ROBOKID™ – 2013

ROBOKID 2013 is one of its kind which will turn out to be revolutionary in bringing theoretical lesson coupled with practical experience through a joyful and innovative way for students.

THEME

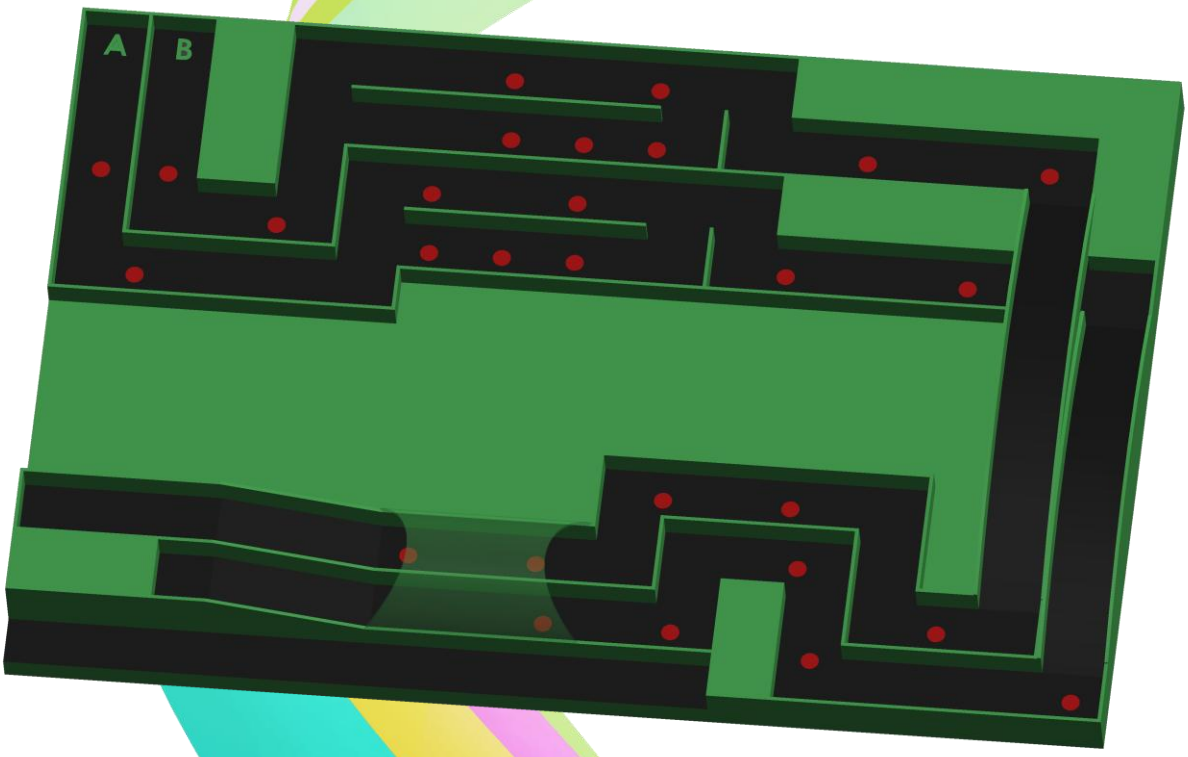
Terrorism has now become an international phenomenon. The biggest threat that the nation faces today emanates from terrorism which is widespread geographically and diverse ideologically. The problem of terrorism needs to be tackled on many fronts.

Today the safety of the state, its people and its properties are at a grave risk in the face of all pervading terrorist attacks. Two powerful explosions ripped through crowded areas of Dilshuknagar (one of the largest commercial and residential centers in Hyderabad), killing 17 and injuring 83.

An attempt to minimize it by implementing new technologies, therefore takes a new dimension. ROBOKID™ 2013 has come up with the theme to inculcate 'experiment based learning' which aids young engineers of tomorrow to get continuously updated with the current technology.

GUIDE

The map given for the Level 2 is the 'GAME FIELD' for Level 3.The following is the view of the game field.



- The game field is of "6 x 4 meters" in size.
- Duration of the game will be "5 min."

