Napredno programiranje i programski jezici

05 C++ (static)

Fakultet tehničkih nauka, Novi Sad
23-24/Z
Dunja Vrbaški

```
class A {
private:
    int x;
public:
    A(int xx = 0) : x(xx) {}

    int getX() const { return x; }
    void setX(int x) { this -> x = x; }
};
```

```
void print(const A &a) {
    cout << "x = " << a.getX() << endl;
}
int main()
{
    A a1(3), a2(5);

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);
}
```

```
class A {
private:
    int x;
public:
    A(int xx = 0) : x(xx) {}

    int getX() const { return x; }
    void setX(int x) { this -> x = x; }
};
```

```
void print(const A &a) {
    cout << "x = " << a.getX() << endl;
}
int main()
{
    A a1(3), a2(5);

    cout << "a1: " << print(a1);
    cout << "a2: "; print(a2);
}
```

usput, ovo je česta greška na K

```
class A {
private:
    int x;
public:
    A(int xx = 0) : x(xx) {}

    int getX() const { return x; }
    void setX(int x) { this -> x = x; }
};
```

```
void print(const A &a) {
    cout << "x = " << a.getX() << endl;
}
int main()
{
    A a1(3), a2(5);

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);
}
```

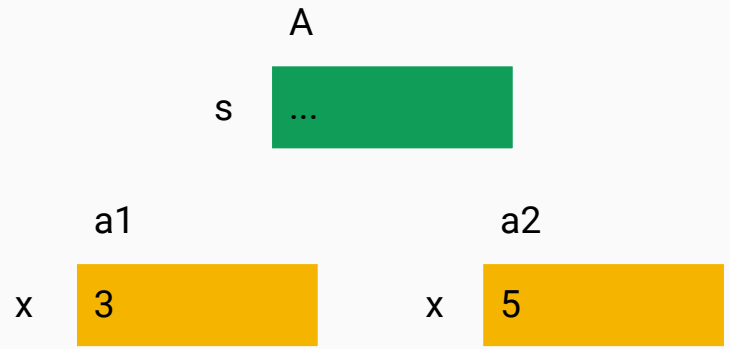
```
class A {
private:
    int x;
public:

   static int s;

    A(int xx = 0) : x(xx) {}

    int getX() const { return x; }
    void setX(int xx) { x = xx; }
};
```

```
void print(const A &a) {
    cout << "x = " << a.getX() << endl;
}
int main()
{
    A a1(3), a2(5);

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);
}
```

Zajedničko polje objekata klase A

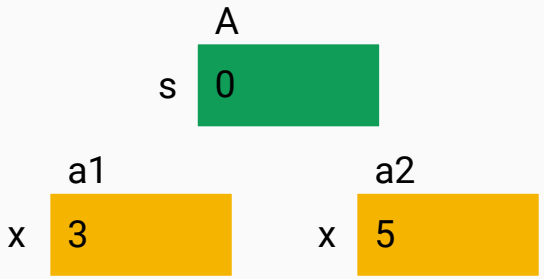
```
class A {
private:
    int x;
public:

   static int s;

    A(int xx = 0) : x(xx) {}

    int getX() const { return x; }
    void setX(int x) { x = xx; }
};
```

```
void print(const A &a) {
    cout << "x = " << a.getX() << endl;
}
int main()
{
    A a1(3), a2(5);

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);
}
```



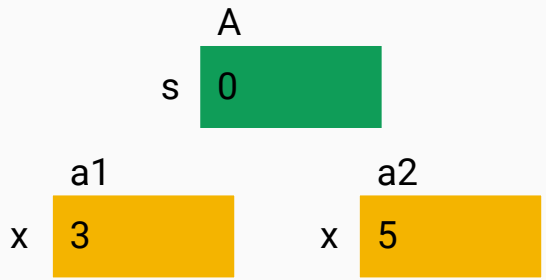
```
class A {
private:
    int x;
public:

    static int s;

    A(int xx = 0) : x(xx) {}

    int getX() const { return x; }
    void setX(int x) { x = xx; }
};
```

```
void print(const A &a) {
    cout << "x = " << a.getX() << endl;
}

int A::s = 0;

int main()
{
    A a1(3), a2(5);

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);
}
```



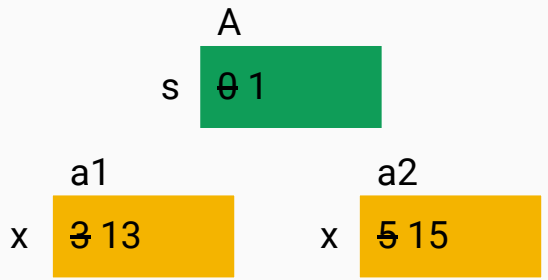
```
class A {
private:
    int x;
public:

    static int s;

    A(int xx = 0) : x(xx) {}

    int getX() const { return x; }
    void setX(int x) { x = xx; }
};
```

```
void print(const A &a) {
    cout << "x = " << a.getX()
    << " s = " << A::s << endl;
}

int A::s = 0;

int main()
{
    A a1(3), a2(5);

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);
}
```




```
a1: x = 3 s = 0
a2: x = 5 s = 0
```

