Preparation Guide for

WeDo 2.0 with Scratch 3 Regular Level Certification

The goal of the certification is to certify that a person is proficient in the use of the Lego® WeDo 2.0 kit to design, build, and program simple robots with Scratch 3, not WeDo 2.0 programming. It tests for basic coding skills and familiarity with the Scratch 3 environment (50%). It also checks for science and engineering related subjects that can be acquired through hands on Lego WeDo project experiences. Below is a list of things that might be helpful in preparation for certification.

- Review basic WeDo 2.0 building instructions (https://education.lego.com/en-us/support/wedo-2/building-instructions) for Fan, MILO, MILO with a Motion sensor, Earthquake, Joystick, Pull, Push, Revolve, Sweep, etc.
- Practice basic programs with the above building models. Basic coding topics are:
    - o Sequencing
    - o Decision making
    - o Simple iterations
    - o "Repeat until" and "wait until" blocks
    - o Relational operators
    - o Events and multi-tasking
    - o Using random numbers
    - o How to connect WeDo 2 to a computing device via Bluetooth
- For Science and engineering related subjects, first read
    - o WeDo user guide at: https://education.lego.com/en-us/support/wedo/user-guide (skip WeDo 2.0 programming part, since we are using Scratch 3)
    - o WeDo 2.0 Toolbox at: https://le-www-live-s.legocdn.com/sc/media/files/user-guides/wedo-2/toolbox/toolbox-en-us-v1-96e832f4ef0e1c99a838ad8744f0dd1c.pdf (skip WeDo 2.0 programming part, since we are using Scratch 3)
    - o Then focus on studying:
        - ✓ Speed calculation
        - ✓ Motion
        - ✓ Friction
        - ✓ Gears and pulleys (important)
        - ✓ WeDo sensor types; Use of various sensor values in Scratch
        - ✓ Object detection