



UNIVERSITÀ DEGLI STUDI DI SALERNO
DIPARTIMENTO DI INFORMATICA
DIPARTIMENTO DI ECCELLENZA

Università degli Studi di Salerno

Dipartimento di Informatica

Programmazione ad Oggetti

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Array

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Dichiarazione di Array

```
type [ ] array_identifier;  
or  
type array_identifier [ ];
```

```
type [ ][ ] array_identifier;  
or  
type array_identifier [ ] [ ];
```



Dichiarazione di Array

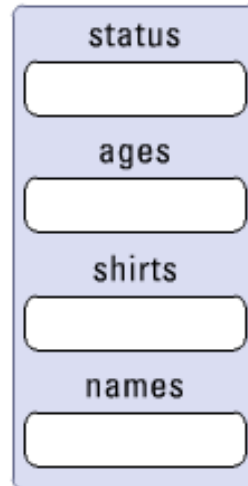
```
char [ ] status;  
int [ ] ages;  
Shirt [ ] shirts;  
String [ ] names;
```



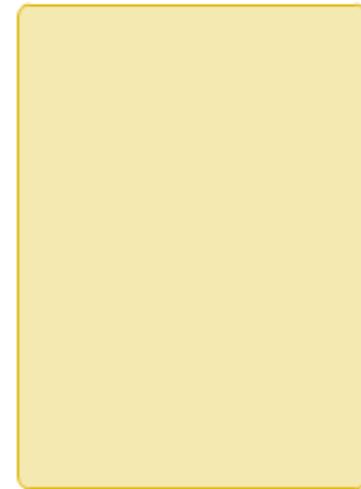
Dichiarazione di Array

```
char [ ] status;  
int [ ] ages;  
Shirt [ ] shirts;  
String [ ] names;
```

Stack Memory



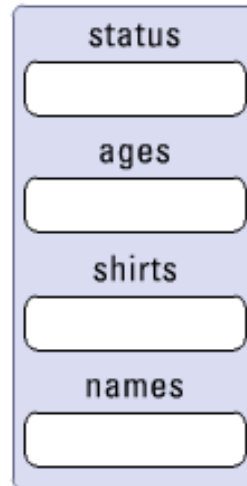
Heap Memory



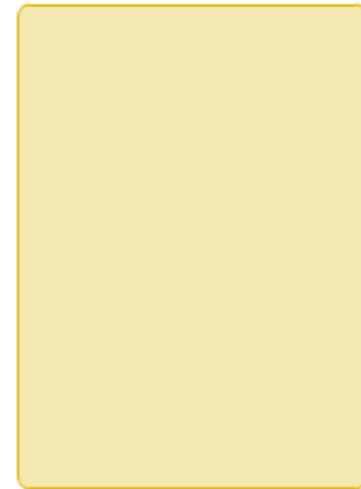
Definizione

```
status = new char [5];  
ages = new int [5];  
names = new String [7];  
shirts = new Shirt [3];
```

