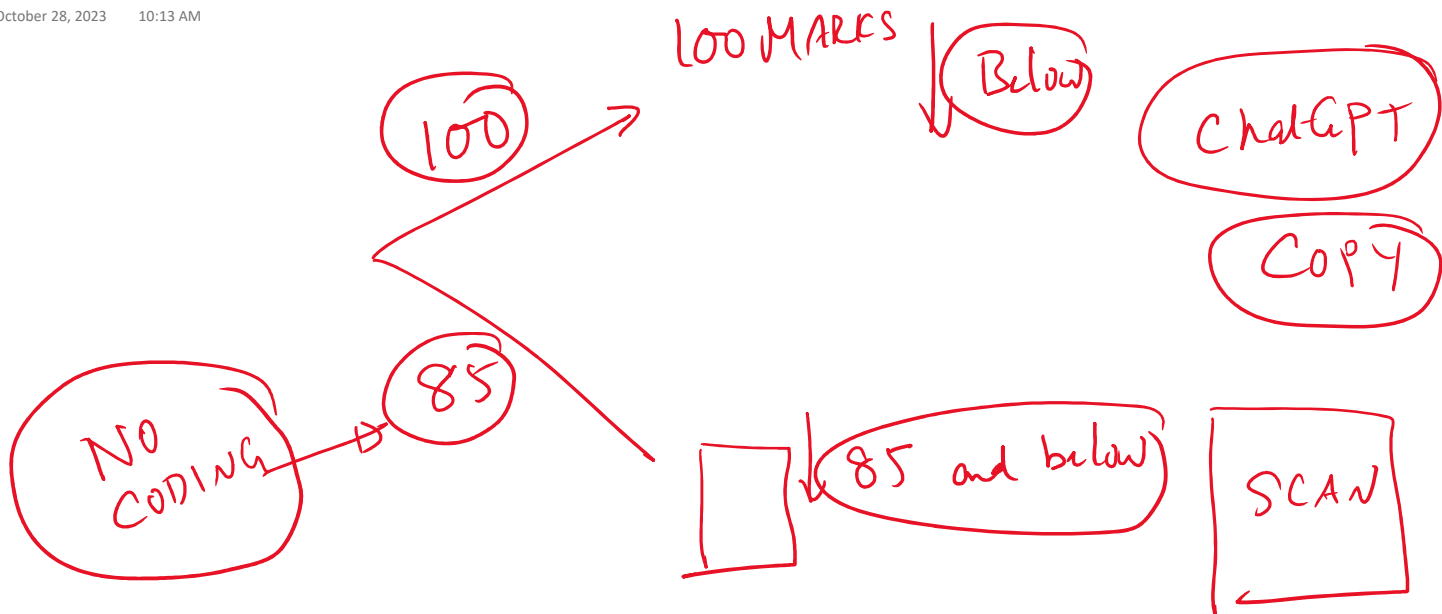


DAA 8 MIDTERM

Saturday, October 28, 2023 10:13 AM



MAX MAN

10 class

0 1 2 ... 9

0 1 2 ... n-1

30 99 80 ... 57

All marks are ≥ 0

If you take i you cannot take $i+1$

#num

0	{}	0	{0}
1	{80}	80	{0}
2	{50, 70}	70	{1}
2	{80, 50}	80	{0}
3	{50, 70, 100}	150	{0, 2}
3	{20, 100, 70}	100	{1}
3	{2, 80, 91}	93	{0, 2}
4	{1, 2, 3, 4}	6	{1, 3}

0 to n-1

20, 100

i i+1

90

100

50, 70

80, 50

150

70

0(n) n n^2 (n!)

n=10

for

work[0] = work[0] + 1

3 hr

0 to n-1

2 3

i i+1

0 1 2 3 4

1, 2, 3, 5, 3

7 7

{1, 3, 5}

{0, 2, 4}

{1, 3, 5}

4hr

11, 12, 1, 2

2 PM CA

10

5 PM

Boston

ONE Submission

100

ONE SUBMISSION 5 PM (BOSTON)

$\{ \text{for } (\text{int } i = 0; i < n; i++) \}$
 $\{ \text{work} += t[i]; \}$

Work

n^2 works

200

$\text{work} = 0$
 $\text{for } (\text{int } i = 0; i < n; i++) \{ \text{work} += t[i]; \}$
 $n = 10$
 100
 $10 - 10$
 $10 - 100$
 $O(n)$
 $\text{work} = 10$
 $= 100$

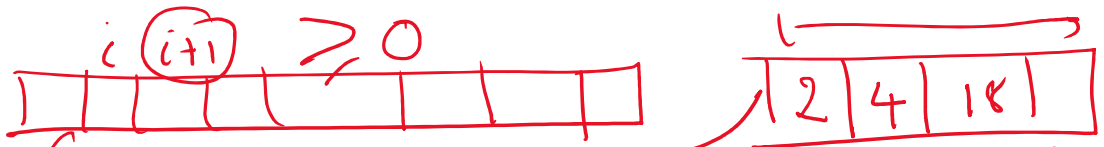
92 MARK
CODING
OPTIMAL solution

NO CODE

8 MARKS

$\{1, 12, 10\}$
 $= 11$
 18

step by step
0 1 2 3 4
[2, 7, 1, 8, 4]
show by hand BRUTEFORCE
Show by hand OPTIMAL



```

2 #####
3 class Alg():
4     def __init__(self, a: 'python list', ans: 'python list', maxv: 'list of size 1', work: 'list of size 1', show: 'bool'):
5         self._a = a
6         self._ans = ans
7         self._maxv = maxv
8         self._work = work
9         self._show = show
10        ## You can have your data structure here
11
12        ## Nothing can be changed below
13        self._exam() #Everything happens in _exam
14        check_result(self._a, self._ans, self._maxv[0]) #your answer is checked here
15

