



0	1	2	3	4	5
8	5	7	1	9	2

target = 1

0	1	2	3	4	5
8	5	7	1	9	2

target = 1

↑
 $8 \neq 1$

↑
 $5 \neq 1$

↑
 $7 \neq 1$

↑
 $1 = 1$

→ return 3

0	1	2	3	4	5
8	5	7	1	9	2

target = 3

↑
 $8 \neq 3$

↑
 $5 \neq 3$

↑
 $7 \neq 3$

↑
 $1 \neq 3$

↑
 $9 \neq 3$

↑
 $2 \neq 3$

→ return -1

Search In Range

0	1	2	3	4	5	6	7
10	3	7	14	19	15	11	7

target = 19

start = 2

end = 5

0	1	2	3	4	5	6	7
10	3	7	14	19	15	11	7

↗
 $7 \neq 19$

↗
 $14 \neq 19$

↗
 $19 = 19$

↘ return 4

0 1 2 3 4 5 6 7

10	3	7	14	19	15	11	7
----	---	---	----	----	----	----	---

target = 11

start = 2

end = 5

0 1 2 3 4 5 6 7

10	3	7	14	19	15	11	7
----	---	---	----	----	----	----	---

$7 \neq 11$ $14 \neq 11$ $19 \neq 11$ $15 \neq 11$

return -1

Find maximum

0	1	2	3	4	5	6	7
10	3	7	14	19	15	11	7

$maxm = 10$

$i = 1$

$3 < 10$

$maxm: 10$

$i = 2$

$7 < 10$

$maxm: 10$

$i = 3$

$14 > 10$

$maxm: 14$

$i = 4$

$19 > 14$

$maxm: 19$

$i = 5$

$15 < 19$

$maxm: 19$

$i = 6$

$11 < 19$

$maxm: 19$

$i = 7$

$7 < 19$

$maxm: 19$

Find minimum

0	1	2	3	4	5	6	7
10	3	7	14	19	15	11	7

$\text{minm} = 10$

$i = 1$

$10 > 3$
 $\text{minm} = 3$

$i = 2$

$3 < 7$
 $\text{minm} = 3$

$i = 3$

$3 < 14$
 $\text{minm} = 3$

$i = 4$

$3 < 19$
 $\text{minm} = 3$

$i = 5$

$3 < 15$
 $\text{minm} = 3$

$i = 6$

$3 < 11$
 $\text{minm} = 3$

$i = 7$

$3 < 7$
 $\text{minm} = 3$

Search in 2d array

	0	1	2	3
0	23	4	1	
1	18	12	3	9
2	78	99	34	56

target = 10

• Take 0th row

0	1	2	3
23	4	1	

- Apply linear search on 0th row and check 10 is in the row or not.

• Take 1st row

0	1	2	3
18	12	3	9

- Apply linear search on 1st row and check 10 is in the row or not.

• Take 2nd row

0	1	2	3
78	99	34	56

- Apply linear search on 2nd row and check 10 is in the row or not.

→ Return (-1, -1)

Find a number with Even numbers of digits

0	1	2	3	4
12	345	2	6	7896

Return 2
(ONLY 12 & 7896 has even digits)

- How to count digits in numbers.

e.g. 12 → has 2 digits

345 → has 3 digits

- one way is to convert each digit in string check length of the string if its even increase the counter.

- Another way is to let's say we have number 7896 keep dividing the number by 10 (floor division)

→ 7896 // 10 → 789 ①

789 // 10 → 78 ②

78 // 10 → 7 ③

7 // 10 → 0 ④

It takes 4 steps to reach 0. hence 7 has 4 digits

Richest

CUS to mer

2	8	7
7	1	3
1	9	5

→ sum: → 17 → Return

17

→ sum: → 11

→ sum: → 15

Initially $maxm = 0$

Row = 0

$Sum(2, 8, 7) = 17$
 $17 > maxm:$
update $maxm = 17$

Row = 1

$Sum(7, 1, 3) = 13$
 $13 < maxm:$
 $maxm = 17$

Row = 2

$Sum(1, 9, 5) = 15$
 $15 < maxm$
 $maxm = 17$