KEY

HW: DriveBot Modules

Please complete all of the following problems in your lab notebook.

1. In DriveBot, there are 11 different modules. Write the name of each module below.

1. 9V battery
2. motor driver
3. power supply unit
4. PSoC (microcontroller)
5. power switch
6. bluetooth receiver
7. chassis
8. motor
9. wheels
10. LifePack
11. Vehicle

2. Write 1-2 sentences to describe at least six of the eleven modules' functionality.
(e.g. The purpose of the 9v battery is to supply power to DriveBot, particularly the Power Supply Unit)

1. The Power Supply Unit provides power to the MotorDriver, the PSoC, the bluetooth receiver, and the power switch. It receives power (energy) from the battery and a signal from the power switch.

2. The MotorDriver receives power from the PSU and data from the PSoC, which it uses to power the left and right motors.

3. The motors receive power and data from the MotorDriver, and use the power and data to spin the wheels in a controlled manner.

4. The Bluetooth Receiver receives data from the phone, commands from the PSoC, and power from the PSU, and sends information (such as motor speed) to the PSoC.

5. The vehicle includes the chassis, motors, and wheels, which comprise the physical/structural parts of DriveBot.

6. The PSoC gets information from the bluetooth receiver, and sends commands to the motor driver and back to the bluetooth receiver. The PSoC relays information between the user (user's phone) and DriveBot (DriveBot's motors).