

## Format of the Programs

We provided an example program file called “pr.txt” . After writing your simulation program you may run it with command “Simulate pr.txt -D 0” and the output should be similar to the below one :

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memory after execution:

```
0 7 ,1 0 ,2 0 ,3 0 ,4 0 ,5 0 ,6 0 ,7 0 ,8 0 ,9 0 ,  
10 0 ,11 0 ,12 0 ,13 0 ,14 0 ,15 0 ,16 0 ,17 0 ,18 0 ,19 0 ,  
20 0 ,21 0 ,22 0 ,23 0 ,24 0 ,25 0 ,26 0 ,27 0 ,28 0 ,29 0 ,  
30 0 ,31 0 ,32 0 ,33 0 ,34 0 ,35 0 ,36 0 ,37 0 ,38 0 ,39 0 ,  
40 0 ,41 0 ,42 0 ,43 0 ,44 0 ,45 0 ,46 0 ,47 0 ,48 0 ,49 0 ,  
50 0 ,51 55 ,52 0 ,53 0 ,54 0 ,55 0 ,56 0 ,57 0 ,58 0 ,59 0 ,  
60 0 ,
```

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Notice that memory location 51 is 55.

We provided text files called “sort.txt” and “search.txt” . You need to fill the instruction sections of the both files.

At search.txt at memory location 21 there is the number N=100 which is the number of numbers to be searched. At index 22 there is the key and you need to save the result to index 23 . At index 24 there is the start index of the numbers to be searched. You should follow the same format at your programs.

At sort.txt memory location 21 contains number N which is the number of numbers to be sorted. And memory location 24 contains the start index of the numbers to be sorted.

**YOU SHOULD STRICTLY FOLLOW THIS FORMAT AT THE HOMEWORK.**

## Instruction Set Explanation

Below is the explanation of the instructions :

