Test #2
(Based on Nov. 12 Version)

1. The system designed should be configured with a sensor, more specifically with the Passive Infrared PIR Motion Sensor. This sensor is able to have detection distances ranging from 25 centimeters to 20 meters which is in accordance with the distance that a regular blind cane, which typically has a range of 1.2 meters, can reach. By using this sensor, a visually impaired individual is able to be notified of an obstacle in advance, and is able to move accordingly.
    a. Test Setup
        i. Put different sizes and types of obstacles in front of the sensor to see if the product detects their motion while moving.
            - Pass: Sensor is able to detect any moving object of any size.
    b. Environmental Parameters
        i. Indoor environment: well-lit room with controlled lighting conditions for the sensor to be able to properly detect objects
        ii. Outdoor environment: an open space with natural lighting. In terms of weather, it should be moderate for testing purposes, so a full idea of the sensor can be obtained.
            - Pass: Sensor works for both indoor and outdoor environments, however, moderate lighting (space is evenly illuminated, providing a balanced light),
    c. Test Inputs
        i. A variety of objects to simulate real-world conditions, including static and moving objects
            - Pass: the device can detect moving objects
        ii. Test scenarios will vary in complexity as objects of different distances and sizes can be different. The angle of approach to the obstacle can be another factor that makes up various scenarios.
            - Pass: The sensor can detect objects at an angle a little under 180 degrees, and the sensor can detect any moving object of any size.
    d. Quantifiable Measurement Standard
        i. To ensure precise and consistent measurements within the sensor's range of 25 cm to 20 m, it is recommended to place an obstacle at the maximum distance and activate the sensor. By doing so, an accurate indication of the sensor's range can be determined, making it easier to obtain reliable measurements at various distances within the range.
            - Pass: The sensor can detect distances from 25 cm to 5 m with no problem, the rest of the distances are yet to be tested.
    e. Pass Criteria
        i. If the range of the sensor is consistent after various trials, with a low percent error, then it is considered a pass. However, if there are inconsistencies with the ranges that the sensor detects, then the device does not pass the test.
            - Pass: So far, there are no inconsistencies with the distances with respect to the actual distance that the sensor can detect, more to follow.