

Objektové modelování, přednáška č. 1

$$\left(\begin{array}{c|c|c} & & \text{int } a; \\ & & a = 3; \\ & & \text{int } b = a; \end{array} \right) \rightarrow \left(\begin{array}{c|c|c} & a = 0 & a = 3; \\ & & \text{int } b = a; \end{array} \right) \rightarrow$$

$$\left(\begin{array}{c|c|c} & a = 3 & \text{int } b = a; \end{array} \right) \rightarrow \left(\begin{array}{c|c|c} & a = 3, b = 3 & \end{array} \right)$$

```
class Vector {
    int a;
    int b;
    int c;

    Vector() {
        a = 1;
        b = 2;
        c = 3;
    }

    void setA(int newA) {
        a = newA;
    }
}
```

$$\left(\begin{array}{c|c|c} & & \text{Vector } v = \text{new Vector()}; \\ & & v.\text{setA}(7); \end{array} \right) \rightarrow$$

$$\left(\begin{array}{c|c|c} \#1 \rightarrow \text{Vector}(a = 0, b = 0, c = 0) & \text{this} = \#1 & \text{this.a} = 1; \\ & & \text{this.b} = 2; \\ & & \text{this.c} = 3; \\ & & \text{return this;} \\ \hline & & \text{Vector } v = \bullet; \\ & & v.\text{setA}(7); \end{array} \right) \rightarrow$$

$$\left(\begin{array}{c|c|c} \#1 \rightarrow \text{Vector}(a = 1, b = 0, c = 0) & \text{this} = \#1 & \text{this.b} = 2; \\ & & \text{this.c} = 3; \\ & & \text{return this;} \\ \hline & & \text{Vector } v = \bullet; \\ & & v.\text{setA}(7); \end{array} \right) \rightarrow$$

$$\left(\begin{array}{c|c|c} \#1 \rightarrow \text{Vector}(a = 1, b = 2, c = 0) & \text{this} = \#1 & \text{this.c} = 3; \\ & & \text{return this;} \\ \hline & & \text{Vector } v = \bullet; \\ & & v.\text{setA}(7); \end{array} \right) \rightarrow$$

$$\left(\begin{array}{c|c|c} \#1 \rightarrow \text{Vector}(a = 1, b = 2, c = 3) & \text{this} = \#1 & \text{return this;} \\ \hline & & \text{Vector } v = \bullet; \\ & & v.\text{setA}(7); \end{array} \right) \rightarrow$$

$$\left(\begin{array}{c|c|c} \#1 \rightarrow \text{Vector}(a = 1, b = 2, c = 3) & & \text{Vector } v = \#1; \\ & & v.\text{setA}(7); \end{array} \right) \rightarrow$$

$$\begin{aligned}
& (\#1 \rightarrow \text{Vector}(a = 1, b = 2, c = 3) \mid v = \#1 \mid \text{v.setA}(7);) \rightarrow \\
& \left(\#1 \rightarrow \text{Vector}(a = 1, b = 2, c = 3) \mid \frac{\text{this} = \#1, \text{newA} = 7}{v = \#1} \mid \frac{\text{this.a} = \text{newA};}{\text{return;}} \right) \rightarrow \\
& \left(\#1 \rightarrow \text{Vector}(a = 7, b = 2, c = 3) \mid \frac{\text{this} = \#1, \text{newA} = 7}{v = \#1} \mid \text{return;} \right) \rightarrow \\
& (\#1 \rightarrow \text{Vector}(a = 7, b = 2, c = 3) \mid v = \#1 \mid)
\end{aligned}$$