# TECHNOVANZA

Taking Technology To Society

VJTI Presents
TECHNOVANZA
2020-21

# ROBOMAZE

## INTRODUCTION:

There is no one who don't know what E-Commerce is. It has become a necessity for our day to day life let it be online auctions, payment gateways, online ticketing, internet banking and yes, last but not the least the very popular ONLINE SHOPPING. The current COVID-19 pandemic had stopped everything but it couldn't stop Online Shopping.

We at Technovanza will take you to the amazing world of Online Shopping. You are a delivery person who carries the parcels and deliver them to their respective locations. But while travelling you have to take care and select the path which has least exposure to COVID-19 in minimum time possible.

## OBJECTIVE:

The objective is to complete the task assigned to you in minimum time taking care of you safety. You have to get out of the maze completing the task. Your main aim is to find the safest path in the maze for your task and collect maximum points within the given time constraint.

## TEAM SPECIFICATION:

1)Any team can participate in RoboMaze.
2)A team may consist of only one member.

## CERTIFICATE POLICY:

1)Certificate of participation will be awarded to all the teams and certificate of excellence will be given to the top three teams.
2)Disqualified teams will not be considered for any certificate.

## PRIZE MONEY:

Cash Prize of 25000 in total.

## ARENA SPECIFICATIONS:

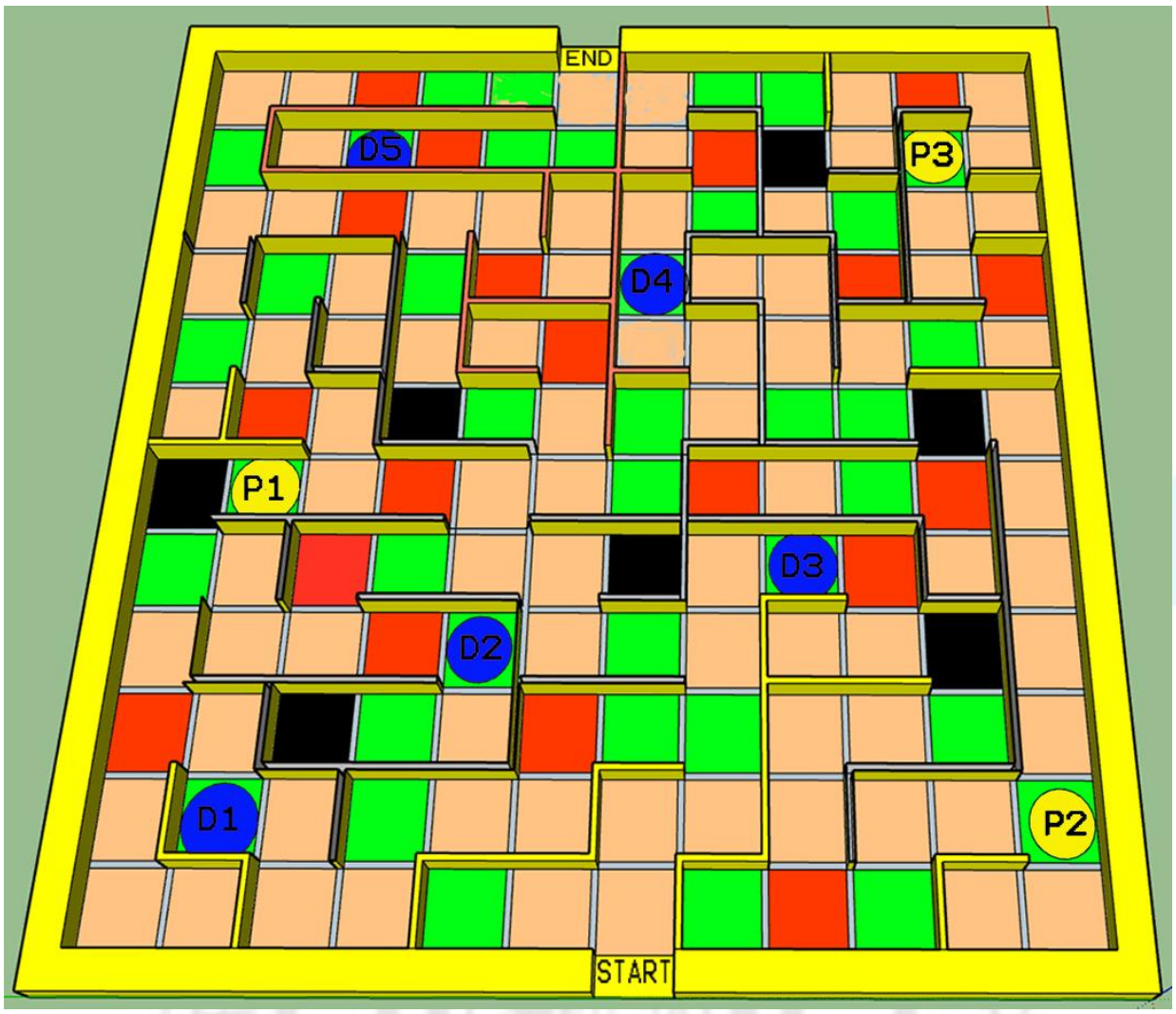
**Maze size-**

1)15 feet * 15 feet (containing 12*12 grid). (For Round 1)
2)20 feet * 20 feet (containing 16*16 grid). (For Round 2)
3)40 feet * 20 feet (containing 32*16 grid). (For Round 3)

## GAMEPLAY:

1) The maze base is designed considering the COVID-19 situation i.e. it has four regions in it marked with different colours.

