Report for Practical Work 01:  
Computing Basises (Number Systems, Binary Arithmetic, Boolean Algebra)

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| **Student Name Surname** | **Student DOB (dd.mm.yyyy)** | **Date** |
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Table with Task Answers.

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| Nr | Assignment, Instruction, Variant of Task | Detailed Answer |
| 3.1 | Convert Decimal integer to a) Binary, b) Octal, c) Hexadecimal, d) Check your answer by converting Bin🡪Dec   * Choose your variant x = 1st letter of your Name in the English alphabet. * Use your date of birth to number generation from date template DdMmYYyy.   x) Your Variant of Task Text **2503** | Example for DdMm=2503  a)2503 /2=1251 (1)  1251 /2=625 (1)  625 /2=312 (1)  312 /2=156 (0)  156 /2=78 (0)  78 /2=39 (0)  39 /2=19 (1)  19 /2=9 (1)  9 /2=4 (1)  4 /2=2 (0)  2/2=1 (1)  Binary=1110 0011 101  b)octal=3435  c)hexadecimal=71D  d)1\*2^11+1\*2^10+1\*2^9+\*2^5+1\*2^4+1\*2^3+1\*2^1=2503 |
| 3(.2 | Convert a Decimal real number to a) Binary integer & b) Binary fraction with an accuracy of 8 digits after RADIX point.   * Choose your variant x = 1st letter of your Surname in the English alphabet. * Use your date of birth to number generation from date template DdMmYYyy.   x) Your Variant of Task Text … | Example for dD.yy=52.03   1. **52 = 110100** 2. **03 = 11**   Binary=**110100.11**  b)0.03=**11**  52.03=**110100.11** |

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| 3.3 | Convert Binary integer number to a) Decimal, b) Octal, c) Hexadecimal.   * Choose your variant x = 2nd letter of your Name in the English alphabet.   x) Your Variant of Task Text … | H) 1110111  a)1\*2^6+1\*2^5+1\*2^4+0+1\*2^2+1\*2^1+1\*2^0=64+32+16+4+2+1=119  b)001 110 111=167  c)0111 0111=77 |
| 3.4 | You need a) add two binary numbers; b) check your answer by converting Bin🡪Dec.   * Choose your variant x = 2nd letter of your Surname in the English alphabet.   x) Your Variant of Task Text … | A)  a)111011 + 101101  0111011  0101101+  01101000  b)111011=59  101101=45  01101000=104 |
| 3.5 | Find value for a Boolean expression.   * Choose your variant x = 3rd letter of your Name in the English alphabet or 3rd letter of your Surname in the English alphabet (if you Name is short).   x) Your Variant of Task Text … | A)  NOT((NOT(s) NOR NOT(h)) NAND (c NOR NOT(h))) for s=false; h=false; c=true  1 nand 0 = 1 |