```

Code

Each Steps

2 1 10
1 2 3 4
0 1 2 3
↑ ↑

Should Pass

[2, 5, 11]

Resubmit-
① File

C++

Submit

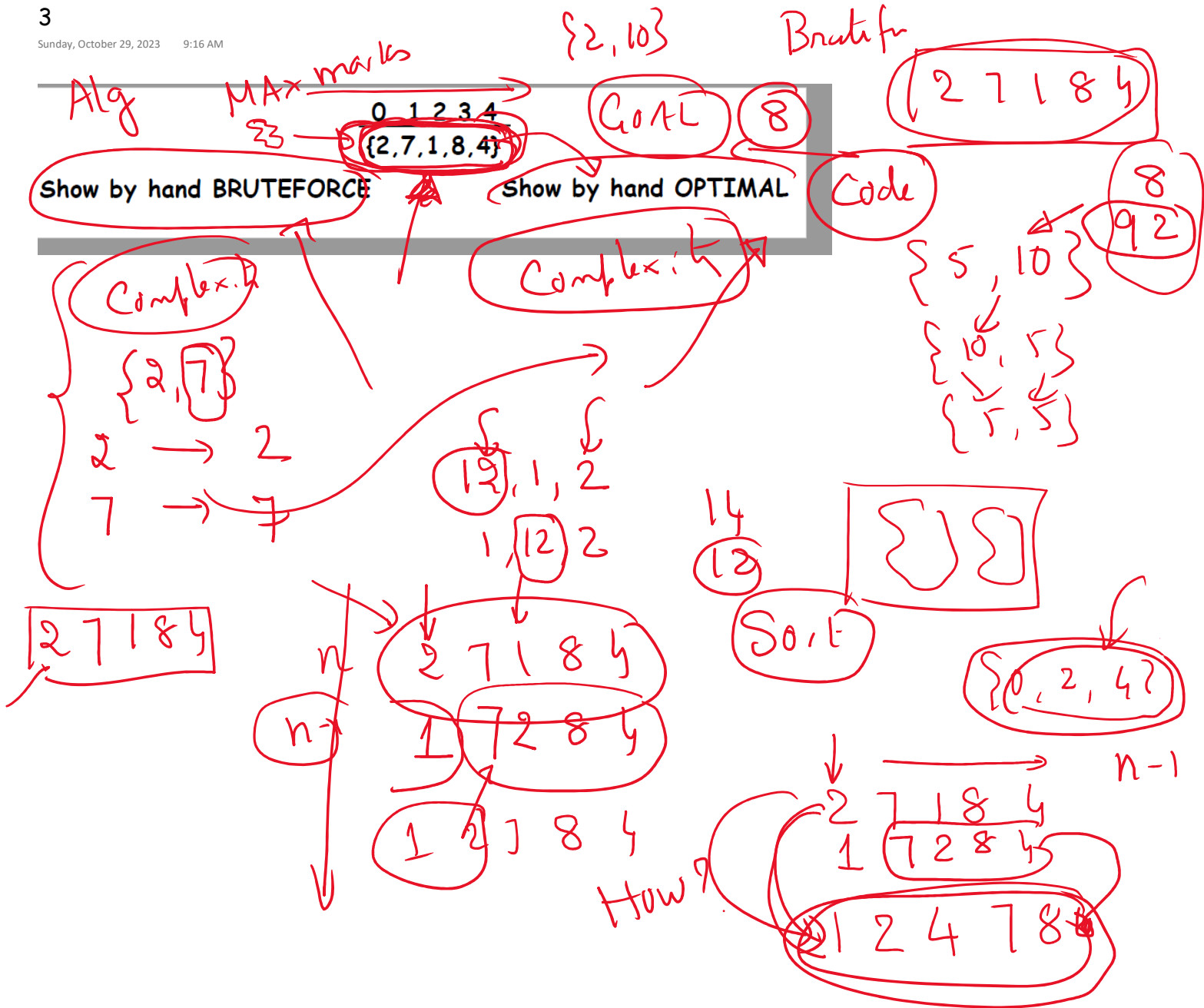
WRONG

①

85

FILE
SCANNED

SCANNED
File



Sunday, October 29, 2023 9:21 AM

BAG SIZE of 6

1. Show V matrix
2. Show K matrix
3. Max profit: _____
4. Item Stole: _____

2. Show **K** matrix

~~3. Max profit:~~

4. Item Stole:

(FILL ANSWER)

(FILL ANSWER)

20 \$)

MINUS BAG

BAG SIZE of 6

0/1 KNAPSACK

	TV	LAPTOP	PC	DVD
	M	N	O	P
Value	10\$	4\$	7\$	2\$
Weight	1kg	3kg	2kg	4Kg

Handwritten calculations on the right:

10\$
1kg

→ 6kg

56kg

7kg

1. Show V matrix
2. Show K matrix
3. Max profit: _____ (FILL ANSWER)
4. Item Stole: _____ (FILL ANSWER)