JAYPEE INSTITUTE OF INFORMATION TECHNOLOGY

SEC - 128, NOIDA

ROBO HEIST

PROBLEM STATEMENT

TASK:

- Teams have to build a manually controlled bot that can complete the route by overcoming the Hurdles in its path.
- The bot can be wired or wireless.

ARENA:

- The outer dimensions of the arena are 700cm x 500cm
  It consists of the following:
    - The arena is set up of 3 levels of height: Level 0, Level 1, & Level 2.
    - The arena is based on a city, which consists of ramps, flyovers, breakers, buildings, banks, tunnel, jungle, security gates and other stuff.
    - You need to start your heist from your safe house to complete your task successfully and return back to your safe house.
    - **There might be few surprise elements in the arena during your run.**

- Color Code for the provided arena images are as follows,

    - YELLOW - Checkpoints

    - GREEN - Starting point

    - RED - Ending point

    - PURPLE - Breakers

    - BLUE - Tunnels
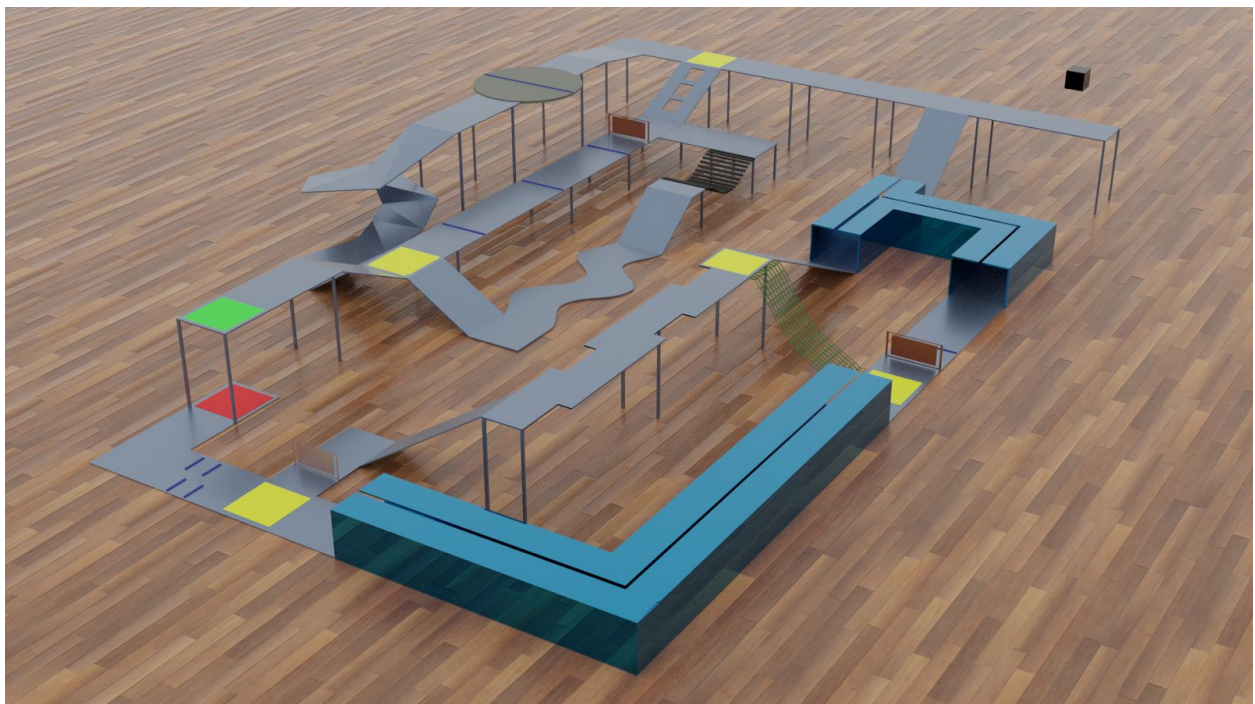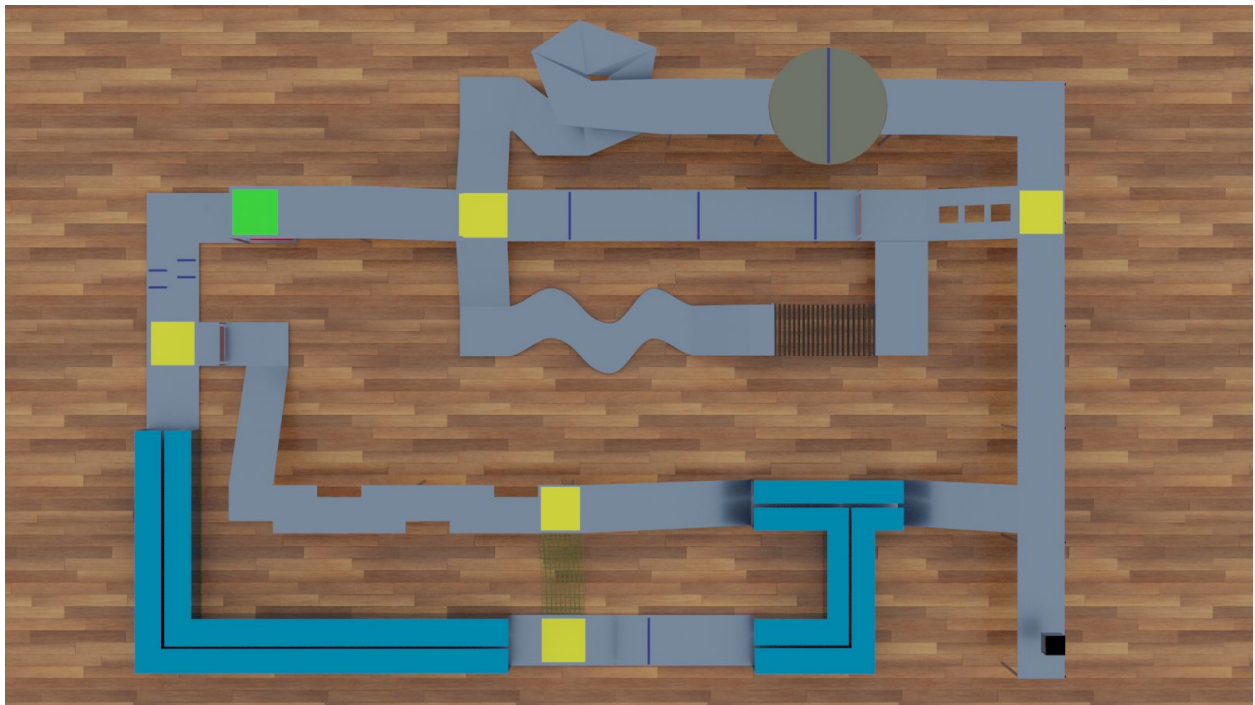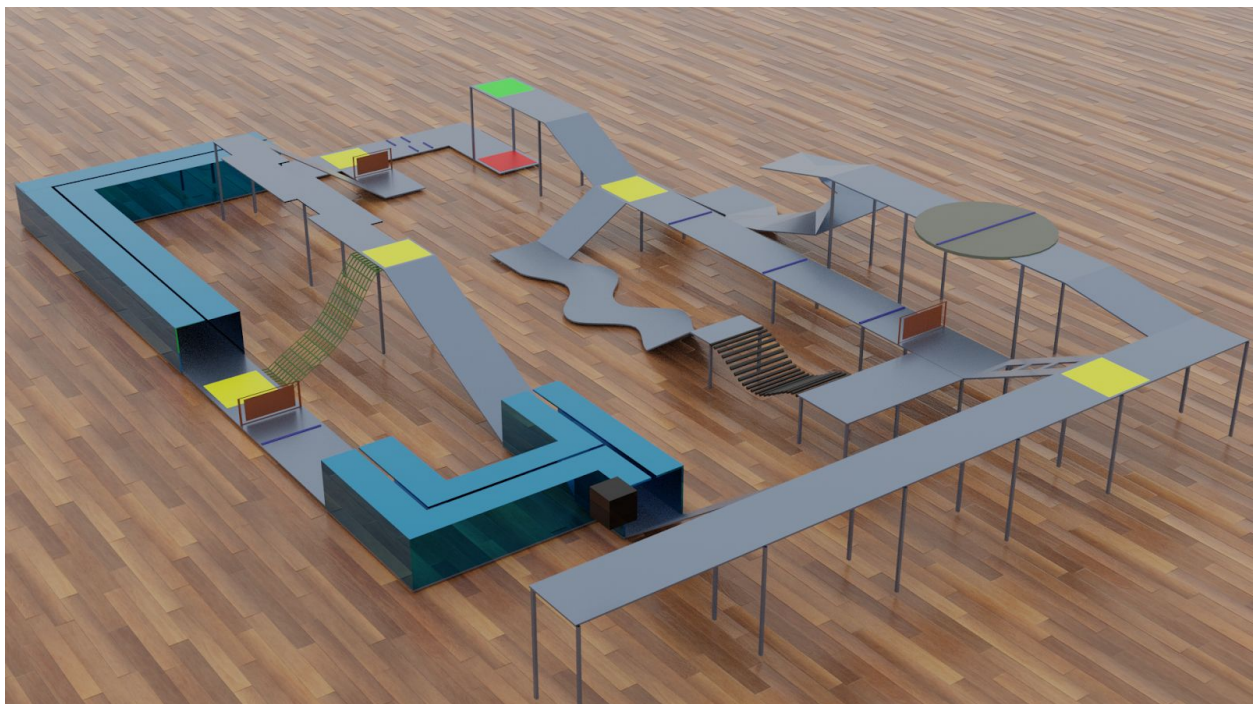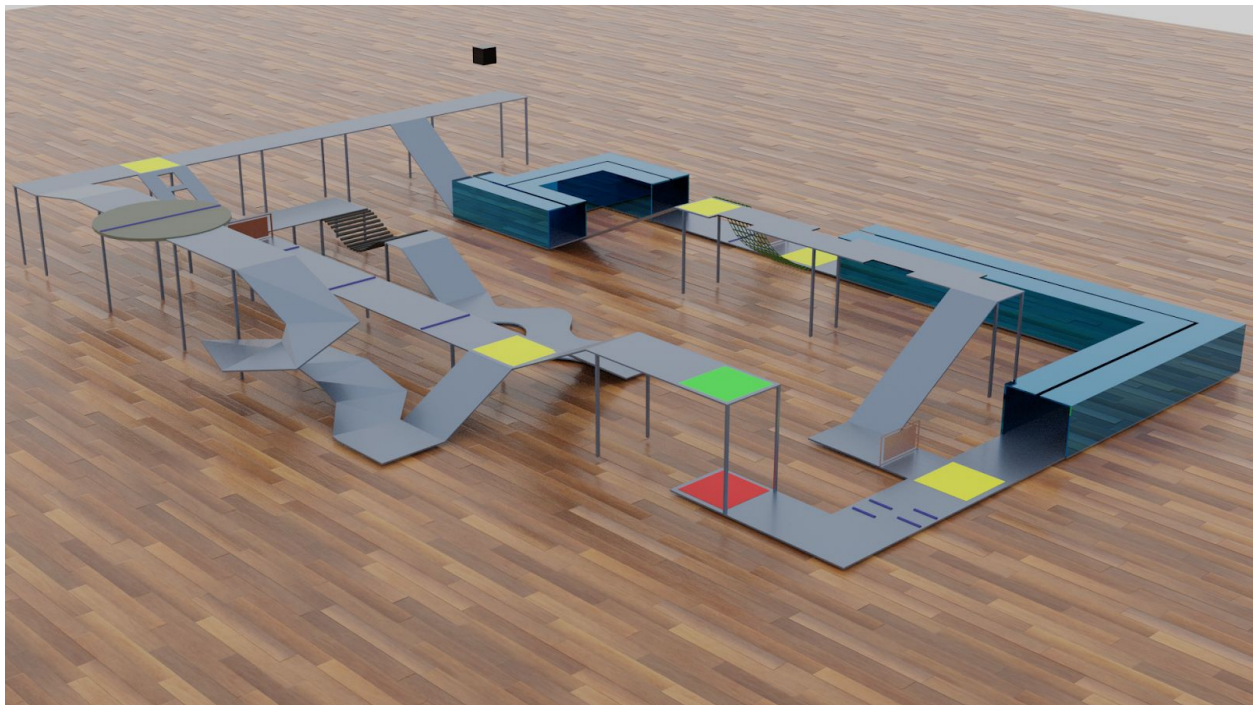
BOT SPECIFICATION:

