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\* 用数组模拟栈的实现

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**public** **class** ArrayStack {

**static** **int**[] *arr* = **new** **int**[10];

**int** index = 0;

// 压入元素

**public** **void** push(**int** element) {

*arr*[index] = element;

index++;

**if** (index >= *arr*.length) {// 如果插入的范围超出了数组的长度

**int**[] newArr = **new** **int**[*arr*.length \* 2];

**for** (**int** i = 0; i < *arr*.length; i++) {

newArr[i] = *arr*[i];

}

*arr* = newArr;

}

}

// 弹出元素

**public** **int** pop() {

**int** element = *arr*[index - 1];

**int**[] arr2 = **new** **int**[index - 1];

**for** (**int** i = 0; i < index - 1; i++) {

arr2[i] = *arr*[i];

}

*arr* = arr2;

index--;

**return** element;

}

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\* 返回数组的大小

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**public** **int** size() {

**return** index - 1;

}

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\* 清空数组

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**public** **void** clear() {

**int**[] arr2 = **new** **int**[*arr*.length];

*arr* = arr2;

}

**public** **static** **void** main(String[] args) {

ArrayStack as = **new** ArrayStack();

as.push(1);

as.push(2);

as.push(3);

as.push(4);

as.push(1);

as.push(2);

as.push(3);

as.push(4);

as.push(5);

as.push(6);

as.push(7);

System.***out***.println("栈底的数据为：");

System.***out***.println(as.pop());

System.***out***.println("此时栈中的元素是：");

**for** (**int** a : *arr*) {

System.***out***.println(a);

}

}

}