

## Abstrakter Datentyp Feld

Feld = (Objekte  $O_F$ , Funktionen  $F_F$ )

$$\bullet O_F = \{[0], [1], [2], \dots, [n]\}$$

$$\bullet F_F = \{\text{Init}(n), \text{FillRandom}(), \text{Min}(), \text{Max}(), \text{Avg}(), \text{Print}()\}$$

Signaturen:

$$\bullet [0], [1], \dots, [n] \rightarrow O_F$$

$$\bullet \text{Init}(n) : \text{int} \rightarrow O_F$$

$$\bullet \text{FillRandom} : O_F \rightarrow O_F$$

$$\bullet \text{Min}() : O_F \rightarrow O_F$$

$$\bullet \text{Max}(), \text{Avg}(), \text{Print}() : O_F \rightarrow O_F$$

## Abstrakter Datentyp Matrix

Matrix = (Objekte  $O_M$ , Funktionen  $F_M$ )

$$\bullet O_M = \{1 \times 1, 1 \times 2, 2 \times 1, 1 \times 3 \dots\}$$

$$\bullet F_M = \{\text{Init}(n), \text{Print}(n), \text{Input}(), \text{Add}(M), \text{Mult}(n)\}$$

Signaturen:

$$\bullet 1 \times 1, 1 \times 2 \dots \rightarrow O_M$$

$$\bullet \text{Init}(n) : \text{int} \rightarrow O_M$$

$$\bullet \text{Print}() : O_M \rightarrow O_M$$

$$\bullet \text{Add}(n), \text{Mult}(M) : O_M \times O_M \rightarrow O_M$$