- The dimensions of the bot should be less than or equal to **30 cm* 30 cm * 30 cm (l*b*h)** failing which the team will be disqualified.
- The bot must be controlled manually.
- **Power Supply of 24V would be provided, however, you may also use your own power supply.** The voltage between any two points should be less than or equal to 24V DC at all times during the run.
- Only one person is allowed to control the bot.
- Failing to meet any of the above specifications will lead to immediate disqualification.

GAME RULES:

- Only one team member is allowed to handle the bot. No other team member is allowed to enter the arena.
- The bot will be liable for disqualification if it causes any kind of damage to the arena.
- **A maximum of 16 minutes will be given for each team.**
- In case the bot is stuck at a place, it will be repositioned at the previous checkpoint.
- The timer won't be stopped during this process.
- **In case of any disputes/discrepancies, the organizer's decision will be final and binding.**

JUDGING:

- 50 points will be awarded for successfully crossing hurdles and checkpoints.
- 50 extra points for crossing each bridge.
- In case the bot falls/crosses referred path 20 points will be deducted and bot will be placed at the previous checkpoint.
- 20 points will be deducted every time you are caught by police.

SCORING:

- A = Points Scored
- P = Penalties
- T = (960 - Time taken in seconds)
- Total points scored = $A + T - P$

TEAM SPECIFICATION:

- A team may consist of a maximum of 4 members.
- Students from different educational institutes can form a team.

ELIGIBILITY:

- All students with a valid identity card of their respective educational institutes are eligible to participate.

HOW TO REGISTER:

Click here to register for the event.

CERTIFICATE POLICY:

- Hard Copy of Certificate of Merit would be awarded to the top 3 Winners.
- E-Certificates of participation will be given to the top 60% team.