

# **Infinity Crusade**

## **Introduction**

Half of the world has been wiped out, thanks to Thanos for snapping his fingers in a novel approach for ending billions of lives. Our beloved commander of S.H.I.E.L.D Nick Fury was also among them. Now you are the new commander of S.H.I.E.L.D.

Somewhere in the dark and dreadful cosmos, Iron man and nebula are stuck on the planet Titan as their spaceship has been destroyed and there are no resources to survive or escape from the planet. S.H.I.E.L.D received a help signal from the planet Titan which possibly might be from Iron man, decoded as "WE NEED HELP!".

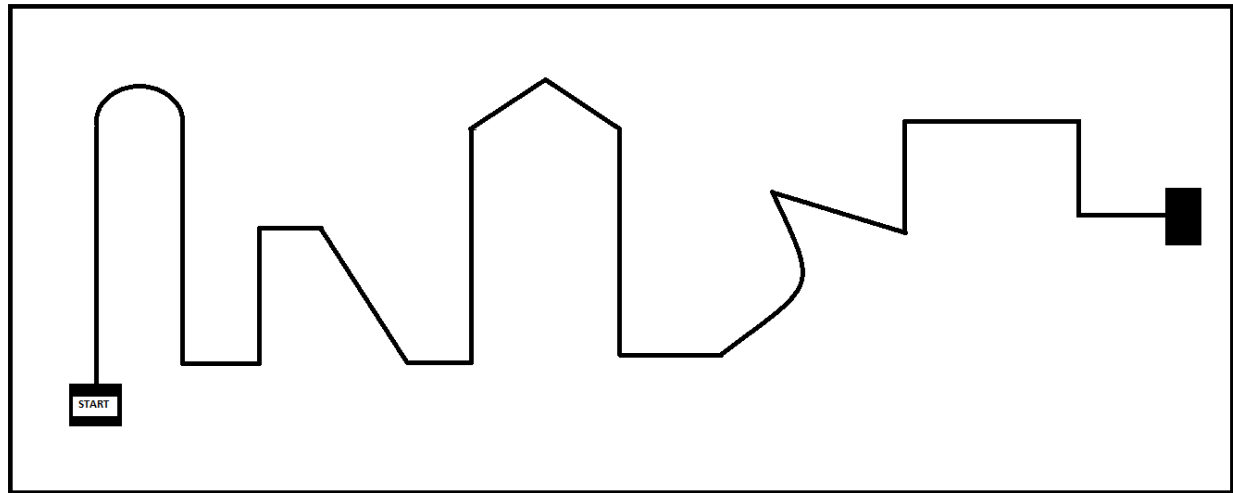
Now you being the new commander have to lead a rescue operation to planet Titan. An optimized path has been designed by S.H.I.E.L.D intelligence team, thus the path to Titan is known to you and you have to design an autonomous space shuttle (robot) which will rescue the survivors on Titan . The path to Titan is very complex and full of dangers consisting of black holes and asteroids, also the resources are limited on Titan so you have to rescue them as fast as possible and save the world from the "Mad Titan" since Iron Man is our only hope.

## **Rules and Regulations**

1. A team can't have members from different colleges.
2. A team can have maximum 4 members.
3. Judges' decision will be final and binding to all.
4. You will be provided with 220V 50 HZ AC power.
5. You can't supply more than 120W power to your robot.
6. Voltage must not be more than 24V between any two points.
7. If robot is supplied with AC power, RMS voltage between any two points can't be greater than 24V.
8. Your Code should not be hard-coded.
9. Organizers reserve the right to change any rules or make new as they deem fit.
10. Robot must fit into a box of dimension 25 cm x20 cm x20 cm however it can expand later during gameplay.
11. Robots must not weigh more than 5Kg.
12. You are allowed to use readymade sensors.
13. Maximum number of trials allowed are four.

15. The angles are 60, 90, 120.

Note- This is sample arena final arena may be changed.



1. All the teams have to submit their robot for design testing.
2. Your robot has to traverse the whole arena from start to end.
3. There are three checkpoints in the whole arena.
4. After clearing any checkpoint, if any timeout required then robot has to restart the journey from the last cleared checkpoint.

1. Clearing checkpoint 1 += 300 points.
2. Clearing checkpoint 2 += 500 points.
3. Clearing checkpoint 3 += 600 points.
4. Robot design and structure based += 200 points (max)
5. Algorithm design += 200 points (max)
6. Points for time taken to traverse the arena = total points scored – (time in seconds)\*0.5
7. For each time out taken by robot(90 seconds) = -70 points.

## Round 1: Bot Review Round

The bots built would be reviewed by the event coordinators to gauge the progress.

### **Final Round:**

Teams selected for final round will be playing during “Avishkar 2018” as stated above in gameplay.

### **Contacts**

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