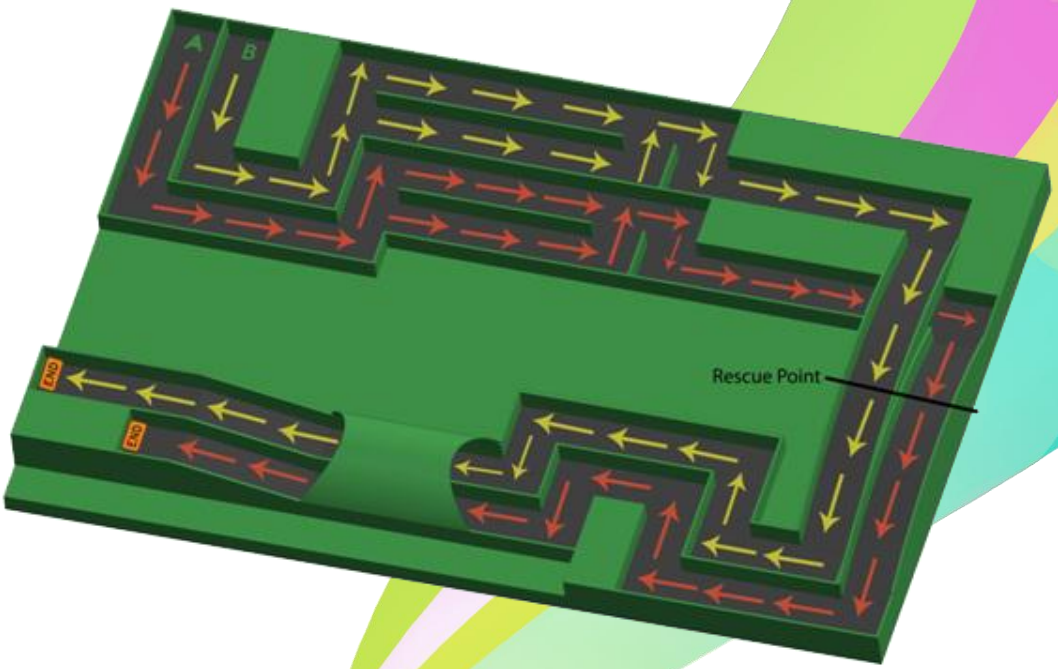
- The total distance the robot has to move in the game field is of 17 meters. The total distance is equal for both the teams.
- The RED circles in the path are represented as bombs.
- A total of 14 bombs are present in path of each participant.
- Each team will be given an opportunity to play a role of Bomb squad officer.
- Initially when the game starts, all the bombs will be ON (i.e., the lights under the bombs are switched on representing the bombs are live).
- Once the robot crosses the bomb, the organizer switches off the light which indicates that the bomb is diffused.
- Each team's goal is to program their robots to efficiently diffuse the bombs in shortest time.
- Two teams would compete with each other. They have to start their robots at the same time from the same position.

ROBOT SPECIFICATIONS

- Robot must be completely autonomous.
- It should not receive any input from outside the arena.
- Only one autonomous robot per team is allowed.
- The autonomous robot must fit within a cube of dimensions 250mm x 250mm x 100mm (l x b x h) at the beginning of the game.
- The weight of the robot should not exceed 5kgs.
- Teams must use an on-board power supply upto a maximum 18Volts DC. The on-board voltage will be checked by a multimeter, and if found the voltage greater than 18volts, the team will be disqualified.
- The robot should not separate or split into two or more units.

GAME RULES

- At the start of the game, the robots of two teams will be placed at the starting point at 'A' and 'B' positions on the game fields respectively.
- Each team will be given 5 minutes for the entire game.
- Both the teams will be starting simultaneously when the organizer gives the signal to start.
- Only 1 member from the team is allowed to be near the game field while starting the bot. The other team members can be the instructors.



- Starting Procedure – The starting procedure of the robot should be simple and should not involve giving it any manual force or impulse in any direction.
- The robot should move only in the path mentioned above and should be contained between its walls i.e., 'A' team robot should move only in the red colored path and the 'B' team robot should move only in the yellow colored path as mentioned above.
- Rescue point – In order to aid the participants, ONE rescue point is provided exactly in the half way of the game field. While in the game, if your robot malfunctions/struck you could again restart your robot. However, if the robot has crossed the rescue point, you could restart your robot from the rescue point. Else, you will have to restart your robot from the start point.
- Restarts –You could restart you robot any number of times. No penalty will be awarded for a restart. In case of a restart, the timer will not be set back to zero and will not be paused. During a restart, a contestant must not alter the program of the robot. However, contestants are allowed to: adjust sensors and make repairs. A contestant may not alter a robot in a manner that changes its weight (e.g. removal of / switching to lighter batteries to get better speed)
- Time Management - After the game time of 5mins, the teams that took part in the game should leave the arena within 5minutes. After which a countdown timer starts for 5 minutes before which the next participating teams should keep their robots on the arena failing to which they will be disqualified. Time management should be strictly followed.

- **WINNING CRITERIA**
  - The team which completes the entire path from the starting point to the end point will be declared as the **'WINNING TEAM'**.
  - If two teams complete the entire path, then the team which diffused maximum bombs will be taken into consideration.
  - If both the teams diffuse same number of bombs, then the shortest time taken to complete the path will decide the winners.
  - If none of the teams complete the entire path, the team which diffused maximum bombs will be taken into consideration.
  - If both the teams diffuse same number of bombs, then the shortest time taken for diffusing the bombs will be the winner.
  - If a tie occurs in any case, a re-match will be conducted between the teams.

- **DISQUALIFICATIONS:**
  - Any team that does not follow the above mentioned instructions stands disqualified.

GENERAL RULES

- Only the selected students by Jay Robotix Pvt. Ltd. with a valid identity card of their respective educational organizations are eligible to participate in the event.
- Only 1 member of the team is allowed to handle the robot.
- We request all the participants to make a note that they are not allowed to keep anything inside the arena other than the robot.
- Laptops/personal computers are not allowed near the arena. Wi-Fi, Bluetooth, etc. devices must be switched off.
- The organizers hold the right to check for these devices and their usage and disqualify the team.
- The time measured by the organizers will be final and will be used for scoring the teams.
- The time measured by any contestant by any other means is not acceptable for scoring.
- In case of any disputes / discrepancies, the organizers decision will be final and binding.
- The organizers have all the rights to change any or all of the above rules.
- The organizers have the right to decide the winner by contesting a quiz on the roboguru & programming concepts, if they feel the program is not genuine written by the participant.

JAY ROBOTIX

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