- **Green Zone:** The Safest zone. The zone will give you +100 points. 2.
- **Orange Zone:** This Zone will give you no points. (0 points).
- **Red Zone:** This Zone will deduct you score by -100 points.
- **Containment Zone:** This Zone is marked with Black colour and will deduct your score by –120 points.
- **Pick Up Point:** You have to pick up your items from this point. (You will gain 50 points.)
- **Destination Point:** You have to put the parcels at this point. (You will gain 150 points.)




| ZONE | POINTS | COLOR |
|---|---|---|
| Safe | +100 | |
| Neutral | 0 | |
| Danger | -100 | |
| Containment(Black) | -120 | |
| Pick Up Point | 50 | |
| Destination Point | 150 | |

**2) Check points:**

There are two types of checkpoints. One is pick up point from where you have to take the parcels and the other is destination which will be the location for delivery.

E.g.: Pick up cell will be marked as P1, P2... etc. and Destination cells as D1, D2... Etc.

**3)** The **main motive** of your's is to complete the given task.

You will be starting from the start position (which will be marked in the maze). There is no restriction for the order of completion of task, you can complete any task first, but at a time can do only one Task. And all the tasks need to be completed.

Let's take an **example** for better understanding:

**E.g.:** Task 1: P1-D2, D3

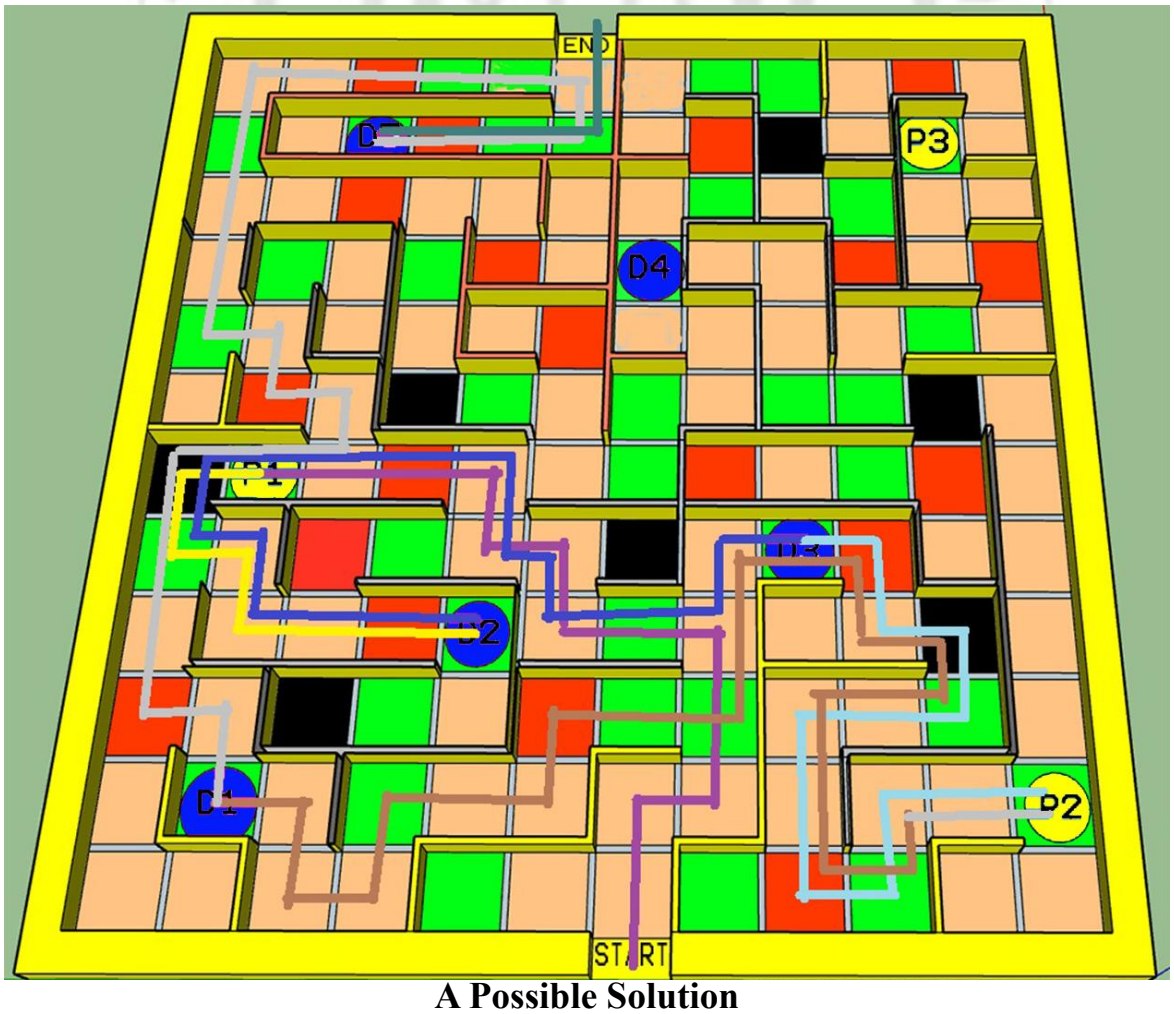
Task 2: P2-D1, D5

Here 2 tasks are given. (It will be you choice to select which task is to be done first) Let us complete task 1 first.

You have the freedom to choose which of the two task is to be done first, accordingly you can go to either pickup point P1 or P2 from start position.

**Case 1-** If you go to P1 first, then from there you can go to D2 or D3 first and then the remaining one, you need to deliver at those two destinations in any order, and after that go to the other pick up point(i.e.P2) and then go to the it's corresponding destinations.

**Case 2-** If you go to P2 first, then from there you can go to D1 or D5 first and then the remaining one, you need to deliver at those two destinations in any order, and after that go to the other pick up point(i.e.P1) and then go to the it's corresponding destinations.




**A Possible Solution**

4) Teams will be judged according the points evaluation scheme explained below.

**POINTS EVALUATION-**

During the point evaluation note that once you pass over a green cell, it will be converted to an orannge for 5 sec
A possible path traced above for solving the task mentioned above, it's point calculation is done below:

**Task 1:**

**Start to P1:** 0+0+0+100+0+100+0+0+0+0-100+0+100= +200

**P1 to D2:** -120+100-100+100= -20

**D2 to D3:** -100+100-120+100-100+100+100 = +80

**Task 2:**

**D3 to P2**: -100-120+100-100+100+100 = -20

**P2 to D1:** +100-100+100-120-100+100+100+100-100 +100 +100 = +180

**D1 to D5:** -100+100-120+100-100+100+100-100 +100 +100 +100+100-100+100 = +380

**D5 to End:** -100+100+100 = +100

Total points= 200-20+80-20+180+380+100 = 900.

