

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.)