C Programming & Lab

8. Arrays

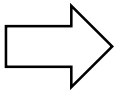
Sejong University

8-3) Practice 1

- **Read 5 integers and store them in an array**
- **Compute the average of the 5 integers**
- **Print all the integers that are greater than the average value**

Input Example 1

```
1 1 1 10 10
```



Output Example 1

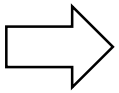
```
10
10
```

8-3) Practice 2

- **Read 5 integers and store them in an array**
- **Compare the first element and the second element**
- **If the first element is greater than the second element, swap them**
- **Repeat the above from the first element to the element right before the last element**

Input Example 1

```
5 4 3 2 1
```



Output Example 1

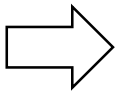
```
4
3
2
1
5
```

8-3) Practice 3

- **Read 10 integers (1, 2, or 3) and store them in an array**
- **Count the number of integers in an array**
- **Print * the number of times each integer apperars**

Input Example 1

```
1 1 1 2 2 2 3 3 3 3
```



Output Example 1

```
1:***
2:***
3:****
```

8-3) Practice 4

- **Read 5 integers and store them in an array**
- **Print the biggest number and the second biggest number**

Input Example 1

```
5 4 3 2 1
```

Output Example 1

```
5
4
```

Input Example 2

```
5 5 3 2 1
```

Output Example 2

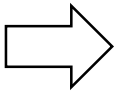
```
5
5
```

8-4) Practice 5

- **Read 7 characters and store them in an array**
- **Print how many times ‘cat’ appears**

Input Example 1

```
catbcat
```



Output Example 1

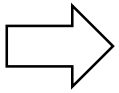
```
2
```

8-5) Practice 6

- **Read 5 characters and store them in an array**
- **Print the characters as shown below (shifting one letter)**

Input Example 1

```
*abcd
```



Output Example 1

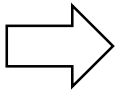
```
*abcd
d*abc
cd*ab
bcd*a
abcd*
```

8-5) Practice 7

- **Read 9 integers and store them in a 3x3 array**
- **Compute and print the sum of diagonal elements**

Input Example 1

```
1 2 3
4 5 6
7 8 9
```



Output Example 1

```
15
```

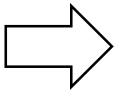
8-5) Practice 8

- **Read 3 numbers between 0 and 5, print the corresponding word**
- **Hint: Use 2 dimensional array**

Number	Word
0	ZERO-
1	ONE--
2	TWO--
3	THREE
4	FOUR-
5	FIVE-

Input Example 1

```
1 3 5
```



Output Example 1

```
ONE--
THREE
FIVE-
```

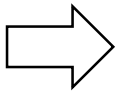
8-4) Practice 9

- **Declare a 2 dimensional array**
- **Read and store 3 students' C programming and Physics scores**
- **Compute and print the sum of each student's C programming and Physics scores.**

	C programming	Physics
Student A	10	20
Student B	30	40
Student C	50	60

Input Example 1

```
10 20 30 40 50 60
```



Output Example 1

```
30
70
110
```