

# Abstract Data Types

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Loose coupling: implementation of different tasks unrelated

## Data Abstraction

- What operations a data collection supports, now how
- Management: CRUD

## Data Structures

- Arrays, stacks, queues

## Abstract Data Type (ADT)

- Collection of data (data structure) + operations
- Specifications
- Operations = interface (wall of isolation)
  - o Programs should not directly access data structure
- Primitive Types = predefined ADTs, portable

## Abstract Classes

- Basis of subclasses, no instances
- Declares functionality
- Requires at least one abstract method
  - o Other methods can be implemented
- `public abstract class Shape {...}`

## Interfaces

- Consists only of public abstract methods + constants
  - `public static final constant_PI;`
- Can be implemented by classes which define its abstract methods