

Lab 06 File I/O

Note: The underlined text is an input data.

1. Write program that calculates average score from file given by command-line arguments with following format.

```
number_of_data
name01 score01
name02 score02
...
```

Example of `ass-01-input-01.txt` file

```
5
Alex 10.5
Bob 15.3
Cindy 16.7
Erik 9.5
Frank 12.0
```

Example 1: `php ass-01.php ass-01-input-01.txt`

Program will print result without waiting for user input.

```
number of data 5
Alex      : 10.500000
Bob       : 15.300000
Cindy     : 16.700000
Erik      :  9.500000
Frank     : 12.000000
Average score = 12.800000
```

Example of ass-01-input-02.txt file

```
3
Cindy 10
Erik 20
Frank 15
```

Example 2: php ass-01.php ass-01-input-02.txt

Program will print result without waiting for user input.

```
number of data 3
Cindy      : 10.000000
Erik       : 20.000000
Frank      : 15.000000
Average score = 15.000000
```

2. Write program that print out multiply table from given command-line arguments.

```
php ass-02.php max [output_file]
```

- The first argument indicates the column table (2 – max)
- If specify the second argument output well be written to `output_file`, otherwise print out to monitor

Example 1: (without output_file)

```
php ass-02.php 5
```

	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25
6	6	12	18	24	30
7	7	14	21	28	35
8	8	16	24	32	40
9	9	18	27	36	45
10	10	20	30	40	50
11	11	22	33	44	55
12	12	24	36	48	60

Example 2: (with output_file)

```
php ass-02.php 7 ass-02-output.txt
```

File: ass-02-output.txt

	1	2	3	4	5	6	7
1	1	2	3	4	5	6	7
2	2	4	6	8	10	12	14
3	3	6	9	12	15	18	21
4	4	8	12	16	20	24	28
5	5	10	15	20	25	30	35
6	6	12	18	24	30	36	42
7	7	14	21	28	35	42	49
8	8	16	24	32	40	48	56
9	9	18	27	36	45	54	63
10	10	20	30	40	50	60	70
11	11	22	33	44	55	66	77
12	12	24	36	48	60	72	84

3. Write program that copy the given file to another file from given command-line arguments.

```
php ass-03.php [input_file] output_file
```

- If it has only 1 command-line argument that argument will be output file and keyboard is input file
- If it has 2 command-line arguments, the first one will be input file and the other will be output file
- The `input_file` may be **binary file**, try to test it with image file or zip file.

Example for input from keyboard and output to file `ass-03-output-01.txt`

```
php ass-03.php ass-03-output-01.txt
```

Example for input from file `ass-01-input.txt` to file `ass-03-output-02.txt`

```
php ass-03.php ass-01-input.txt ass-03-output-02.txt
```

Example 1: (input from keyboard)

```
php ass-03.php ass-03-output-01.txt
```

```
abcdef
123456
Assignment 03
^Z
```

File: `ass-03-output-01.txt`

```
abcdef
123456
Assignment 03
```

Example 2: (input from file)

```
php ass-03.php ass-01-input-01.txt ass-03-output-02.txt
```

File: ass-03-output-01.txt

```
5
Alex 10.5
Bob 15.3
Cindy 16.7
Erik 9.5
Frank 12.0
```

Example 3: (input file not found)

```
php ass-03.php not_existed_file.txt ass-03-output-03.txt
```

```
Cannot open file not_existed_file.txt!!!
```

Example 4: (Invalid arguments)

```
php ass-03.php
```

```
invalid arguments
use ass03 [input_file] output_file
```