Cisco thingQbator

THE ANNUAL TECHNICAL FEST OF ELECTRONICS ENGINEERING DEPARTMENT OF IIT (BHU)
UDYAM'21

X-IoT-A
Problem Statement for Round 1

Task:

The Gringotts Wizarding Bank is considering switching to modern technologies for the security of the gold and its transport system underground. We need to give the security head Mr. Woo, a demo of our security system so that the switching process is approved. A basic security system requires the following properties:

1. A cart that carries the gold while monitoring its weight
2. The GPS location of the cart is sent to the security office as soon as the weight of the gold alters
3. On reaching the destination, a confirmatory signal is sent to the security office.

If at least, the second property is fulfilled, Mr. Woo will approve the process. Otherwise, the bank will not change its methods.
Mr. Woo is also very enthusiastic about new features that can improve the security system. The demo that displays stronger security features gets more attention and approval from Mr. Woo.

Your task is to implement virtually a security system that can get approved by Mr. Woo.

Optional add-ons:

- Locking/alarm system in case of disturbance in the gold cart.
- More than one cart for different routes.
- Graphical analysis of the system's working using tools like thingSpeak.
- Control over cart route/doors using tools like Blynk.
- Any other security feature you can think of that would be beneficial in transporting gold from one place to another.

Scoring criteria:

1. The second property is mandatory to implement to qualify this round.
2. Additional security features will fetch you a higher score.
3. Clarity of concept, representation, and explanation in the simulators will be judged.
4. All the security features implemented must be visible on virtual terminal.

Submission instructions:

- The deadline for completion of PS1 is 23:59 - 7 April 2021
- Each team has to submit an abstract mentioning the features they've implemented.
- Send the abstract to xiota.udyam@gmail.com before the deadline
- The judgment of simulation will be done through Anydesk software (so you are free to use any software/tools available on your system).
- Only one submission per team will be accepted.

Rules/regulations and constraints:

- Since node MCU is not easily available for simulation on many simulators, we suggest you to complete the task using Arduino board simulation.
- The final submissions must be submitted to the event coordinators in the format specified on or before April 7, 2021.
- The organizers reserve the right to change the rules as they deem fit. Change in rules, if any, will be highlighted on the website and notified on the Whatsapp group.
- The decision of the organizers shall be final and binding.

In case of any type of cheating suspected, the team will be immediately disqualified and no certificate will be given.