**ObstiBot** is a versatile robot designed for obstacle detection and navigation. It combines various components to provide a range of functionalities:

1. **Ultrasonic Sensor (HC-SR04):** ObstiBot utilizes an HC-SR04 ultrasonic sensor to measure distances. This sensor emits ultrasonic waves and calculates the distance by measuring the time it takes for the waves to bounce back. This functionality enables the robot to detect obstacles in its path.

2. **Motorized Wheels (MLa, MLb, MRa, MRb):** ObstiBot is equipped with two pairs of motorized wheels, allowing it to move in various directions. By controlling the rotation and speed of these wheels, the robot can move forward, backward, turn left, and turn right.

3. **Servo Motor (Myservo):** The servo motor is an essential component for ObstiBot's orientation. It can pivot the sensor or other equipment, enabling precise directional adjustments. This is particularly useful when the robot encounters obstacles and needs to make controlled turns.

**Functionality:**

1. **Obstacle Detection:** ObstiBot constantly emits ultrasonic waves using the HC-SR04 sensor. It calculates the distance to any object in its path based on the time it takes for the waves to return. When an obstacle is detected within a predefined range, ObstiBot responds accordingly.

2. **Obstacle Navigation:** When an obstacle is detected, ObstiBot follows a set of rules to navigate around it. It stops its forward motion, briefly reverses to ensure clearance, and then turns in either the left or right direction, depending on the count of previously encountered obstacles.

3. **Adaptive Turning:** ObstiBot's unique feature is its adaptive turning behavior. If it encounters an even number of obstacles, it turns right; if it encounters an odd number, it turns left. The servo motor assists in fine-tuning the direction during these turns.

4. **Serial Communication:** The robot can communicate its distance measurements via serial communication, allowing external devices to monitor its operation and make decisions based on the data.