



Course Title: SPL Lab

Course Code: CSE 1112

Credit Hours: 3.0

Trimester & Year: Summer 2022

Section: E

AZ

## Evaluation -02

Total Marks: 20

Time: 30 min

### ROBIN HOOD & ARRAY

Robin Hood likes to loot rich people since he helps the poor people with this money. Instead of keeping all the money together he does another trick. He keeps  $n$  sacks where he keeps this money. The sacks are numbered from  $0$  to  $n-1$ .

Now each time he can do one of the three following tasks:

1. Give all the money of the  $i^{\text{th}}$  sack to the poor, leaving the sack empty.
2. Add new amount (given in input) in the  $i^{\text{th}}$  sack.
3. Find the total amount of money from  $i^{\text{th}}$  sack to  $j^{\text{th}}$  sack.  
Since he is not a programmer, he seeks your help.

### Input

1. First Line of Input contains two integers  $n$  and  $q$ .
2. The next line contains  $n$  space separated integers in the range. The  $i^{\text{th}}$  integer denotes the initial amount of money in the  $i^{\text{th}}$  sack.
3. Each of the next  $q$  lines contains a task in one of the following form:
  - $1\ i$  - give all the money of the  $i^{\text{th}}$ .
  - $2\ i\ v$  - add money  $v$  ( $1 \leq v \leq 1000$ ) to the  $i^{\text{th}}$  ( $0 \leq i < n$ ) sack.
  - $3\ i\ j$  - find the total amount of money from the  $i^{\text{th}}$  sack to the  $j^{\text{th}}$  sack ( $0 \leq i \leq j < n$ ).

### Output

If the query type is **1**, then print the amount of money given to the poor. If the query type is **3**, print the total amount from  $i^{\text{th}}$  to  $j^{\text{th}}$  sack. After all the query print the current condition of the sacks.

Input	Output	Explanation
5 6	5	3 2 1 4 5
3 2 1 4 5	14	1 <sup>st</sup> Query : 3 2 1 4 0 [Output 5]
1 4	1	2 <sup>nd</sup> Query : 3 2 1 8 0 (add 4 with 4) [No Output]
2 3 4	13	3 <sup>rd</sup> Query : 3 2 1 8 0 [Output : 3+2+1+8=14]
3 0 3	2	4 <sup>th</sup> Query : 3 2 0 8 0 [Output 1]
1 2	3 0 0 8 0	5 <sup>th</sup> Query : 3 2 0 8 0 [Output : 3+2+0+8+0=13]
3 0 4		6 <sup>th</sup> Query : 3 0 0 8 0 [Output 2]
1 1		[Output 3 0 0 8 0]