

LBU \$30,\$0(50)	PC=00	10010000000111100000000000110010
ADDI \$30,\$30,1	PC=04	00100011110111100000000000000001
ADDI \$1,\$0,1	PC=08	00100000000000010000000000000001
ADDI \$5,\$0,0	PC=0C	00100000000001010000000000000000
BEQ \$1,\$30,END5	PC=10 LOOP5	00010000001111100000000000000011
ADD \$5,\$5,\$1	PC=14	00000000101000010010100000100000
ADDI \$1,\$1,1	PC=18	00100000001000010000000000000001
J LOOP5	PC=1C	00001000000000000000000000000100
ADDI \$1,\$0,1	PC=20 END5	00100000000000010000000000000001
ADDI \$6,\$0,0	PC=24	00100000000000110000000000000000
BEQ \$1,\$30,END6	PC=28 LOOP6	00010000001111100000000000000101
ADD \$2,\$1,\$0	PC=2C	00000000001000000001000000100000
ADD \$3,\$1,\$0	PC=30	00000000001000000001100000100000
JAL ctnhan	PC=34	00001100000000000000000001101111
ADD \$6,\$6,\$4	PC=38	00000000110001000011000000100000
J LOOP6	PC=3C	00001000000000000000000000001010
ADDI \$1,\$0,3	PC=40 END6	00100000000000010000000000000011
ADDI \$2,\$0,1	PC=44	00100000000000100000000000000001
ADDI \$3,\$0,1	PC=48	00100000000000110000000000000001
BEQ \$1,\$30,END7	PC=4C LOOP7	00010000001111100000000000000101
ADD \$4,\$2,\$3	PC=50	00000000010000110010000000100000
ADDI \$2,\$3,0	PC=54	00100000011000100000000000000000
ADDI \$3,\$4,0	PC=58	00100000100000110000000000000000
ADDI \$1,\$1,1	PC=5C	00100000001000010000000000000001
J LOOP7	PC=60	000010000000000000000000000010011
ADDI \$7,\$3,0	PC=64 END7	00100000011001110000000000000000
ADDI \$1,\$0,0	PC=68	00100000000000010000000000000000
ADDI \$3,\$0,1	PC=6C	00100000000000110000000000000001
BEQ \$1,\$30,END8	PC=70 LOOP8	00010000001111100000000000000101
ADDI \$2,\$1,1	PC=74	00100000001000100000000000000001
JAL ctnhan	PC=78	00001100000000000000000001101111
ADDI \$3,\$4,0	PC=7C	00100000100000110000000000000000
ADDI \$1,\$1,0	PC=80	00100000001000010000000000000000
J LOOP8	PC=84	000010000000000000000000000011100
ADDI \$8,\$3,0	PC=88 END8	00100000011010000000000000000000
ADDI \$1,\$0,1	PC=8C	00100000000000010000000000000001
LW \$30,\$0(50)	PC=90	10001100000111100000000000110010
ADDI \$2,\$0,33	PC=94	0010000000000010000000000100001
BEQ \$1,\$2,END910	PC=98 LOOP910	00010000001000100000000000001000
ANDI \$4,\$30,x01	PC=9C	00110011110001000000000000000001
BNE \$4,\$0,notzero	PC=A0	0001010010000000000000000000010
ADDI \$10,\$10,1	PC=A4	00100001010010100000000000000001
J through	PC=A8	0000100000000000000000000101100
ADDI \$9,\$9,1	PC=AC notzero	00100001001010010000000000000001