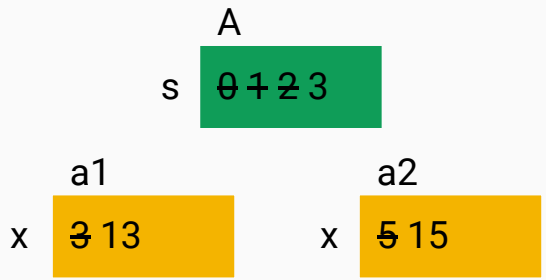
```
class A {
private:
    int x;
public:

    static int s;

    A(int xx = 0) : x(xx) {}

    int getX() const { return x; }
    void setX(int x) { x = xx; }
};
```




```
void print(const A &a) {
    cout << "x = " << a.getX()
    << " s = " << A::s << endl;
}

int A::s = 0;

int main()
{
    A a1(3), a2(5);

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);

    a1.setX(13);
    a2.setX(15);
    A::s = 1;

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);
}
```

```
a1: x = 3 s = 0
a2: x = 5 s = 0
a1: x = 13 s = 1
a2: x = 15 s = 1
```

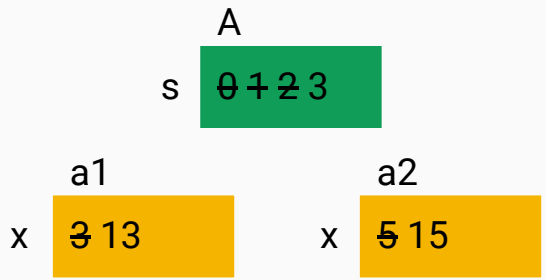
```
class A {
private:
    int x;
public:

    static int s;

    A(int xx = 0) : x(xx) {}

    int getX() const { return x; }
    void setX(int x) { x = xx; }
};
```




```
void print(const A &a) {
    cout << "x = " << a.getX()
    << " s = " << A::s << endl;
}

int A::s = 0;

int main()
{
    A a1(3), a2(5);

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);

    a1.setX(13);
    a2.setX(15);
    A::s = 1;
    a1.s = 2;  a2.s = 3;

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);
}
```

```
class A {
private:
    int x;
    static int s;
public:
    A(int xx = 0) : x(xx) {}

    int getX() const { return x; }
    void setX(int x) { x = xx; }

    static int getS() { return s; }
    static void setS(int ss) { s = ss; }
};
```

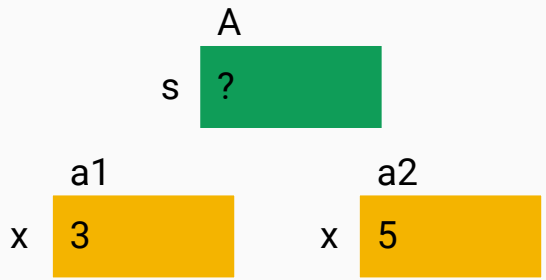
```
class A {
private:
    int x;
    static int s;
public:
    A(int xx = 0) : x(xx) {}

    int getX() const { return x; }
    void setX(int x) { x = xx; }

    static int getS() { return s; }
    static void setS(int ss) { s = ss; }
};
```




```
void print(const A &a) {
    cout << "x = " << a.getX()
    << " s = " << A::getS() << endl;
}

int A::s = 0;

int main()
{
    A a1(3), a2(5);

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);

    a1.setX(13);
    a2.setX(15);
    A::setS(1); a1.setS(2); a2.setS(3);

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);

    return 0;
}
```

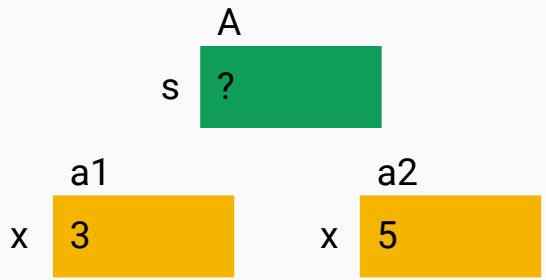
```
class A {
private:
    int x;
    static int s;
public:
    A(int xx = 0) : x(xx) { s++; }

    int getX() const { return x; }
    void setX(int x) { x = xx; }

    static int getS() { return s; }
};
```

```
void print(const A &a) {
    cout << "x = " << a.getX()
    << " s = " << A::getS() << endl;
}

int A::s = 0;

int main()
{
    A a1(3), a2(5);

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);
    return 0;
}
```

