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 **2007** | Example for DdMm=2007  a)2007 /2=1003 (1)  1003 /2=501 (1)  501 /2=250 (1)  250 /2=125 (0)  125 /2=62 (1)  62 /2=31 (0)  31 /2=15 (1)  15 /2=7 (1)  7 /2=3 (1)  3 /2=1 (1)  Binary=111 1101 0111  b)octal=3727  c)hexadecimal=7D7  d)1\*2^11+1\*2^10+1\*2^9+1\*2^8+1\*2^7+0+1\*2^5+0+1\*2^3+  1\*2^2+1\*2^1=2007 |
| 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=02.02  a)2/2=1 0  ½=0 1  Binary=10  b)0.02=0.000001010001111011  02.02=10. 000001010001111011 |

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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 … | R) 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 … | U) 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 … | T) (NOT(g) OR u) NAND (p NAND NOT(u)) for g=true; u=false; p=false  (NOT(1) OR 0) NAND (0 NAND NOT(1))= 0 NAND 1= 1 = TRUE |