Sensors for WallE

You can use any one among the below sensors for distance sensing or if you have any other ideas do verify them before implementing it

1) TSOP: (Low cost, only Digital signal)
Gives only Digital output
You can vary the cutoff distance (D) using the resistive pot
If distance between wall and bot is < D then the digital out put will be high .
If distance between wall and bot is > D then the digital out put will be Low.
Its available at
http://www.robosoftsystems.co.in/roboshop/single-tsop-sensor-module.html

2) Sharp sensor: (Highly reliable , High cost)
Gives an analog output corresponding to the distance between the wall and the bot . Using ADC on the arduino board you can convert it in to digital value , which you can code to get back the required information.
Its available at :
http://www.nex-robotics.com/ir-range-sensors.html
http://www.robosoftsystems.co.in/roboshop/index.php/sensors.html?p=2
Use full information :
http://www.acroname.com/robotics/info/articles/sharp/sharp.html

3) IR Emitter and receiver:(Less reliable, Low cost)
Gives an analog output directly proportional to the distance from wall
Things required for making the sensors are IR emitter and receiver, OP-AMPs, resistors and capacitors..
They are available at:
Mangaldeep (opposite to main gate)
Lamington Road
There are many designs to implement this kind of system
http://ikalogic.com/ir_prox_sensors.php (a bit complex but detects long distances in design-2, as explained in Workshop)
http://www.societyofrobots.com/schematics_infraredemitdet.shtml
http://irbasic.blogspot.com/