

NAME: PRAMOD

ENROLLMENT NUMBER: 18114055

FIRST CPP CODE IS WRITTEN THEN I CONVERTED THAT CPP CODE TO ASSEMBLY LANGUAGE

Name - Pramod, Enrollment - No. - 18124053

Date

c++ code

```
int i=1; count=0;
while (count<1)
{
    int int_count=0;
    for (int j=1; j3≤i; j++)
        for (int k=j+1, k3≤i, k++)
            if (j3+k3=i)
                int_count++;
    if (int_count==2)
    {
        count++;
    }
    i++;
}
```

// i=40, count=81, int\_count=82, j=83, k=84, j<sup>3</sup>=85,  
// k<sup>3</sup>=86, j<sup>3</sup>+k<sup>3</sup>=87,

mov r0, 1

mov r1, 0

.loop3:

mov r2, 0

mov r3, 1

.loop1:

.loop2:

~~mov r4, r3~~

add r10, r3, 1

mov r4, r10

mul r5, r3, r3

mul r5, r5, r3

mul r6, r4, r4

mul r8, r6, r4

```
add r7, r5, r6
```

```
bgt r0, r7, label // changing if statement  
add r2, r2, 1 // to short the code.
```

```
.label:
```

```
add r4, r4, 1
```

```
mul r8, r4, r4
```

```
mul r8, r8, r4
```

```
bgt r0, r8, loop2
```

```
add r3, r2, 1
```

```
mul r9, r3, r3
```

```
mul r9, r9, r3
```

```
bgt r0, r9, loop1
```

```
bgt 2, r2, label2 // changing if statement to
```

```
add r1, r1, 1 // short assembly code
```

```
.label2:
```

```
add r0, r0, 1
```

```
bgt 1, r1, loop.
```

→ value is stored in r0.