

Arrays

consecutive elements of the same "type" ^{CLASS}

`int[] numbers = new int[n]` ^{int expression}

`n` 6

numbers →

0	1	2	3	4	5
88	52	77	50	85	90

`numbers[2] = 77;`

`for (int i = 0; numbers.length; i++)
 numbers[i] = stdin.nextInt();`

`int min = numbers[0];
for (int i = 1; i < numbers.length; i++)
 if (numbers[i] < min)
 min = numbers[i];`

Uses of arrays

`for (integerint x : numbers)
 if (x < min)
 min = x;`

`String[] names = new String[n];`

`fraction[] fracs = new fraction[n];`

fracs →

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`for (int i = 0; i < n; i++)
 fracs[i] = new fraction(i, i+1);`

Uses of arrays

(1) Keep track of several objects.

(2) Frequency Info

	0	1	2	3	4	5	6	7	8	9
apScores	2	3	5	1	5	2	3	3	2	4

freq	0	1	3	3	1	2
	0	1	2	3	4	5

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freq = new int[26];
for (int i = 0; i < word.length(); i++)
    freq[word.charAt(i) - 'a']++;

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	0	1	2	3	4	5	...
Cell phone freq	0	5	22	45	60	20	

$$1 \times 5 + 2 \times 22 + 3 \times 45 + 4 \times 60 + \dots$$

$$5 + 22 + 45 + \dots$$