TASK 1:

There are N travelers and each of them has a LED light. Every LED is connected with a wire. Each LED has a switch associated with it, however due to faulty wiring, a switch also changes the state of all the LED to the right of current LED. Given an initial state of all LED, find the minimum number of switches you have to press to turn on all the LED. You can press the same switch multiple times.

Note: 0 represents the LED is off and 1 represents the LED is on.

Input Format:

The first and the only argument contains an integer array A, of size N.

Output Format:

Return an integer representing the minimum number of switches required.

Constraints:

1 <= N <= 5e5
0 <= A[i] <= 1

Example:

Input 1:

A = [1]

Output 1:

0

Explanation 1:

There is no need to turn any switches as all the bulbs are already on.

Input 2:

A = [0 1 0 1]

Output 2:

4

Explanation 2:

press switch 0: [1 0 1 0]

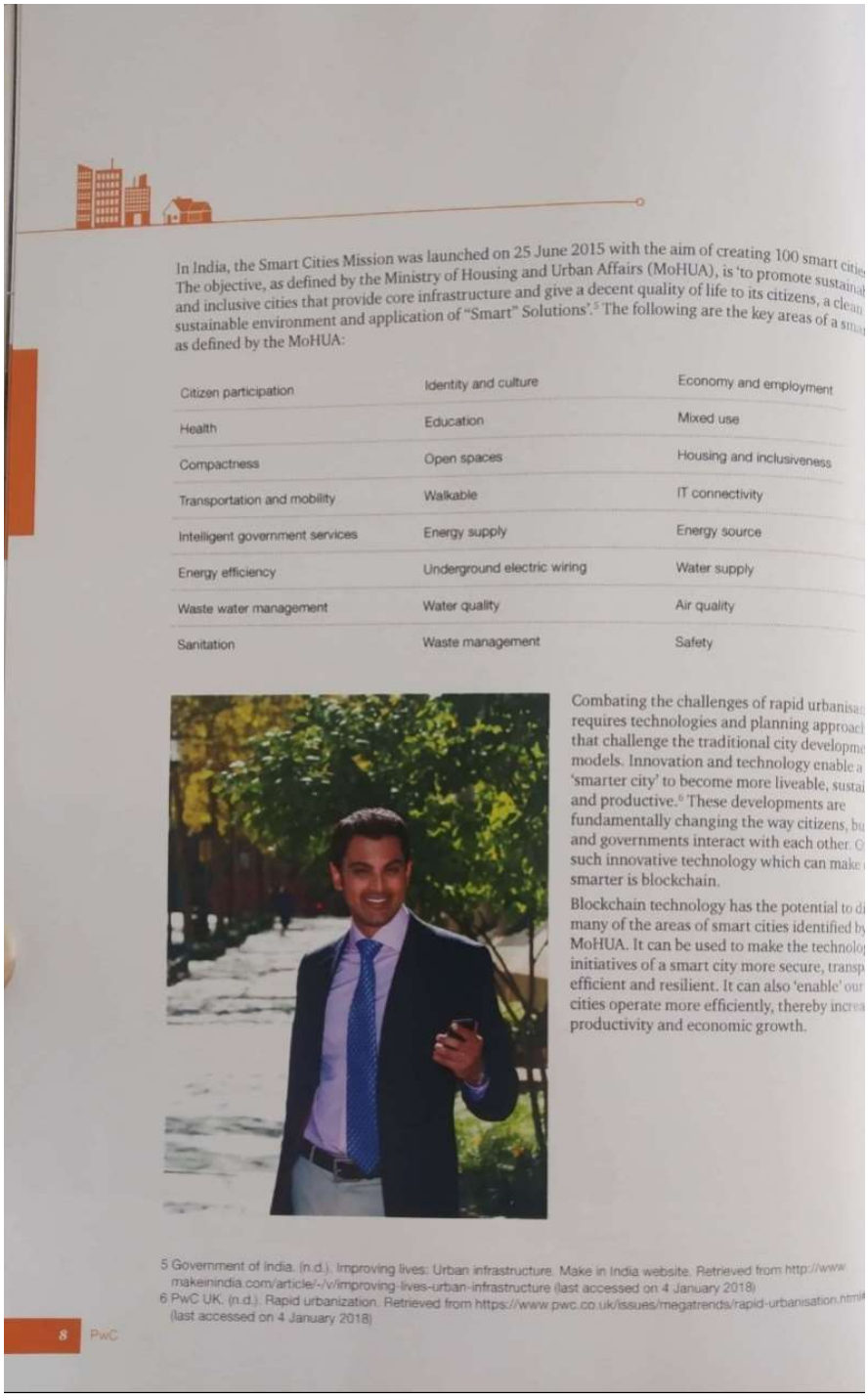
press switch 1: [1 1 0 1]

press switch 2: [1 1 1 0]

press switch 3: [1 1 1 1]

TASK 2:

Grab the image inside the document and save it.



In India, the Smart Cities Mission was launched on 25 June 2015 with the aim of creating 100 smart citie
The objective, as defined by the Ministry of Housing and Urban Affairs (MoHUA), is 'to promote sustainab
and inclusive cities that provide core infrastructure and give a decent quality of life to its citizens, a clean
sustainable environment and application of "Smart" Solutions'.[5] The following are the key areas of a sma
as defined by the MoHUA:

Citizen participation	Identity and culture	Economy and employment
Health	Education	Mixed use
Compactness	Open spaces	Housing and inclusiveness
Transportation and mobility	Walkable	IT connectivity
Intelligent government services	Energy supply	Energy source
Energy efficiency	Underground electric wiring	Water supply
Waste water management	Water quality	Air quality
Sanitation	Waste management	Safety

Combating the challenges of rapid urbanisa
requires technologies and planning approach
that challenge the traditional city developme
models. Innovation and technology enable a
'smarter city' to become more liveable, sustai
and productive.[6] These developments are
fundamentally changing the way citizens, bu
and governments interact with each other. O
such innovative technology which can make
smarter is blockchain.

Blockchain technology has the potential to di
many of the areas of smart cities identified by
MoHUA. It can be used to make the technolo
initiatives of a smart city more secure, transp
efficient and resilient. It can also 'enable' our
cities operate more efficiently, thereby increa
productivity and economic growth.

5 Government of India. (n.d.). Improving lives: Urban infrastructure. Make in India website. Retrieved from http://www.makeinindia.com/article/-/v/improving-lives-urban-infrastructure (last accessed on 4 January 2018)
6 PwC UK. (n.d.). Rapid urbanization. Retrieved from https://www.pwc.co.uk/issues/megatrends/rapid-urbanisation.html (last accessed on 4 January 2018)

Deadline:

Task1: Exact one day after task is assigned.

Task2: Two Days after the first task is submitted.

Submission:

Upload the code in a folder on drive and share the link.

NOTE: Please don’t copy the code, as the plagiarism will be checked.