**Computer Science Fundamentals**      WS 2021/22

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# Please solve the following exercises at home prior to the tutorial:

## Exercise 1

Give the Place-value Notation for the following numbers as well as their decimal representation:

$(1111)_2$,   $(AB1)_{12}$,   $(705)_8$,    $(ABC)_{16}$

## Exercise 2

Give the Place-value Notation for the following numbers as well as their decimal representation:

$(1573,4)_8$,   $(ABC,CBA)_{16}$,   $(1011,1101)_2$,   $(0,4)_8$

## Exercise 3

Convert the following numbers to decimal using Horner's Scheme!

$(1210)_8$,   $(888)_9$,   $(ADA)_{16}$

## Exercise 4

Perform the following conversions:

$(87599)_{10}$ = to hexadecimal

$(1234)_{10}$   = to base seven

To verify your result, convert it back to decimal!

## Exercise 5

Perform the following conversions:

$(445)_{10}$    = to dual

$(7294)_{10}$   = to octal

$(77875)_{10}$ = to base three

To verify your result, convert it back to decimal!

## Exercise 6

Convert the decimal number 26.4375 to dual, octal and hexadecimal.
To verify your result, convert it back to decimal!