# Table: Pipes

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

Table holds the information on the pipe part.

Pipe – a hard, non-malleable, straight cylinder. May be from top to bottom or left to right on a grid square.

Note: Pipe and Tubes might be used as the same instance. I.E. Tube might be able to be considered a pipe for the purpose of the program.

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| **Column Name** | **Data type** | **Description** |
| PipeID | Int | Primary Key to Pipe Table. |
| GradeID | Int | Foreign Key to connect the Grade Table. |
| MaterialID | Int | Foreign Key to connect the Material Table. |
| Name | String | User given name of the pipe (can be left blank). |
| Diameter | Float | The diameter of the pipe in meters. |
| Distance | Float | The distance (length or height which ever user prefers to reference it as) given in meters. |

**Procedures (Database functions)**

* sprocGetPipes
  + Returns a list of Pipe objects that are currently stored in the database.
* sprocGetPipe
  + Returns a Pipe object that is currently stored in the database that has the given Pipe ID number.
* sproc\_PipeAdd
  + Stores the given Pipe object into the database and returns its assigned Pipe ID number.
* sproc\_PipeUpdate
  + Changes information of the Pipes Table in the database with the given primary key to the given Pipe class object.
* sproc\_PipeRemove
  + Removes the Pipe from the Pipes Table with the given Pipe ID number.

**DAL (Software Functions)**

* PipesGetAll()
  + Returns a list of Pipe objects that are currently stored in the database.
* PipeGet(int ID)
  + Returns a Pipe object that is currently stored in the database that has the given Pipe ID number.
* PipeAdd(Pipe Pipe)
  + Stores the given Pipe object into the database and returns its assigned Pipe ID number. Returns -1 if error occurred, otherwise returns null.
* PipeUpdate(Pipe Pipe)
  + Changes a Pipe object that is currently stored in the database with the given Pipe’s Pipe.ID with the Pipe’s information.
* PipeRemove(int ID)
  + Removes the Pipe object stored in the database with the given Pipe ID number. Returns -1 if error occurred, otherwise returns null.