e-Yantra Robotics Competition (eYRC-2018)

Task 1 – Nutty Squirrel

Welcome to Task 1 of Nutty Squirrel!! The aim of this task is to learn line following techniques, path planning algorithm and implement on V-REP.

This task is divided into two parts:

- Basic task in V-REP
- Implementation of path planning algorithm on given arena in V-REP

Please find the following folders within **Task 1 folder** that contains this **Read Me** file.

- First folder is Task 1.1
  - Please find the following file/s in this folder:

    File: Task_Details1.1.pdf

    Folders: Assignment, Tutorial, Task
  - Follow the instructions in Task_Details1.1.pdf file to work on the assignments and task.
- Second folder is Task 1.2
  - Please find the following file/s in this folder:

    File: Task_Details1.2.pdf

    Folders: Tutorial, Task
  - Follow the instructions in Task_Details1.2.pdf file to work on the task.
- Third folder is NS_Project
  - Please find the following file/s in this folder:

    File: Predef.pdf, Coding Standards.pdf

    Folder: NS_Task_1_Project

You can refer to Predef.pdf to know about the basic functions available in the project and Coding Standards.pdf to be followed for each task.

Programming Instructions:

- You will make changes and further additions to your NS_Task_1_Sandbox.cpp and NS_Task_1_Sandbox.h file.
- You may declare new functions and global variables.
- You are not permitted to modify files apart from NS_Task_1_Sandbox.cpp and NS_Task_1_Sandbox.h file.
- The only exception to this is the NS_Task_1.cpp file which contains the main function.
- In the main function, you should uncomment the function "Task_1_1", and your entire Task Logic should be called from this function for Task 1.1 and similarly for Task 1.2, you should uncomment the function "Task_1_2".
- During evaluation, any other modifications to your main function will not be considered.

Submission Instructions for Task 1.1:

You must submit your code for the task given in Task folder. Your submitted folder name should be ***NS#****_Task_1.1*** where **** is your Team ID. For example, if the Team ID is 12, save it as, ***NS#0012_Task_1.1.zip*** and submit on the portal.

NS#****_Task_1.1.zip file should contain following files:

- NS_Task_1_Sandbox.cpp
- NS_Task_1_Sandbox.h

NOTE: Deadline for Task 1.1 submission is: November 14th, 2018.

Submission Instructions for Task 1.2:

On successful completion of this task, create a folder named ***NS#****_Task_1.2*** where **** is your Team ID. For example, if the Team ID is 12, save it as, ***NS#0012_Task_1.2.zip*** and submit on the portal.

NS#****_Task_1.2.zip file should contain following files:

- NS_Task_1_Sandbox.cpp
- NS_Task_1_Sandbox.h
- NS_Task_1_Report.pdf

In addition to your code, you must also submit a PDF report containing the following:

- A description of path planning algorithm and reason for selecting the particular algorithm.

NOTE: Deadline for Task 1A submission is: November 28th, 2018.

ALL THE BEST!