**Sets will be made** according to the **allocated tasks** in each round and points of participants will be compared inside to those **task group** only, so that competition will be even.
**Firstly,** team with higher points (path points) will be considered. If teams have the exact same points then time of submission will be considered.

**RULES-**

1) In total 3 rounds will be conducted with increasing difficulties and a greater number of tasks.

- **Round 1-(**Qualifier Round (Any team can participate))

  A 12 X 12 maze will be given with pickup and destination points and task assigned.

  Participant has to solve the maze with max points and within the given time limit. Out of those who have solved within given time limit, will be compared for points; if points are same time taken will be considered.

  Top 50% participants will qualify for Round 2.
- **Round 2-(**Quarter Final)

  A 16 X 16 maze will be given with pickup and destination points and task assigned.

  The ranking will be done on the basis of same rules mentioned in the round 2.

  Certain number of top participants will qualify for Round 3
- **Round 3-(**Final Round)

  Those who qualified for final round will be divided into groups of two.(Suppose X,partcipants are there, then X/2 groups will be formed).

  Each group of two will be assigned the symmetric tasks with pick up and destination points (in a 32 X 16 sized maze) and will play simultaneously on the same maze. The one who finishes all the tasks earlier and reach till end, will win among them.

  So, we will be having X/2 such winners, those will be ranked according to point scored during their task. And out of them certain number of top partcipants will be declared as winners.

2) During any round the maze will be **closed** on participant's display after a certain maximum time which will be informed before maze starts.

3)**Number of tries in rounds -**

In round 1, there you will be given maximum of three tries,i.e. after each maze end participant will be shown a screen where he can try again or submit the maze if he wants.Max three tries are there, after third try your score will be submitted automatically to the system. Between to tries you will be given a 1 min time to try again, if you don't click either of the button maze will be submitted automatically.

For other rounds also there will be certain number of tries which will be mentioned during start of round.

## GENERAL INSTRUCTIONS:

1) Layout of rounds can be changed by the organizers of events at any point of time.
2) No rash behavior with the organizers will be tolerated
3) While solving the maze, make sure you are well connected to internet as no complaints regarding low internet speed or poor connections will be entertained and time period given for the particular round will be followed strictly.
4) Organizers decision will be final decision.
5) Maze design will change after every round.

**NOTE: Rules mentioned above are subject to change anytime. Participants should check for the latest updated PDF on official website of TECHNOVANZA 20. However, this draft is to be followed as the latest version. Technovanza reserves all rights regarding rules and regulations.**

## CONTACT US:

1) Ojaswi Sarve - +91 9167612235
2) Gauri Surwade - +91 8169760181
3) Dheetlekha Nath - +91 7738783998