### COL216 Assignment 1

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#### 1 Space occupied by the program

The space occupied by the program in terms of the number of instructions is 33 instructions  $\times$  32 bits.

#### 2 Space Used for data in terms of number of words

The program being of size 33 instructions occupies **memory locations of word size 32 bits** starting from memory address  $0 \times 000000000$  to  $0 \times 000000088$ . The data output for n Hardy-Ramanujan Numbers starts from memory address  $0 \times 000001000$  and occupies n memory locations of word size 32.

## 3 Execution time of the program (in terms of number of instructions executes)

The code was run for the below mentioned values of n:

n	No. of Instructions executed
1	658545
4	36070745
8	137143493

# 4 Execution time of the program (in hours/minutes/seconds)

The code was run for the below mentioned values of n:

n	Execution Time (mm:ss)
1	00:00:00.54
4	00:00:21
8	00:01:34