

Electrical Engineering and Information Technology, B.Eng.  
Introduction to the C Programming Language: Exercises

Exercise Sheet 1

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1. Exercise. Write a program, which reads a character with `c = getchar()`. Then output the value of `c` with `printf()` as
- char with format `%c`
  - integer with format `%d`
  - hexadecimal value with format `%x`

Extend your program so that you can input an arbitrary number of characters and output the characters as described before. The input of characters shall stop when you enter `'\n'`.

2. Exercise. The operator `sizeof` delivers the number of bytes of an object (variable) or of a type. The call is done by

```
length = sizeof object;  
or by  
length = sizeof(Type);
```

How much bytes are allocated on your computer for a char, int, short, long, float, double, "123456" ?

3. Exercise. a) Write a program that reads from the keyboard a text of at most 20 characters. Use the function `strlen()` from example E.2-2 of the lecture to determine the length of the text and print the length on to the screen.  
b) Change your program and use the library-function `strlen()` instead of E.2-2. You need `#include <string.h>` in your program.