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|  | **Test Case** |  |  |
|  | **Test Case ID:** 01 | **Test Designed by:** Kamal Kant | |
|  | **Test Priority (Low/Medium/High):** High | **Test Designed date:** 25-04-2019 | |
|  | **Module Name:** Avoid Obstacle | **Test Executed by:** Kamal Kant | |
|  | **Test Title:** Sharp DistanceMeasure | **Test Execution date:** 27-04-2019 | |
|  | **Description:** Through the sharp distance sensor avoid the obstacle |  |  |
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**Pre-conditions:** 1. Circuit should be connected. 2. Sharp Distance sensor should be functional

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| **Step** | **Test Steps** | **Expected System Response** | **Status**  **(Pass/Fail)** | **Notes** |
| 1 | Get the value from the IR sensor | Value Measured Successfully | Pass |  |
| 2 | Process the value in the main controller | Process the value (x^-0.857)1167.9 | Pass | x is the value returned from the sensor |
| 3 | Move the device to avoid obstacle | If distance from obstacle < 4.3 cm move to another direction | Pass |  |



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|  | **Test Case** |  |  |
|  | **Test Case ID:** 02 | **Test Designed by:** Gurkirat Singh | |
|  | **Test Priority (Low/Medium/High):** Medium | **Test Designed date:** 26-04-2019 | |
|  | **Module Name:** Gear Motor | **Test Executed by:** Kamal Kant | |
|  | **Test Title:** Movement of device | **Test Execution date:** 28-04-2019 | |
|  | **Description:** test the motors individually to forward , backward, left, right turn. |  |  |
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**Pre-conditions:** 1. Circuit should be connected. 2. H-Bridge functioning properly

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| **Step** | **Test Steps** | **Expected System Response** | **Status**  **(Pass/Fail)** | **Notes** |
| 1 | Send signal to motor to move forward | Device move forward | Pass |  |
| 2 | Send right motor high and left low | Turn right | Pass |  |
| 3 | Send left motor high and right low | Turn left | Pass |  |
| 4 | Switch the signals to move antilock wise or backward | Backward | Pass |  |

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|  | **Test Case** |  |  |
|  | **Test Case ID:** 02 | **Test Designed by:** Gurkirat Singh | |
|  | **Test Priority (Low/Medium/High):** Medium | **Test Designed date:** 26-04-2019 | |
|  | **Module Name:** Gear Motor | **Test Executed by:** Kamal Kant | |
|  | **Test Title:** Movement of device | **Test Execution date:** 28-04-2019 | |
|  | **Description:** test the motors individually to forward , backward, left, right turn. |  |  |
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**Pre-conditions:** 1. Circuit should be connected. 2. H-Bridge functioning properly

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| **Step** | **Test Steps** | **Expected System Response** | **Status**  **(Pass/Fail)** | **Notes** |
| 1 | Send signal to motor to move forward | Device move forward | Pass |  |
| 2 | Send right motor high and left low | Turn right | Pass |  |
| 3 | Send left motor high and right low | Turn left | Pass |  |
| 4 | Switch the signals to move antilock wise or backward | Backward | Pass |  |

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| **Test Case** | |  |
| **Test Case ID:** 03 | **Test Designed by:** HarmanDeep | |
| **Test Priority (Low/Medium/High):** High | **Test Designed date:** 20-04-2019 | |
| **Module Name:** Battery Power | **Test Executed by:** Jhonsy Bansal | |
| **Test Title:** Battery level | **Test Execution date:** 28-04-2019 | |
| **Description:** Test the battery to power device and if battery discharges then switch off the devices. |  | |  |
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**Pre-conditions:** 1. Circuit should be connected. 2. IRF520 MOS FET Driver Module fi

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| **Step** | **Test Steps** | **Expected System Response** | **Status**  **(Pass/Fail)** | **Notes** |
| 1 | Send 5v to Arduino through potentiometer | Arduino receive 5V signal | Pass | Raw 11.1V cannot be supplied to Arduino, it will damage it. |
| 2 | Calculate voltage | Calculate volatege out of 11.1V | Pass | (((readInput\*4.9)/1000)\*voltageBatCharged ) / 5; |
| 3 | If (Voltage < 11) stop devices | Fan and motors should be off. | Pass |  |

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| **Test Case** | |  |
| **Test Case ID:** 04 | **Test Designed by:** Jhonsy Bansal | |
| **Test Priority (Low/Medium/High):** Low | **Test Designed date:** 28-04-2019 | |
| **Module Name:** WiFi Connection | **Test Executed by:** Gurkirat | |
| **Test Title:** Remotely enable disable device | **Test Execution date:** 30-04-2019 | |
| **Description:** Connect wifi and start and stop the device using Android App |  | |  |
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**Pre-conditions:** 1. Wifi Module is connected to Arduino 2. Wifi Network with active internet is available

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| **Step** | **Test Steps** | **Expected System Response** | **Status**  **(Pass/Fail)** | **Notes** |
| 1 | Connect to the WiFi Hotspot | Connected | Some times Fails | Flash the wifi module (ESP8266) with ssid and pass and Blynk libraries. |
| 2 | Connect to Blynk Server | Connection established | Pass | (((readInput\*4.9)/1000)\*voltageBatCharged ) / 5; |
| 3 | Send ON/OFF signal from Android to ESP8266 | App send signal successfully | Pass |  |
| 4 | Microcontroller receive request from ESP8266 and Start or Stop device | Device Turn On or OFF | Sometimes expecting delays |  |