

DSA through Java

Singly linked list



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Agenda

- ① what is a list?
- ② what is a node
- ③ Singly linked list
- ④ SLL ADT
- ⑤ Array vs Dynamic Array vs SLL

What is a list?

List is a linear collection of data items
also known as List Item

Example 1

Marks of tests / List of marks

20 15 21 24 18 23 25

list item: int

Example 2

List of guests

"Singh", "Chaturvedi", "Dubey", "Khan"

List item: String

Example 3 List of Students

Rahul	Savita	Dilip	
17	19	18	
xyz@x.com	xy@x.com	x@x.com

List item: Student

What is a node?

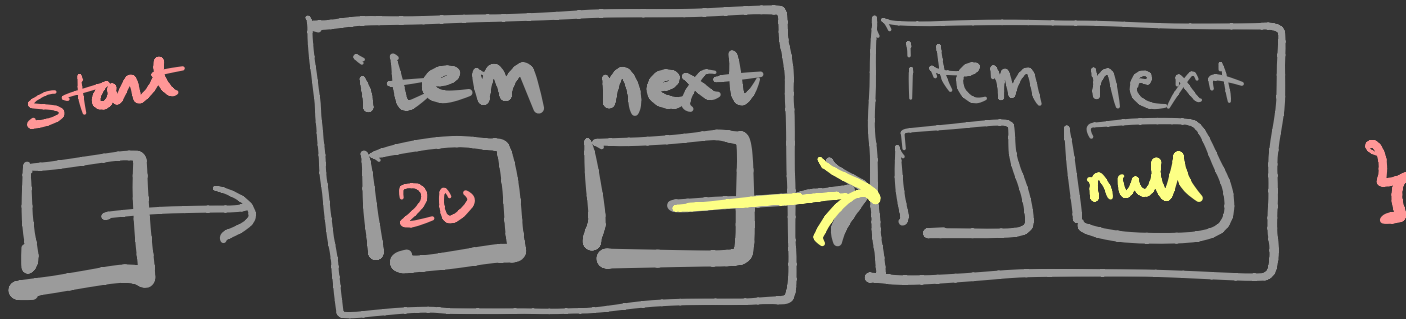
Example-1

Marks of tests / List of marks
20 15 21 24 18 23 25

class node {

int item;

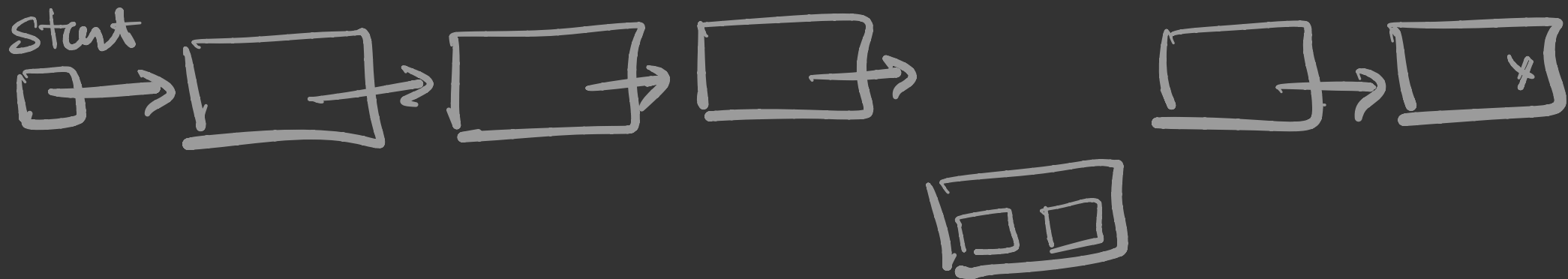
node next;



node start = new node();

Singly Linked List

- ① insertion
 - ① starting
 - ② Last
 - ③ after a node
- ② deletion
 - ① first node
 - ② last node
 - ③ specific node



Array vs Dynamic Array vs SLL

Array

fixed size

Dynamic Array

growable
shrinkable



SLL

Dynamic
growable
shrinkable

