



UNIVERSITY OF TRENTO - Italy

Laboratorio 19

Dettagli allocazione

DISI – aa 2024/25

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Coda (FIFO) con array

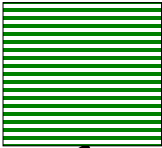
```
typedef struct TipoCoda {
    int n;           // numero elementi nella coda
    int dim;         // dimensione max coda
    int head;        // posizione elemento in testa
    int tail;        // posizione elemento in coda
    Tdato *s;        // vettore elementi
    TipoCoda () { // costruttore default
        dim = 3;
        n = 0; head = 0; tail = 0;
        s = new Tdato[3];
    }
    TipoCoda (int x) { // costruttore specifico
        dim = x;
        n = 0; head = 0; tail = 0;
        s = new Tdato[x];
    }
};

typedef TipoCoda Coda;
typedef TipoCoda *CodaPtr;
```

Coda c1; // Coda c1 = Coda();

TipoCoda c1; //TipoCoda c1 = Coda();

c1



c1.dim 3

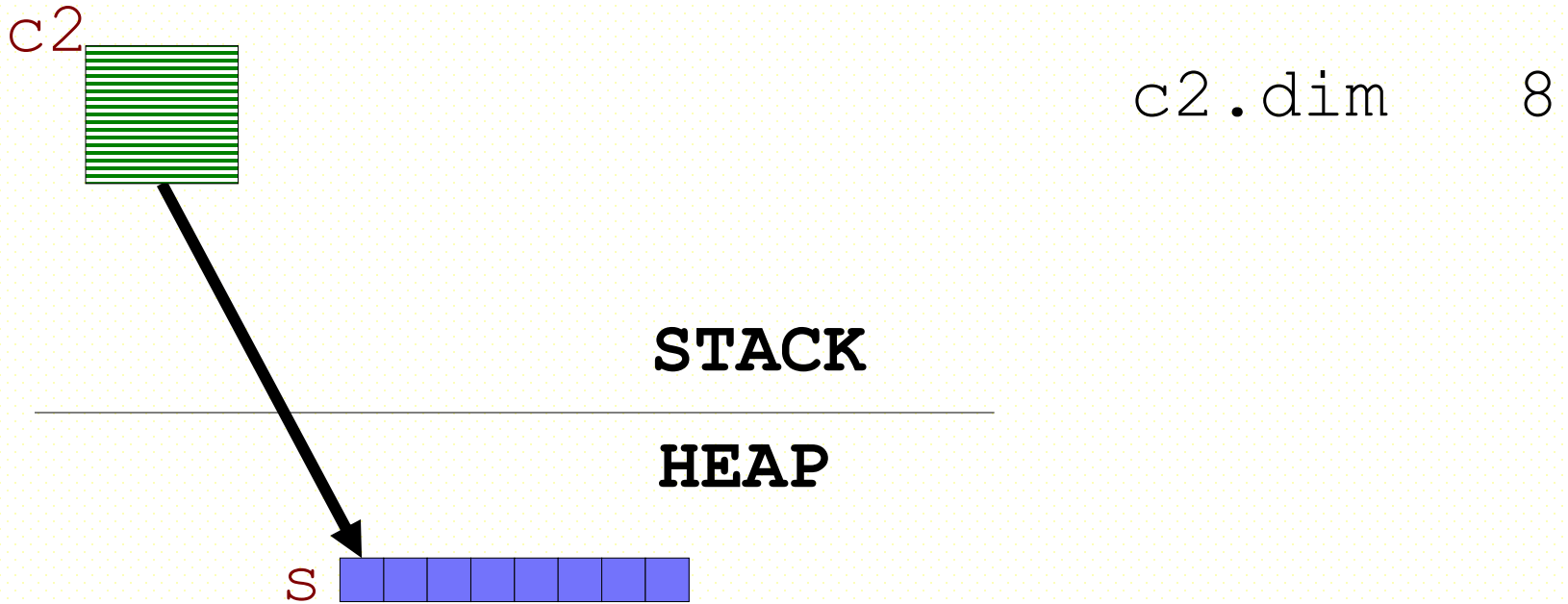
STACK

HEAP

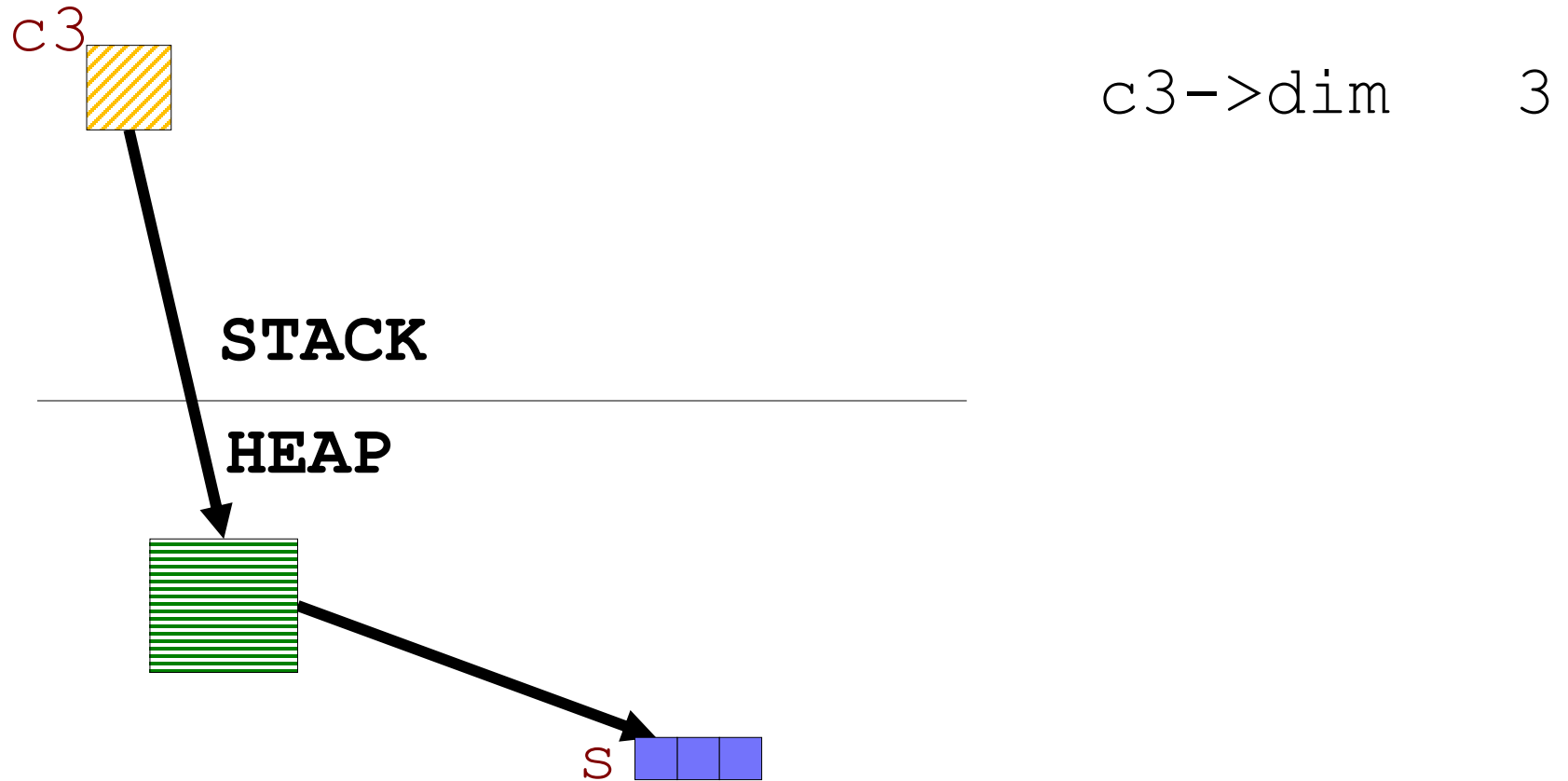
s



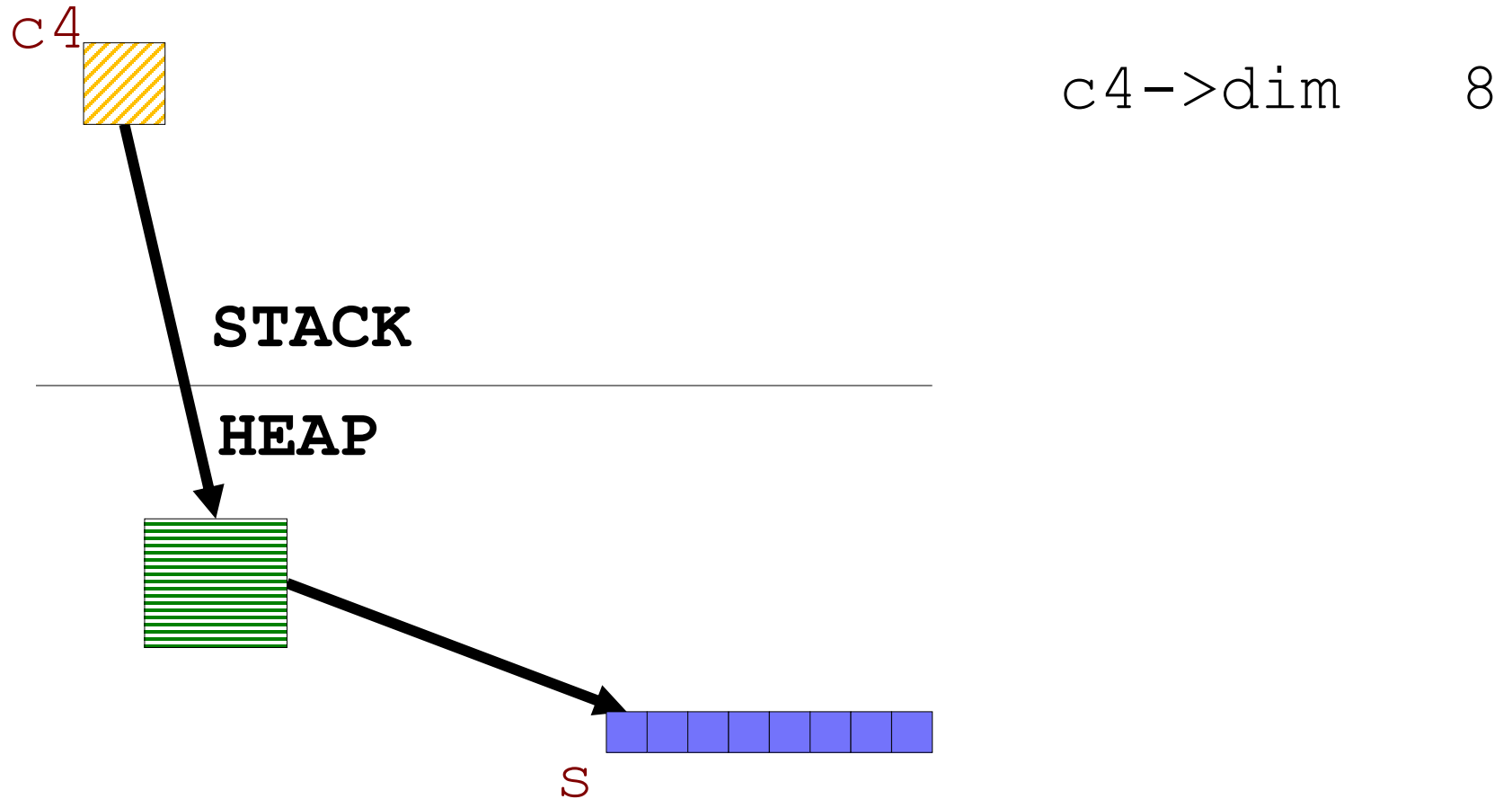
Coda c2(8); // Coda c2 = Coda(8);



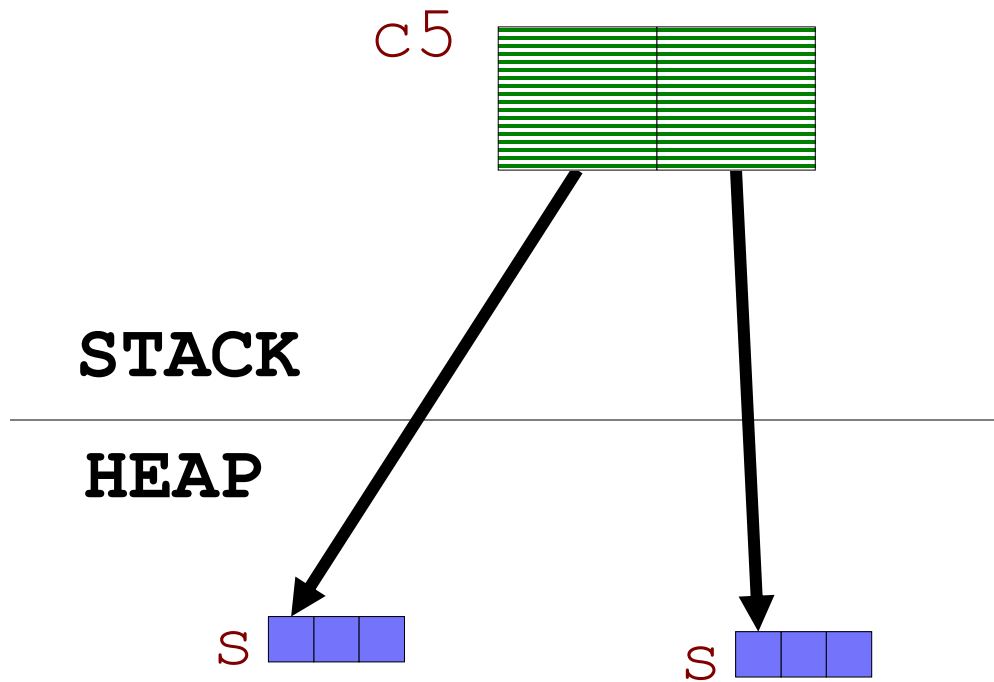
CodaPtr c3 = new Coda();



