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**MIDDLE EAST TECHNICAL UNIVERSITY**

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

EE493 – Weekly Progress Report #3

POTATO INTEGRATED TECHNOLOGIES

A close up of a clock

Description generated with high confidence

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**Project 3 - Vehicles chasing each other around a closed course with varying properties:**

**Goal:** Follow the elevated path without falling-off, try to catch & tag the opponent robot.

**Functional Requirements:**

* Detect start signal
* Detect elevated path robot is placed on
* Start moving with the suitable speed with respect to the start point on the path
* Follow the path without falling off
* Adjust speed according to the instantaneous location on the path
* Faster robot senses the opponent
* Handshake protocol is achieved (Tagging)
* Tagged robot loses the round
* End of the round

**Constraints:**

* All instrumentation has to be onboarded the robot.
* Robot performance should not be affected from the disturbances.
* Collision of the robots must be avoided.
* One full turn of the robot should not exceed 20 sec.
* Tagging will be achieved when the opponent is 5 cm ahead.

# Project 4 - Devices trying to extract the plan of their surroundings

# Goal: To design a self-contained robot which extracts plan of its surrounding.

**Functional requirements:**

* Detect start signal
* Scanning the surroundings
* Change position for different scan angles
* Distinguish different objects in terms of their shape
* Create a data containing information of individual shapes and their positions
* Send created data to a remote location in one-way communication for display purposes

**Constraints:**

* The robot should not disrupt the playfield.
* The robot is fully autonomous.
* All operation sensors must be included within the robot.
* Max height of the robot should not exceed the height of objects in field and the robot should fit in a cylinder of 25 cm diameter.