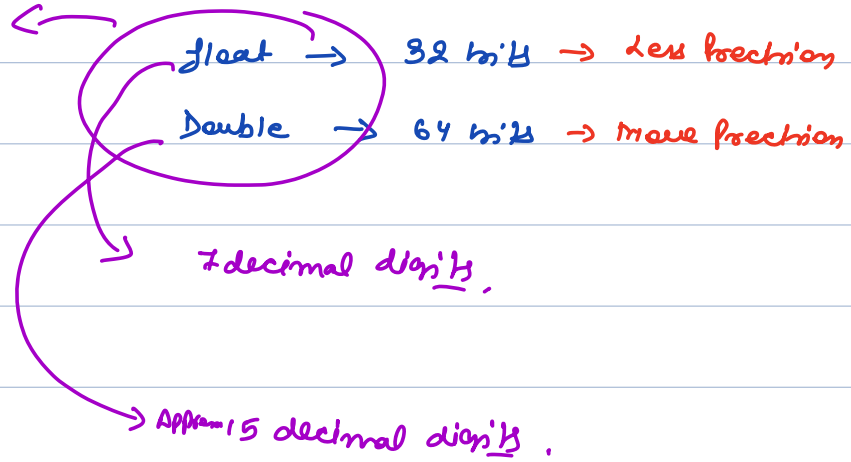
10)   Strings

11)   Hashmap & Hashset.

Datatypes

1)   Text $\rightarrow$ " I am Aman"
     $\rightarrow$ " My Age is 25" $\Big]$ $\rightarrow$ String

                                     group of
                                     character

2)   numbers
     $\hookrightarrow$ int $\Big\}$ integers $\{-\infty, -3, -2, -1, ...0\}$
     $\hookrightarrow$ long   Positive & neg.
                                   whole numbers
     $\hookrightarrow$ float $\Big\}$ Decimal $\{3.14, 1.56, 9.23\}$
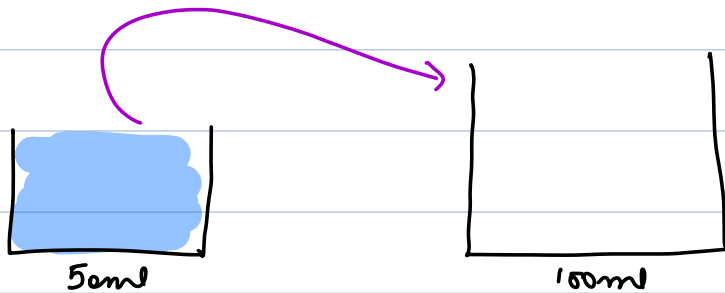 $\hookrightarrow$ double

                                 $\rightarrow$ 4 Bytes (32 bits)

$-10^9 \simeq \left(-2^{31}\right) <= int <= \left(2^{31}-1\right) \simeq 10^9$

$-10^{18} \simeq \left(-2^{63}\right) <= \underline{long} <= \left(2^{63}-1\right) \simeq 10^{18}$

                              $\hookrightarrow$ 8 Bytes (64 bits)

$$\overset{\displaystyle\smile\ \ \smile\ \ \smile}{\boxed{\ \sigma_1\ |\ \alpha_1\ |\ \sigma_1\ |\quad|\quad|\quad}}$$

Range

float → 32 bits → Less Prechion

Double → 64 bits → More Prechion

7 decimal digits.

Approx 15 decimal digits.

Type Casting

5cml   100ml

int ⟶ long

5cml   100ml   → < = 50ml

int ⟵ dlong

> 50ml
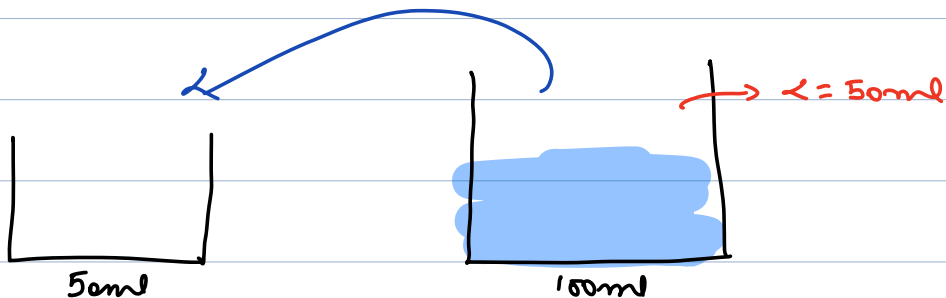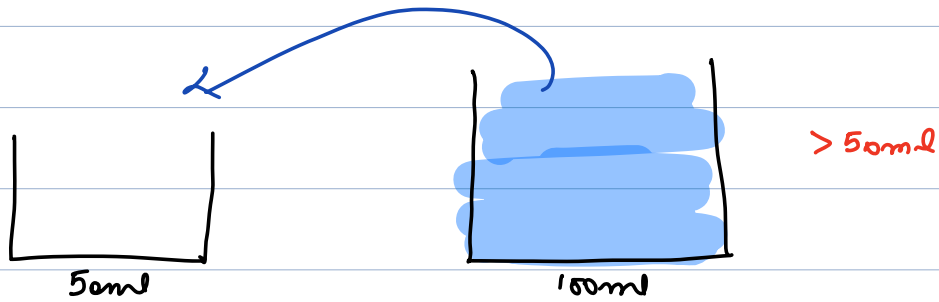
Overflow   int ← long

Garbage   int ← 10^{12}

64 bits

32 bits

long ℓ = 1000;

int i = ℓ

32 bits

int

: ☹ := int → int.