ADDi t1 = t1 + 3 \\ t1=3

Hexcode- [ 8113 ]

ADD t2 = t1 + t1 \\ t2= 1+1=6

Hexcode- [ 0211 ]

SUB t2 = t2 - t1 \\ t2= 6-3=3

Hexcode- [ 1221 ]

ADDi t3 = t2 + 4 \\ t3= 3+4=7

Hexcode- [ 8324 ]

NOR t4 = t1 nor t3 \\ t4= 0011 Nor 0111 = 1000

Hexcode- [ 2413 ]

OR t4 = t2 or t1 \\ t4 = 0011 or 0011 = 0011=3

Hexcode- [ 3421 ]

ADDi t4 = t4 + 7 \\ t4=6+4=10

Hexcode- [ 8447 ]

AND t5 = t3 and t4 \\ t5 = 0111 and 1010 = 0010 =2

Hexcode- [ 4534 ]

XOR t5 = t4 xor t5 \\ t5 = 1010 xor 0010 = 1000 =8

Hexcode- [ 5545 ]

NAND t6 = t4 nand t5 \\ t6 = 1010 nand 1000 = 0111

Hexcode- [ 6645 ]

ORi t6 = t5 ori 7 \\ t6 = 1000 ori 0111 = 1111 = 15

Hexcode- [ b657 ]

ANDi t5 = t6 andi 6 \\ t5 = 1111 andi 0110 = 0110=6

Hexcode- [ c566 ]

XORi s1 = t5 xori 3 \\ s1 = 0110 xori 0011 = 0101 = 5

Hexcode- [ d953 ]

SUB t1 = t6 – s1 \\ t1 = 15-5 = 10

Hexcode- [ 1169 ]

SUB t2 = t6 – t5 \\ t2= 15-6 =9

Hexcode- [ 1265 ]

Sw t1 4(t2) \\ t1= ‘a’ will store into RAM address 4+9=13

Hexcode- [ a124 ] [op rd rs imm]

Lw t3 4(t2) \\ 10 will load into "t3"

Hexcode- [ 9324 ] [op rd rs imm]

ADDi t4 = t3 + 1 \\ t4=10+1 =11

Hexcode- [ 8431 ]

Sw t4 6(t2) \\ t4=’b’(11) will store into RAM address 6+9=15

Hexcode- [ a426 ] [op rd rs imm]

Lw t5 6(t2) \\ b(11) will load into "t5"

Hexcode- [ 9526 ] [op rd rs imm]

Lw t6 6(t2) \\ b(11) will load into "t6"

Hexcode- [ 9626 ] [op rd rs imm]

ADD t7 = t5 + t6 \\ t7= 11+11=22 (10110)

Hexcode- [ 0756 ]

Beq t6 t7 1 \\ t6 t7 notEquals, so it will execute the immediate next instruction

Hexcode- [ e671 ] [op rd rs imm]

Beq t5 t6 1 \\ t5 t6 Equals, so it will jump

Hexcode- [ e561 ] [op rd rs imm]

Bne t5 t6 1 \\ t5 t6 Equals, so it will execute the immediate next instruction

Hexcode- [ f561 ] [op rd rs imm]

Bne t6 t7 1 \\ t6 t7 notEquals, so it will jump

Hexcode- [ f671 ] [op rd rs imm]