Stack Memory



Heap Memory



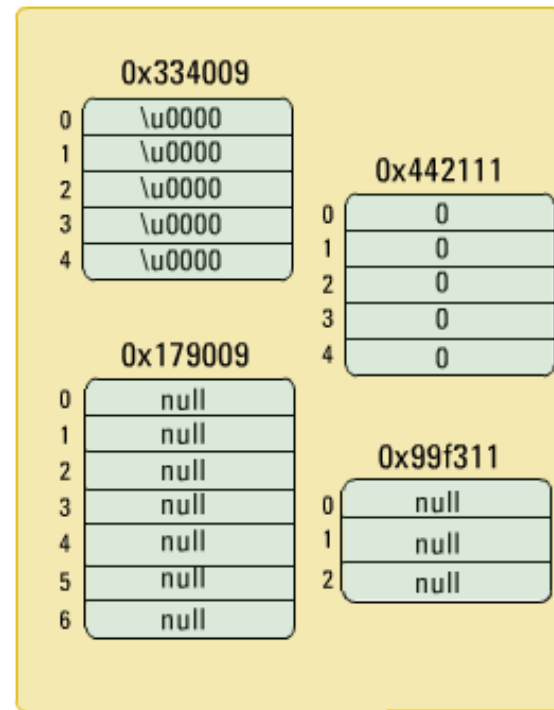
Definizione

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ages = new int [5];  
names = new String [7];  
shirts = new Shirt [3];
```

Stack Memory



Heap Memory



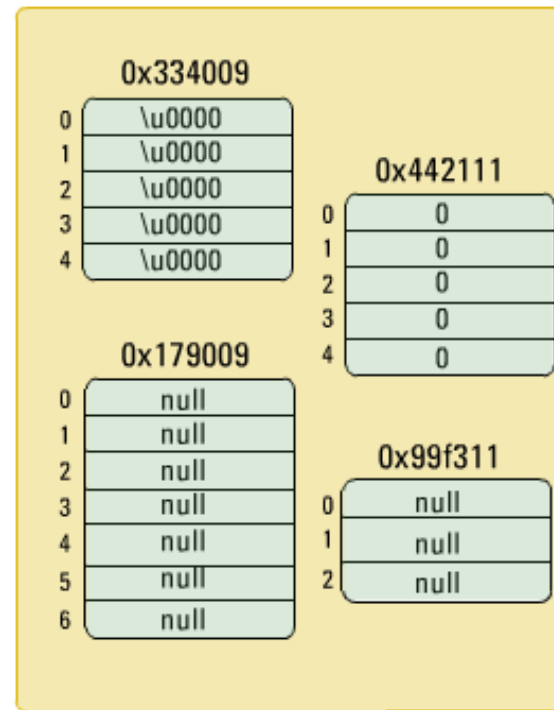
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Stack Memory



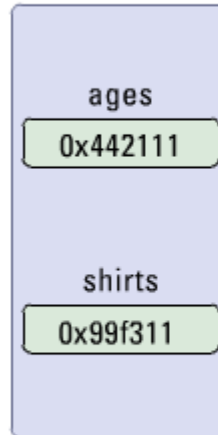
Heap Memory



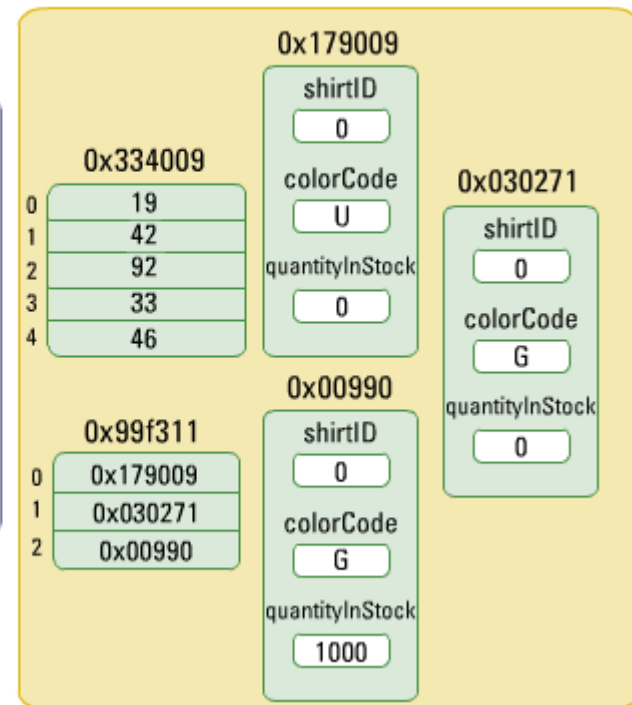
Inizializzazione

```
ages[0] = 19;  
ages[1] = 42;  
ages[2] = 92;  
ages[3] = 33;  
ages[4] = 46;  
shirts[0] = new Shirt( );  
shirts[1] = new Shirt('G');  
shirts[2] = new Shirt('G', 1000);
```

Stack Memory



Heap Memory



Inizializzazione

