# Table: Values

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| **Schema:** | SystemSchematicBuilder |
| **Responsible:** | Kurt A Vedros |

Table holds the information on the readings of the sensors and the parts important information.

This will be able to hold any Information needed about the readings that a sensor can take.

For example. Flow Rate, PSI, Voltage, current, etc.

Value – the numeric value of the reading assigned/asked for by the sensor or part.

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| **Column Name** | **Data type** | **Description** |
| ValueID | Int | Primary Key for the Value Table. |
| PartID | Int | Foreign Key to PartID (should be -1 if Value is to a Sensor) |
| ReadingID | Int | Foreign Key to ReadingID (should be -1 if Value is to a Transporter) |
| Name | String | Name used by the program to identify the value. (Potential Names given below.) |
| LocationFromStart | Float | Numeric value of the distance from the beginning flow of the part that the value is being read from. |
| Value | Float | The numeric value of the reading being taken. |

**Procedures (Database functions)**

* sprocGetReadings
  + Returns a list of Reading objects that are currently stored in the database.
* sprocGetReading
  + Returns a Reading object that is currently stored in the database that has the given Reading ID number.
* sproc\_ReadingAdd
  + Stores the given Reading object into the database and returns its assigned Reading ID number.
* sproc\_ReadingUpdate
  + Changes information of the Readings Table in the database with the given primary key to the given Reading class object.
* sproc\_ReadingRemove
  + Removes the Reading from the Readings Table with the given Reading ID number.

**DAL (Software Functions)**

* ReadingsGetAll()
  + Returns a list of Reading objects that are currently stored in the database.
* ReadingGet(int ID)
  + Returns a Reading object that is currently stored in the database that has the given Reading ID number.
* ReadingAdd(Reading Reading)
  + Stores the given Reading object into the database and returns its assigned Reading ID number. Returns -1 if error occurred, otherwise returns null.
* ReadingUpdate(Reading Reading)
  + Changes a Reading object that is currently stored in the database with the given Reading’s Reading.ID with the Reading’s information.
* ReadingRemove(int ID)
  + Removes the Reading object stored in the database with the given Reading ID number. Returns -1 if error occurred, otherwise returns null.