GAMES OF TEAM NUMBER 12

GAME NUMBER 01:

HAND GESTURE ROBOT MAZE GAME

All the participating teams will let their Hand Gesture Robots move in a Maze created by the Game Organizing team. The Participating Team Members will have to choose one of their representatives from each of the playing teams, and these representatives will have to control their respective robots in order to allow it to cross the maze first. The team whose Robot travels through the Maze first will be the Winner.

PRE-REQUISITE: THE TEAMS WOULD HAVE TO GET THEIR SELF-MADE HAND-GESTURE ROBOTS. THEY EVEN HAVE TO CARRY A DOCUMENT RELATING TO THE WAY THEY HAVE MADE THIS ROBOT, WHAT ALL SPECIFIC COMPONENTS USED, WHAT ALL FEATURES DOES THE ROBOT HAVE AND PICTURES AT THE TIME OF MAKING OF THE HAND GESTURE ROBOT.

GAME NUMBER 02:

SOFTWARE TREASURE HUNT MAZE GAME

There would be three members participating in a team. One member would sit in-front of the P.C. Screen where he/she would be able to watch the maze created in our Campus in reality to reach till the Treasure. The other two members; one of the two would be Blind Folded and the other has to guide the this Blind Folded team member according to the instructions given by the first team member sitting in-front of the P.C. Screen. The first member would be able to track these two members. The Team whose members would be able to crack the Treasure First, would be declared as the Winner.

The first team member would have to solve some riddles based on COMPUTER TECHNOLOGY AND INFORMATION TECHNOLOGY Knowledge in order to crack the route to the TREASURE!!!

The first team member would be allowed to discuss with other team members with the help of the communication system provided to them for the guidance to the route to the TREASURE.

GAME NUMBER 03:

APPLICATION DEVELOPMENT GAME

These problem statements would be provided to each of the participating Teams to develop their own Applications:

1. **“Develop an IoT enabled prototype to give realtime parking space available on the campus.”**

The prototype would ensure optimum use of resources, it would help save time and also be far more efficient than the traditional way of finding the parking slots on the streets. At the same time, it would also reduce unnecessary chaos and traffic on the campus.

**How should the prototype work?**

Whenever a person wants to find a parking space on the campus, he has to login to the prototype using his user id and password, a request message will then be sent to the server. The server will send back a response with the available parking details, real-time mapped directions and real-time parking space to allocate parking according to the size of the vehicle. The prototype would be smart enough to identify whether the car is heading towards the same parking space or not. If not, the application would re-route the same car to another nearest available parking space.

**Challenges**

The above mentioned will be applicable to those vehicles that have logged in to the system and used the navigating system. But we also need to consider those vehicles which have not logged in and are manually finding parking space and heading towards the same parking slot. Can you solve this problem? Develop a smart efficient prototype to solve the problem related to real-time parking space.

2. **“Smart Security System for a Smart University!”**

**How will the security office keep a record of all the objects on the campus at any point in time?**

If any damage occurs to that object, how can it be notified to security immediately? The system should detect any sorts of emergency like fire or earthquake on the campus and the security should get an alert that there is some kind of emergency and immediate action is required. Way to track any movement around the river side slope to make sure student safety during the night.

There are generic Internet of Things (IoT) modules designed to connect devices to the internet and control them through cloud software. You are expected to develop economically suitable wireless IoT systems to solve these problems.

**Challenges**

There are different kinds of objects present on the campus and there are also humans that move around. Which technology can be used to track them? How can you make your system generic so that its scope can be expanded? Can this be linked with the CCTV surveillance so that all the cameras in that area focused on the distressed spot for example the river side slope; Can you link sensors around the campus covering the whole university to avoid any blind spots? Can we develop such a system, which can identify priorities or multitask events?

3. **“GPS-based dengue risk index”**

Develop a prototype to allow a GPS-enabled smartphone owner to find the susceptibility to dengue infection at the location where he or she is in.

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