1)   SUB   x17, x16, x0   funct7: 0100000
                                    rs2: x0 = 00000
      ↑   rs1: x16 = 10000   { 0100000 00000 10000 000 10001 0110011 }
      R-type   funct3: 000
                                    rd: x17 = 10001
                                    opcode: 0110011

      XORI   x8, x1, -8   imm[11:0]: 1111 1111 1000
                                    rs1: x1 = 00001
      ↑   funct3: 100   { 1111 1111 1000 00001 100 01000 0010011 }
      I-type   rd: x8 = 01000
                                    opcode: 0010011

      SB   x4, x3, -4   imm[11:5]: 1111 111
                                    rs2: x3 = 00011
      ↑   rs1: x4 = 00100   { 1111 111 00011 00100 010 11100 0100011 }
      s-type   funct3: 010
              1111 1111 1100   imm[4:0]: 11100
                                    opcode: 0100011

      LUI   x0, 0x10   imm[31:12]: 0000 0000 0001 0000
                                    rd: x0 = 00000   { 0000 0000 0001 0000 00000 0110111 }
      ↑   opcode: 0110111
      U-type

2) x100 jal x0, Loop: imm[20|10:1|11|19:12]: 0 0000 0000 00 0 10000 1100
      ...   rd: 00000
    x20C Loop: rd   opcode: 1101111
      ...
                       immediate val: x20C - x100
                              = 0x10C = 268

                       0 0000 0000 0001 0000 1100

                                               { 0 0000 0000 0001 0000 1100 00000 1101111 }

3) x100 jalr x0, x1, 64   immediate: 64 = 0000 0100 0000   imm[11:0]: 0000 0100 0000
      ...   rs1: 00001
    x20C Loop: funct3: 000   { 0000 0100 0000 00001 000 00000 1100111 }
                                                                    rd: 00000
                                                                    opcode: 1100111

4)
  a) 0xff908493   opcode: 0010011   b) 0xfe215ce3   opcode: 1100011
  1111 1111 1001 0000 1000 0100 1001 0011   rd: 10001 = x17   1111 1110 0010 0001 0101 1100 1110 0011   funct3: 100
                                              funct3: 000   rs1: 00010 = x2
  | ADDi x17, x1, -7 | rs1: 00001 = x1 | BGE x2, x1, -40 | rs2: 00001 = x1
                                              imm[11:0]: 1111 1111 1001
                                                     = -7   imm[12]: 1
                                                                                                               imm[0:5]: 11110 } -40
                                                                                                               imm[4:1]: 1100
                                                                                                               imm[11]: 0

5)

```
0x200    ans:  t0 , a0, 1
0x204    bnez  t0 ,
0x208    li    t1, 3
0x20c    rem   t0, a0, t1      t0 = a0%3 = 0, divisble by 3
0x210    bnez  t0
0x214    li    a0, 1
0x218    return

0x21c    li    a0, 0
0x220    return
                               return 0 bc not divisble by 6
0x224    li    a0, 0
0x228    return
```