CSN 221

Assignment 2

Name – J N Sai Teja

Enrollment No- 18116033

Problem - Ques:-Write a SimpleRisc assembly program to find

the Ramanujan number, the smallest number that is

a sum of two cubes in two different ways.

mov r0, 1

mov r1, 0

mov r2, 0

mov r3, 0

loop1:

mov r1, r1+1

mul r7, r1, r1

mul r7, r7, r1

cmp r7, r0

mov r2, r1

blt .loop2

mov r0, r0+1

mov r1, 0

mov r2, 0

mov r3, 0

mul r6, r0, r0

mul r6, r6, r0

.loop1

loop2:

mov r2, r2+1

mul r4, r2, r2

mul r4, r4, r2

add r5, r7, r4

cmp r5, r6

beq .add\_r3\_1

cmp r3, 2

beq .print\_r0

cmp r4, r0

blt .loop2

.loop1

add\_r3\_1:

add r3, r3+1;

Final output of the Ramanujan Number will be stored in r0