ADDI \$1,\$1,1	PC=B0 through	00100000001000010000000000000001
SRL \$30,\$30,1	PC=B4	000000000000111101111000001000010
J LOOP910	PC=B8	0000100000000000000000000000100110
LBU \$11,\$0(01)	PC=BC END910	100100000000101100000000000000001
LBU \$12,\$0(02)	PC=C0	100100000000110000000000000000010
LBU \$13,\$0(03)	PC=C4	100100000000110100000000000000011
LBU \$14,\$0(04)	PC=C8	1001000000001110000000000000000100
LBU \$15,\$0(05)	PC=CC	1001000000001111000000000000000101
LBU \$16,\$0(06)	PC=D0	1001000000010000000000000000000110
LBU \$17,\$0(07)	PC=D4	1001000000010001000000000000000111
LBU \$18,\$0(08)	PC=D8	10010000000100100000000000000001000
LBU \$19,\$0(09)	PC=DC	10010000000100110000000000000001001
ADDI \$1,\$0,1	PC=E0	001000000000000010000000000000001
ADDI \$4,\$0,10	PC=E4	00100000000000100000000000000001010
BEQ \$1,\$4,ENDA	PC=E8 LOOPA	0001000000100100000000000000101010
ADDI \$2,\$11,0	PC=EC	001000010110001000000000000000000
ADDI \$3,\$12,0	PC=F0	001000011000001100000000000000000
JAL cttraodoi	PC=F4	00001100000000000000000000001110111
ADDI \$11,\$2,0	PC=F8	001000000100101100000000000000000
ADDI \$12,\$3,0	PC=FC	001000000110110000000000000000000
ADDI \$2,\$12,0	PC=100	001000011000001000000000000000000
ADDI \$3,\$13,0	PC=104	001000011010001100000000000000000
JAL cttraodoi	PC=108	00001100000000000000000000001110111
ADDI \$12,\$2,0	PC=10C	001000000100110000000000000000000
ADDI \$13,\$3,0	PC=110	001000000110110100000000000000000
ADDI \$2,\$13,0	PC=114	001000011010001000000000000000000
ADDI \$3,\$14,0	PC=118	001000011100001100000000000000000
JAL cttraodoi	PC=11C	00001100000000000000000000001110111
ADDI \$13,\$2,0	PC=120	001000000100110100000000000000000
ADDI \$14,\$3,0	PC=124	001000000110111000000000000000000
ADDI \$2,\$14,0	PC=128	001000011100001000000000000000000
ADDI \$3,\$15,0	PC=12C	001000011110001100000000000000000
JAL cttraodoi	PC=130	00001100000000000000000000001110111
ADDI \$14,\$2,0	PC=134	001000000100111000000000000000000
ADDI \$15,\$3,0	PC=138	001000000110111100000000000000000
ADDI \$2,\$15,0	PC=13C	001000011110001000000000000000000
ADDI \$3,\$16,0	PC=140	001000100000001100000000000000000
JAL cttraodoi	PC=144	00001100000000000000000000001110111
ADDI \$15,\$2,0	PC=148	001000000100111100000000000000000
ADDI \$16,\$3,0	PC=14C	001000000111000000000000000000000
ADDI \$2,\$16,0	PC=150	001000100000001000000000000000000
ADDI \$3,\$17,0	PC=154	001000100010001100000000000000000
JAL cttraodoi	PC=158	00001100000000000000000000001110111
ADDI \$16,\$2,0	PC=15C	001000000101000000000000000000000

