Homework #1

Variant No.33

1)Write the machine code for the instruction: mov r10, rax

01001 100 100010 11 11 010 000 → 4C8BD0

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2) Translate the machine code 0302 into Intel and AT&T mnemonics

in binary → 000000 11 00 000 010

- 16 - bit: add ax, [BP + SI]
- 32 - bit: add eax, [edx]
- AT&T : addl (%ebp, %esi), %eax

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3) Perform the corresponding shifts for the instructions:

F00f shr, sar , rcr

1111 0000 0000 1111

shr: 0111 1000 0000 0111

sar: 0011 1100 0000 0011

rcr: 1001 1110 0000 0001 → 9E01

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4) Convert 0,125 to binary floating-point format

0,001 1,000 … * 2^-3 127-3=124

01111111

– 11

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01111100

format: 0011 1110 0000 0000 → in hexadecimal 3E00