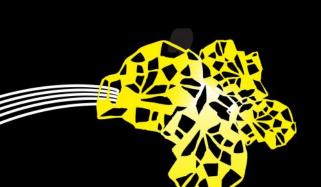
# UNIVERSITY OF TWENTE.



## **The Java List Interface**

Topic of Software Systems (TCS module 2)

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## THE LIST INTERFACE

#### Principle

Separate the abstract concept of a list and its possible implementations

- This video: the abstract list concept
- Later videos:
  - The methods list interface (requires generics)
  - Techniques to implement (dynamic) lists

## LIST PROPERTIES AND METHODS

- A list is a data structure
  - What are the properties of a list?
    - Elements stored in sequence
  - What are the queries?
    - Empty, size, looking up elements
  - What are the commands?
    - Updating an element, adding, removing elements

## JAVA COLLECTIONS FRAMEWORK

- Interfaces, implementations and algorithms to implement collections (sets, bags, lists, etc.)
- Various implementations of the List interface
  - ArrayList
  - LinkedList
  - •

## LIST INTERFACE (FOR A LIST OF STUDENTS)

#### Queries (amongst others)

- Get the length of the list
- Test if the list is empty
- Get Student in position i (index i)

#### Commands (amongst others)

- Add student to the end of the list.
- Replace (set) Student in position i