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## Lab 2 - Standard I/O in C

1. Write a program to print an integer read from the standard input as an octal and a hexadecimal number. ★
2. Write a program to print the number  $\pi = 3.14159265$  using various (floating point) format descriptors. ★
3. Write a program to check what putchar outputs when its argument is a value outside the range character values [32,126]. ★
4. Write a program to print the ASCII codes for the keys of your keyboard. Hint: use printf() with a proper descriptor for output. ★
5. Write a program to print the characters corresponding to the ASCII codes in the range [32,126]. ★
6. Write a program to read a lowercase letter string and print the corresponding uppercase letter string.★★
7. Write a program to read a string with only capitals (uppercase letters), and print the corresponding lowercase letter string. ★★
8. Write a program to containing invocation(s) of gets(s), where s is an array. Check the contents of each array member. Hint: use the debugger to set a breakpoint after the invocation of gets() and inspect the memory area containing the result. Why the newline character ('\n') was replaced by '\0'? ★★
9. Write a program to calculate the sum, difference, product and quotient of a pair of real numbers. **Output the results in a table**, similar to the one below (you do not have to draw lines): ★★★

x	y	x+y	x-y	x*y	x/y
3	1.5	4.5	1.5	4.5	2

10. Same as the previous problem, but only show 2 decimals of the numbers and align the numbers to the left. Make each cell 8 characters wide. ★★★

## References

- Pb. 1-9 [1]

[1] Iosif Ignat & Marius Joldos. *CP Laboratory Guide 2: Standard I/O in C*.