```
int [ ] ages = {19, 42, 92, 33, 46};  
Shirt [ ] shirts = { new Shirt( ), new Shirt('G'),  
                     new Shirt('G',1000) };  
  
int [ ] ages;  
ages = {19, 42, 92, 33, 46};
```



Array Multidimensionali

```
yearlySales = new int [5] [4];
```

[riga,colonna]

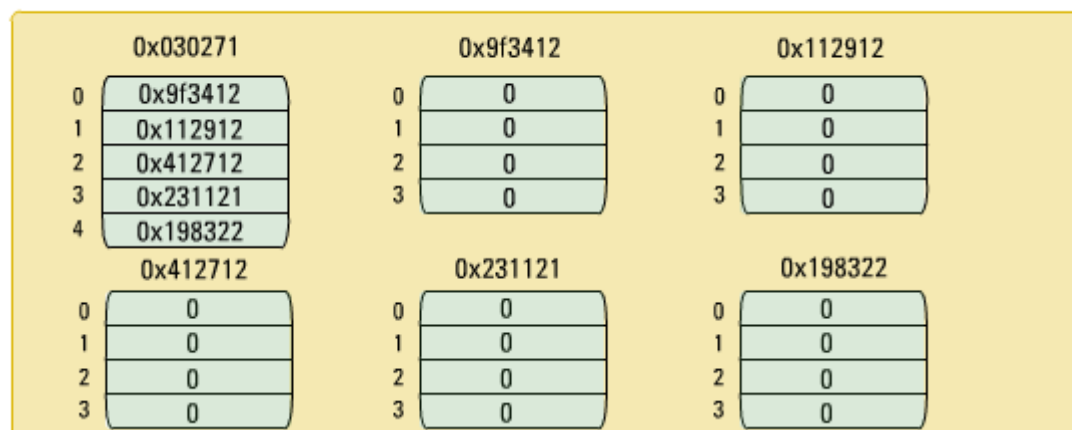
E' un array di i array

yearlySales[0] è il primo array (prima riga),...

Stack Memory



Heap Memory



Assegnamento di un elemento riga **yearlySales [3][2] = 10;** ☐

Assegnamento di una riga **yearlySales[3] = {10, 15, 20, 25};**

Il numero di righe è dato da **int nrighe = yearlySales.length** ☐

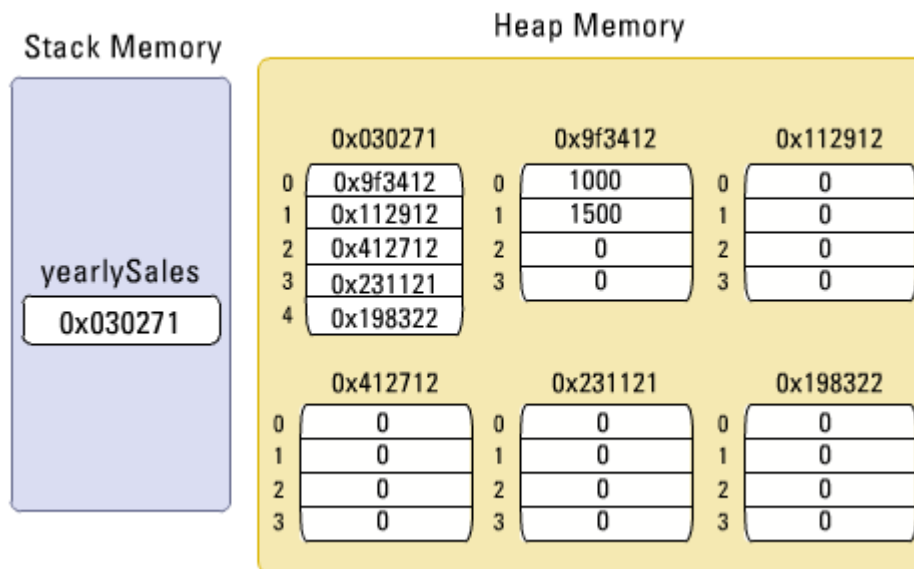
Il numero di colonne è dato da **int ncolonne = yearlySales[0].length**



Array Multidimensionali

In Java la allocazione nell'area Heap è per righe, in c++ per colonne

```
yearlySales[0][0] = 1000;  
yearlySales[0][1] = 1500;
```



Array

