

Pseudocode Examples

Examples using `pseudocode.sty`

Example of Sequences and Sets

a sequence:	$A = \langle 7, 2, 5, 4 \rangle$
its length	$ A \Rightarrow 4$
the second element	$A_2 \Rightarrow 5$
a range	$\langle 4, \dots, 7 \rangle \Rightarrow \langle 4, 5, 6, 7 \rangle$
a subsequence	$A \langle 1, \dots, 3 \rangle \Rightarrow \langle 2, 5, 4 \rangle$
map over a sequence:	$\langle x^2 : x \in A \rangle \Rightarrow \langle 49, 4, 25, 16 \rangle$
filter over a sequence:	$\langle x \in A \mid x > 3 \rangle \Rightarrow \langle 7, 5, 4 \rangle$
a set:	$B = \{3, 5, 1, 6, 8\}$
filter over a set:	$\{x \in B \mid x > 3\} \Rightarrow \{5, 6, 8\}$
a table:	$C = \{a \mapsto 4, b \mapsto 1, c \mapsto 8\}$
map and filter over a table:	$\{x \mapsto y^2 : (x \mapsto y) \in C \mid y > 3\} \Rightarrow \{a \mapsto 16, b \mapsto 64\}$

Example Code

```
1 function greedyApproxSS(S) =
2   if |S| = 1 then S0
3   else
4     let
5       val O = {(overlap(si, sj), si, sj) : si ∈ S, sj ∈ S | si ≠ sj}
6       val (o, si, sj) = arg max(x, →) ∈ O x
7       val sk = join(si, sj)
8       val S' = ({sk} ∪ S) \ {si, sj}
9     in
10      greedyApproxSS(S')
11    end
```

Another example:

```
1 function mcSS(S) =
2   case (showt S)
3     of EMPTY ⇒ -∞
4        | ELT(x) ⇒ x
5        | NODE(L, R) ⇒
6          let
7            val (mL, mR) = (mcSS(L) || mcSS(R))
8            val ma = bestAcross(L, R)
9          in
10            max{mL, mR, mA}
11          end
```