ADDI \$17,\$3,0	PC=160	00100000011100010000000000000000
ADDI \$2,\$17,0	PC=164	00100010001000100000000000000000
ADDI \$3,\$18,0	PC=168	00100010010000110000000000000000
JAL cttraodoi	PC=16C	0000110000000000000000001110111
ADDI \$17,\$2,0	PC=170	00100000010100010000000000000000
ADDI \$18,\$3,0	PC=174	00100000011100100000000000000000
ADDI \$2,\$18,0	PC=178	00100010010000100000000000000000
ADDI \$3,\$19,0	PC=17C	00100010011000110000000000000000
JAL cttraodoi	PC=180	0000110000000000000000001110111
ADDI \$18,\$2,0	PC=184	00100000010100100000000000000000
ADDI \$19,\$3,0	PC=188	00100000011100110000000000000000
ADDI \$1,\$1,1	PC=18C	00100000001000010000000000000001
J LOOPA	PC=190	00001000000000000000000000111010
ADDI \$20,\$11,0	PC=194 ENDA	00100001011101000000000000000000
ADDI \$21,\$12,0	PC=198	00100001100101010000000000000000
ADDI \$22,\$13,0	PC=19C	00100001101101100000000000000000
ADDI \$23,\$14,0	PC=1A0	00100001110101110000000000000000
ADDI \$24,\$15,0	PC=1A4	00100001111110000000000000000000
ADDI \$25,\$16,0	PC=1A8	00100010000110010000000000000000
ADDI \$26,\$17,0	PC=1AC	00100010001110100000000000000000
ADDI \$27,\$18,0	PC=1B0	00100010010101011000000000000000
ADDI \$28,\$19,0	PC=1B4	00100010011111000000000000000000
J END	PC=1B8	00001000000000000000000001111101
ADDI \$4,\$0,0	PC=1BC ctnhan	00100000000001000000000000000000
ADDI \$29,\$0,0	PC=1C0	00100000000111010000000000000000
BEQ \$29,\$3,ENDm	PC=1C4 LOOP	00010011101000110000000000000011
ADD \$4,\$4,\$2	PC=1C8	00000000100000100010000000100000
ADDI \$29,\$29,1	PC=1CC	00100011101111010000000000000001
J LOOP	PC=1D0	00001000000000000000000001110001
ADDI \$1,\$1,1	PC=1D4 ENDm	00100000001000010000000000000001
JR \$31	PC=1D8	0000001111100000000000000001000
SLT \$30,\$2,\$3	PC=1DC cttraodoi	00000000010000111111000000101010
BNE \$30,\$0,endtd	PC=1E0	0001011111000000000000000000011
ADDI \$29,\$2,0	PC=1E4	00100000010111010000000000000000
ADDI \$2,\$3,0	PC=1E8	00100000011000100000000000000000
ADDI \$3,\$29,0	PC=1EC	00100011101000110000000000000000
JR \$31	PC=1F0 endtd	0000001111100000000000000001000
LUI \$1,xABCD	PC=1F4 END	00111100000000011010101111001101
ORI \$2,\$1,x0101	PC=1F8	00110100001000100000000100000001
AND \$3,\$1,\$2	PC=1FC	00000000001000100001100000100100
OR \$4,\$1,\$2	PC=200	00000000001000100010000000100101
NOR \$29,\$1,\$2	PC=204	00000000001000101110100000100111
SLTI \$30,\$1,xFFFF	PC=208	00101000001111101111111111111111
SB \$30,\$0(49)	PC=20C	10100000000111100000000000110001

SW \$29,\$0(44) PC=210

10101100000111010000000000101100

n chứa trong ô nhớ 50

a chứa trong 4 ô nhớ (50,51,52,53)

Task 1: Tính tổng $1+2+\dots+n$ lưu vào \$5
(0-3500)

Task 2: Tính tổng $1^2+2^2+\dots+n^2$ lưu vào \$6
(3500-22700)

Task 3: Tính số Fibonacci thứ n lưu vào \$7
(22700-26200)

Task 4: Tính $(n+1)!$ lưu vào \$8
(26200-2401000)

Task 5: Tìm số chữ số 0 và số chữ số 1 trong a
lưu vào \$10 và \$9
(2401000-2425400)

Task 6: Sắp xếp tăng dần các giá trị trong các
ô nhớ từ 1 đến 9 lưu vào \$20-28
(2425400-2492400)

Task 7: Test 1 số lệnh còn lại

LUI \$1,xABCD PC=1F4 END

ORI \$2,\$1,x0101 PC=1F8

AND \$3,\$1,\$2 PC=1FC

OR \$4,\$1,\$2 PC=200

NOR \$29,\$1,\$2 PC=204

SLTI \$30,\$1,xFFFF PC=208

SB \$30,\$0(49) PC=20C

SW \$29,\$0(44) PC=210

\$1=xABCD0000

\$2=xABCD0101

\$3=xABCD0000

\$4=xABCD0101

\$29=x5432FEFE

\$30=(ABCD0000<0000FFFF)=0

Mem(49)=x00

Mem(44:47)=x5432FEFE

Pipeline: 249870 để thực hiện xong, giảm 10
lần !

