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Intro to Engineering
Group 1

No.	Spec	Rationale	Verification Method
1	Car must avoid obstacles	Design Requirement: Car must be autonomous and not hit obstacles	Put the car on a level floor with various obstacles. Turn the car on, let the car run for 2 minutes, and verify that it does not hit any obstacles
2	Car must turn 180° if it detects walls to either of its sides	Customers prefer cars that move in efficient turns (i.e., a single 180° turn, instead of two 90° turns)	Have the car move forward and place two obstacles to either of its sides within 5 cm when it reaches an obstacle, then verify that it turns 180°.
3	Battery should be accessible without tools or manipulation	Customers prefer cars whose batteries are easy to remove for charging	Give car to unfamiliar operator, instruct them to remove the battery, and observe to verify that they do not need to manipulate the car or need access to tools