FundProg17 – Assignment 3

3.1   Fizz-Buzz

An extension of the game is fizz-buzz. Here, we also have to replace every number that is divisible by 3 by `fizz`. If a number is divisible by 3 and 5, we have to output `fizzbuzz`. Example:

```
1
2
fizz
4
buzz
fizz
7
8
fizz
buzz
11
fizz
13
14
fizzbuzz
...
```

Use a for loop to play fizz-buzz.

3.2   Loops

a) Write a `for` loop to print the string `"Hi!"` 5 times.

b) Write a `for` loop for `i` between 1 and 7 that prints i^2 (so the output should be `1 4 9` and so on).

c) Write a `for` loop for `i` between 1 and 11 that prints `i + 10` (i.e., the output should be `11 12 13` and so on).

3.3   Our first array

Copy the following array into a new program:

```
String[] words = {"a", "book", "about", "aardvarks", "for",
                  "the", "student", "by", "Prof.", "Smith"}
```

a) Print the element number 3 of the array

b) Use an assignment to change `"aardvarks"` to `"dogs"`

c) Print the length of the array

d) Print all elements in the array

3.4   Arrays and loops

a) For a given array

```
int[] numbers = {1, 3, 99, 4, 5};
```

write a program that prints the sum of all numbers in it.

b) For a given array

```
int[] numbers = {1, 3, 99, 4, 5};
```

write a program that prints the maximum value.

c) Now assume that you have two arrays in the same program:

```
int[] numbers = {1, 3, 99, 4, 5};
int[] numbers2 = {2, 82, 11, 2, 9};
```

Write a program that first prints the maximum for the first array, then the maximum for the second array. (The solution is really as dumb as you think – use copy & paste! But I want you to do it once.)