CodaPtr c4 = new Coda(8);

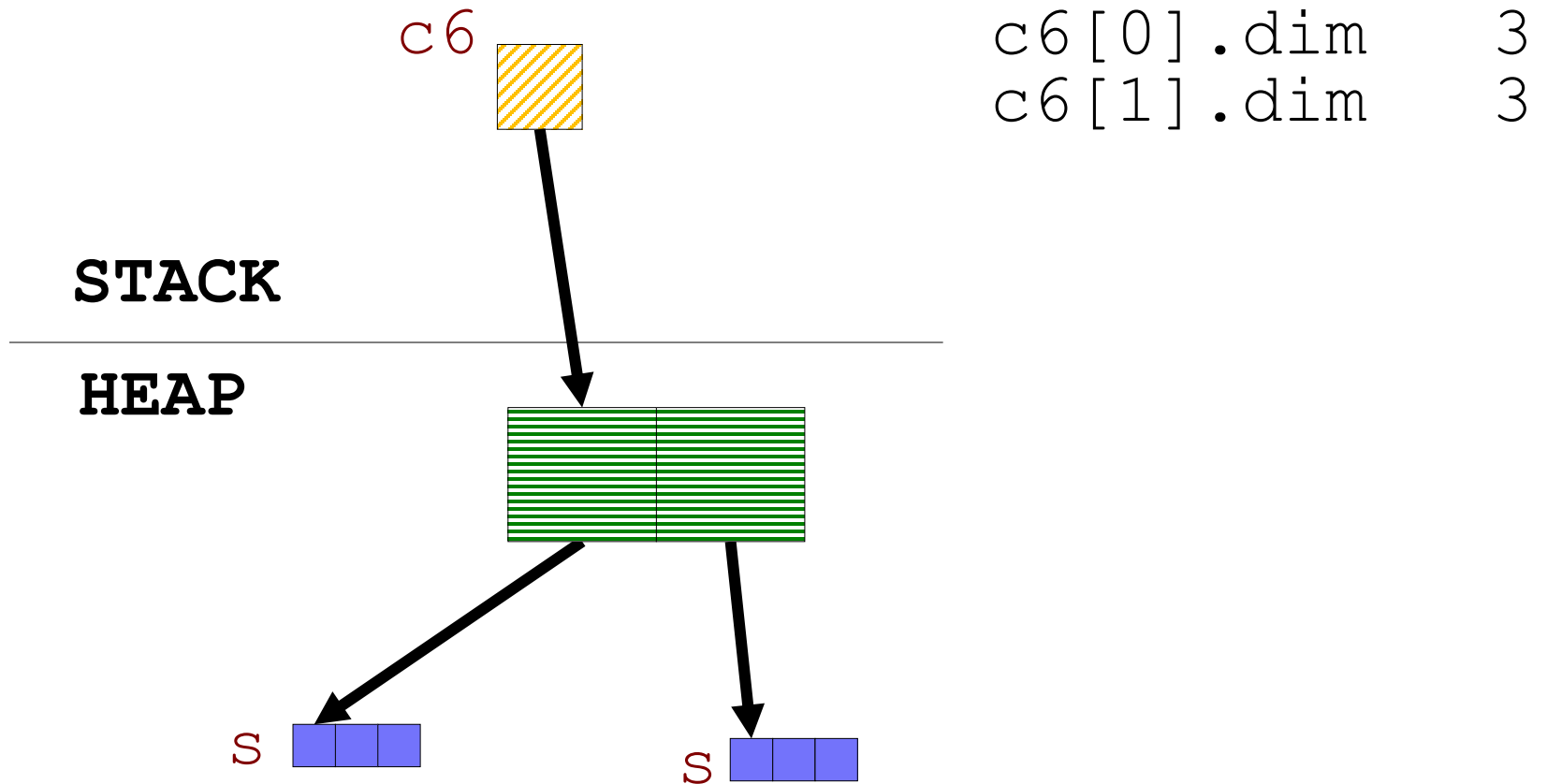


Coda c5[2];



```
c5[0].dim    3  
c5[1].dim    3
```

CodaPtr c6 = new Coda[2];



