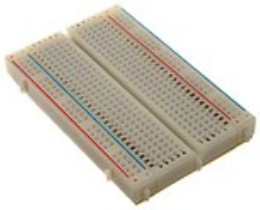
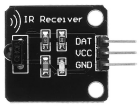
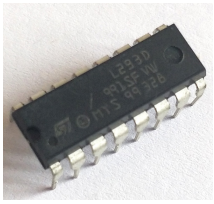
By Group 1(Bohua, Naafiul, Samantha, Amit)

Materials and Components	Description
Breadboard 	A thin plastic board used to hold electronic components (transistors, resistors, chips, etc.) that are wired together. Used to develop prototypes of electronic circuits, breadboards can be reused for future jobs.
DC Motors 	A DC motor is any of a class of rotary electrical motors that converts direct current electrical energy into mechanical energy.
Wheel 	A circular object that revolves on an axle and is fixed below a vehicle to enable it to move.
Arduino UNO board 	Arduino UNO is a low-cost, flexible, and easy-to-use programmable open-source microcontroller board that can be integrated into a variety of electronic projects. This board can be interfaced with other Arduino boards, Arduino shields, Raspberry Pi boards and can control relays, LEDs, servos, and motors as an output.
Ball Caster 	Ball Casters use marble-like spheres which are both space saving and more flexible in movement than conventional wheel casters.
Remote 	A device used to control a machine from a distance with a signal transmitted to it.

Breadboard jumper wires	A jump wire (also known as jumper, jumper wire, jumper cable, DuPont wire or cable) is an electrical wire, or group of them in a cable, with a connector or pin at each end (or sometimes without them – simply "tinned"), which is normally used to interconnect the components of a breadboard or other prototype or test
IR Receiver 	A handheld, wireless device used to operate audio, video and other electronic equipment within a room using light signals in the infrared (IR) range.
L293D pin (H-bridge motor driver) 	The L293D is designed to provide bidirectional drive currents of up to 600-mA at voltages from 4.5 V to 36 V. Both devices are designed to drive inductive loads such as relays, solenoids, DC and bipolar stepping motors, as well as other high current / high voltage loads in positive supply applications.
Battery Pack 	A power pack with 4 AA Batteries in it as a power source.

Pins for Connecting to Arduino:

Motor 1: Connected to output 3 and Output 4 of the IC chip (L293D pin)

Motor 2: Connected to output 1 and Output 2 of the IC chip (L293D pin)

Infrared sensors : Pin 2 on the Arduino

L293d pin (H-bridge motor driver): Enable pins 1 & 2 connected to power. Middle ground pins connected to GND. Two power pins on the edge connected to power. Rest attached to the motors respectively.

BOM and Cost Analysis

Materials	Cost
Breadboard	$5.95
Arduino board	$7
Motor x2	$8.99
Wheel x2	$8.99
Ball Caster	$5.98
RC Remote	$10