

# Assignment

Enrollment No-18115105

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**Q- Design Assembly level algorithm to find the smallest Ramanujan Number**

**Ans**

```
mov r1,2
```

```
    loop1:
```

```
    mov r7,0
```

```
        mov r2,1
```

```
        .loop2:
```

```
        mul r4, r2, r2
```

```
        mul r4, r4, r2
```

```
            mov r3, 1
```

```
            .loop3:
```

```
            mul r5, r3, r3
```

```
            mul r5, r5, r3
```

```
            add r6, r4, r5
```

```
            comp r6, r1
```

```
                beq .ifcond
```

```
                cond
```

```
                comp 1, r7
```

```
                bgt .exit
```

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

```
            comp r1, r5
```

```
            bgt .loop3
```

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

```
        comp r1, r4
```

```
        bgt .loop2
```

```
    add r1, r1, 1
```

b .loop1

exit:

ifcond:

add r7, r7, 1

b .cond