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Assignment 2 (CSN-221)

ECE (O6)

Question → Write a simpleRISC Assembly program to find Ramanujan number .

Code→

```
mov r1,2
.loop1:
    mov r4,0
    mov r2,1
    .loop2:
        add r3,r2,1
        mul r5,r2,r2
        mul r5,r5,r2
        .loop3:
            mul r6,r3,r3
            mul r6,r6,r3
            add r7,r5,r6
            cmp r7,r1
            beq .foo2
            .foo3:
                add r3,r3,1
                mul r6,r3,r3
                mul r6,r6,r3
                cmp r1,r6
                bgt .loop3
        add r2,r2,1
```

```
        mul r5,r2,r2
        mul r5,r5,r2
        cmp r1,r5
        bgt.loop2
cmp r4,2
beq .foo1
add r1,r1,1
b.loop1
.foo1:
    exit
.foo2:
    add r4,r4,1
    b .foo3
```

Result →

Final Answer is stored in register r1.