Algorithm to Make sure a safe distance is being kept:

- Install Bluetooth Beacon detectors around the place and make sure the whole area is covered.
- Hand over badges with Bluetooth beacon attached to them.
- Write a phone app that scan the Bluetooth beacons locations periodically.
- Whenever the app detects that another Bluetooth beacon is closer than 1m for more than 20 sec it'll send a notification to the visitor "Please keep safe distance".
- If the visitor didn't follow the instruction and the other Bluetooth beacon remained in the danger range for more than 1 min the app fires an alarm that automatically stops when the safe distance kept.
- Make sure that all the visitors download the app.

Flowchart:

```
            ┌─────────────┐
            │    Start    │
            └──────┬──────┘
                   │
                   ▼
          ╱────────────────╲
         ╱  Scan Bluetooth   ╲
        ╱   beacons locations  ╲
        ╲                      ╱
         ╲────────────────────╱
                   │
                   ▼
        ┌──────────────────────┐
        │ Highlight the closest│
        │  Bluetooth beacon and│
        │    keep checking     │
        └──────────┬───────────┘
                   │
                   ▼
              ◇─────────◇
    No       ╱           ╲      Yes
   ◄────────  CloseBeacon  ────────►
             ╲  < 1m ?    ╱
              ◇─────────◇
```

Scan Bluetooth beacons locations

Highlight the closest Bluetooth beacon and keep checking

CloseBeacon < 1m ?

No

Yes

Check 20 times every 1s if it's still yes whenever no restart

Send "Keep Safe distance!" To user

Check 40 times every is if it's still yes whenever No restart

Fire an alarm

Check infinite times every 1s is if it's still yes whenever No turn off alarm and restart