CodaPtr c7[3]; //array di puntatori a Coda nello stack

c7[0] = new TipoCoda(3);

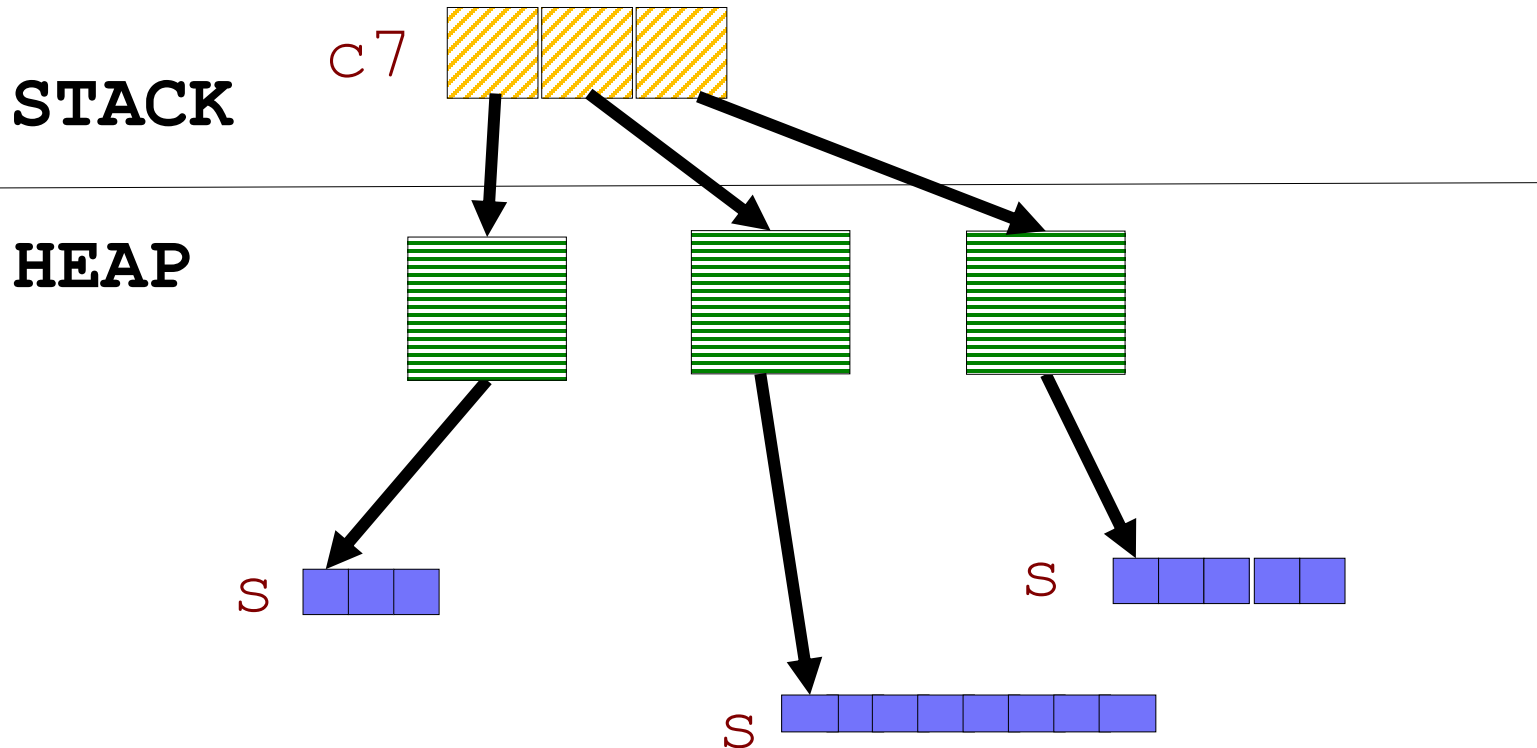
c7[1] = new TipoCoda(8);

c7[3] = new TipoCoda(5);

c7[0].dim 3

c7[1].dim 8

c7[2].dim 5



```
#define DIM 3
```

```
CodaPtr c8 = new CodaPtr[DIM]; // versione sbagliata
```

```
CodaPtr* c8 = new CodaPtr[DIM]; // versione corretta
```

```
//array di puntatori a Coda nell'heap
```

```
c8[0] = new TipoCoda(3);
```

```
c8[1] = new TipoCoda(8);
```

```
c8[3] = new TipoCoda(5);
```

```
c8[0].dim 3
```

```
c8[1].dim 8
```

```
c8[2].dim 5
```

STACK

c8



HEAP