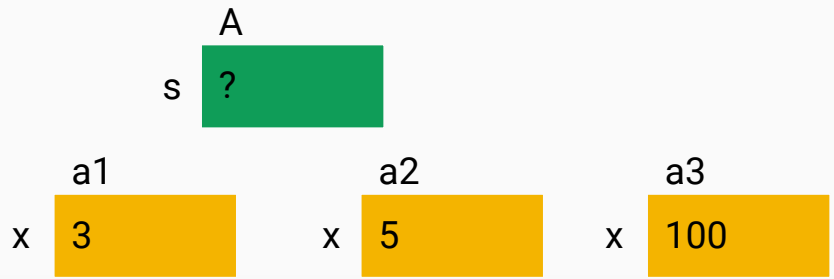


```
class A {
private:
    int x;
    static int s;
public:
    A(int xx = 0) : x(xx) { s++; }
    ~A() { s--; }

    int getX() const { return x; }
    void setX(int x) { x = xx; }

    static int getS() { return s; }
};
```

```
void print(const A &a) {
    cout << "x = " << a.getX()
    << " s = " << A::getS() << endl;
}

int A::s = 0;

int main()
{
    A a1(3), a2(5);

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);
    return 0;
}
```

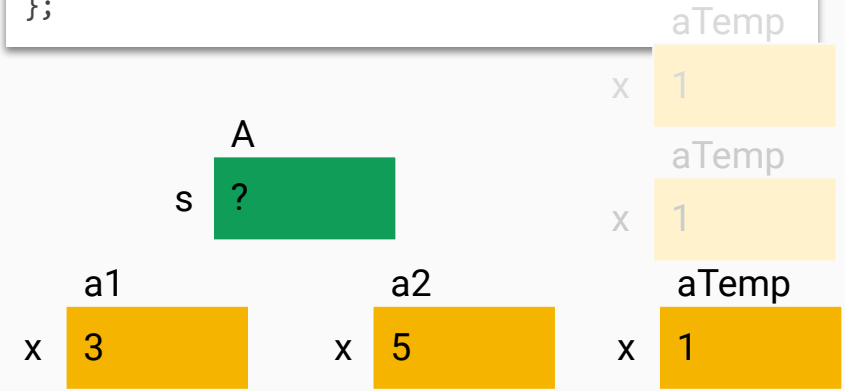


```
class A {
private:
    int x;
    static int s;
public:
    A(int xx = 0) : x(xx) { s++; }
    ~A() { s--; }

    int getX() const { return x; }
    void setX(int x) { x = xx; }

    static int getS() { return s; }
};
```




```
void print(const A &a) {
    cout << "x = " << a.getX()
    << " s = " << A::getS() << endl;
}
int A::s = 0;
int main()
{
    A a1(3), a2(5);
    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);

    cout << endl << "blok" << endl;
    {
        A a3(100);
        cout << "a1: "; print(a1);
        cout << "a2: "; print(a2);
        cout << "a3: "; print(a3);
    }
    cout << endl << "kraj bloka" << endl;

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);
}
```

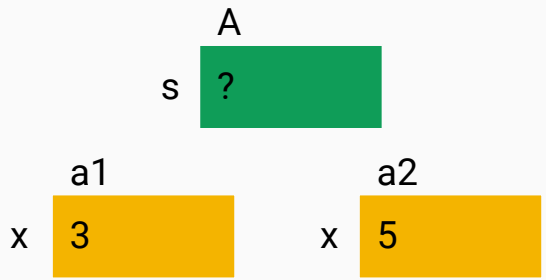
```
class A {
private:
    int x;
    static int s;
public:
    A(int xx = 0) : x(xx) { s++; }
    ~A() { s--; } // ubaciti cout << “Desc”

    int getX() const { return x; }
    void setX(int x) { x = xx; }

    static int getS() { return s; }
};
```




```
void print(const A &a) {
    cout << "x = " << a.getX()
    << " s = " << A::getS() << endl;
}
int A::s = 0;
int main()
{
    A a1(3), a2(5);
    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);

    cout << endl << "for" << endl;
    for (int i = 0; i < 3; i++)
    {
        A aTemp(1);
        cout << "aTemp: "; print(aTemp);
    }
    cout << endl << "end for" << endl;

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);
}
```

```
class A {
private:
    int x;
    static int s;
public:
    A(int xx = 0, int ss) : x(xx) { s = ss; }

    int getX() const { return x; }
    void setX(int x) { x = xx; }

    static int getS() { return s; }
};
```

```
void print(const A &a) {
    cout << "x = " << a.getX()
    << " s = " << A::getS() << endl;
}

int A::s = 0;

int main()
{
    A a1(3, 3), a2(5, 5);

    cout << "a1: "; print(a1);
    cout << "a2: "; print(a2);
    return 0;
}
```



Paziti!

Pored članova klase static se koristi i kao modifikator za lokalne promenljive funkcije + jos detalja

```
class A { ... }

void fun() {
   int x;
   static int s;
   static A a;
   ...
}
```