INSTRUCTIONS FOR 3DHOLOAPPDEV

Microsoft Hololens 2

For help contact our Support Team:

support@3dhologroup.com

Instructions for 3DHoloAppDev
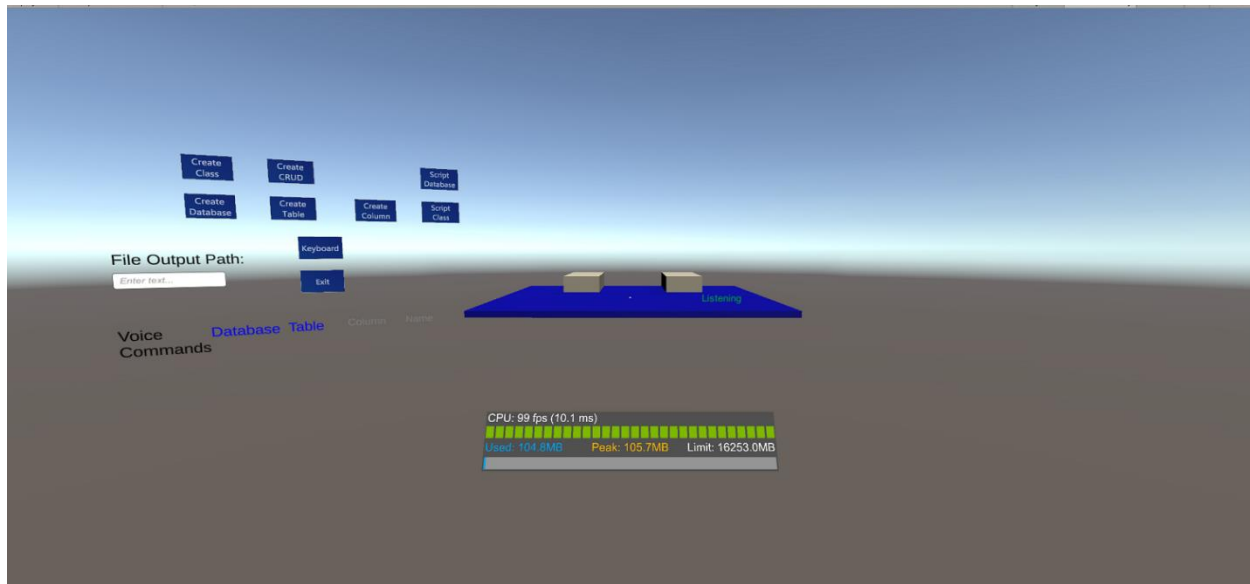
Hardware requirements: To use the 3DHoloAppDev software a Microsoft HoloLens 2 Augmented Reality device is required.

Introduction

3DHoloAppDev is a tool for designing and building Microsoft SQL Server database schemas and C# code files using an Augmented Reality interface via a Microsoft Hololens 2 Augmented Reality device. The software allows the user to use the built-in hand gesture controls and voice commands to quickly create a new database, new database tables & columns and code files.

This patent-pending technology is currently in a Beta stage of development and is being freely distributed for a limited time. Not all features are available, and while we have tested most positive path scenarios this application has not been fully tested for all possible scenarios. We are in the process of garnering feedback from our Beta testers in order to ensure we are creating the best product we can with the features our users want to see. Please send all comments, suggestions or defects found to **support@3dhologroup.com**
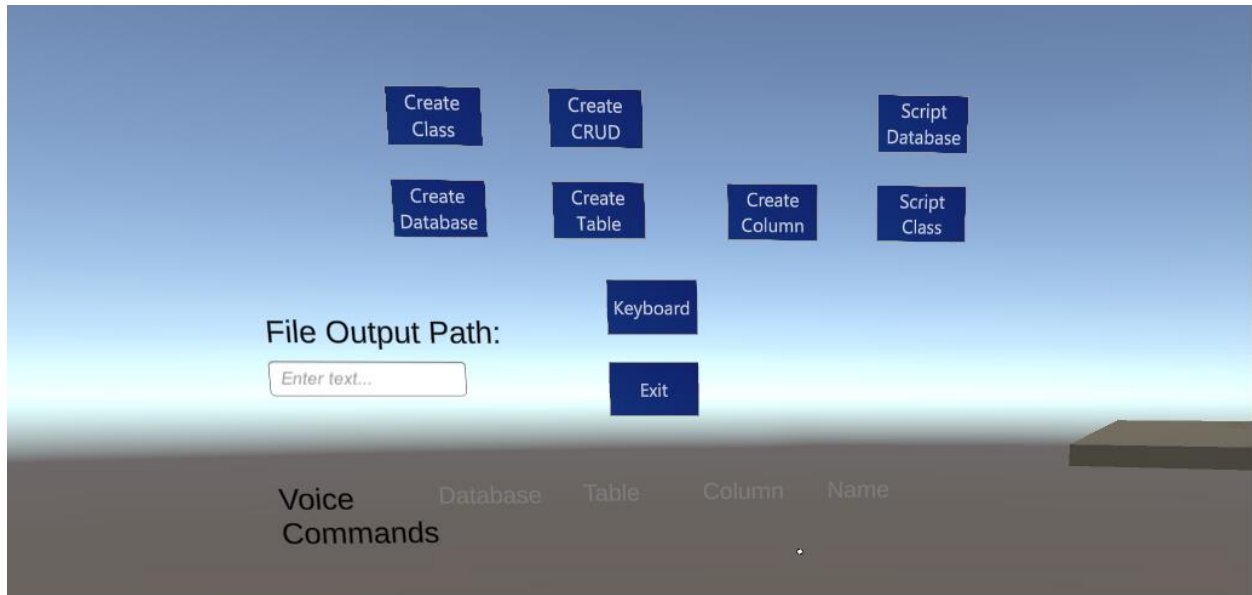
The Workspace

The workspace is the main platform that is centered in the screen when the application starts. This platform is where the holographic representations of database schemas and code constructs are created and maintained while designing and building. There are two smaller platforms built on the workspace platform which are grey and can be seen to the left & right on the main platform. These two platforms are used for shrinking and enlarging different parts of the models being built. The purpose of this feature is to allow for large designs where parts of the design can be shrunk to a small size while other parts of the design can remain enlarged while working on them to reserve space while working with the model.

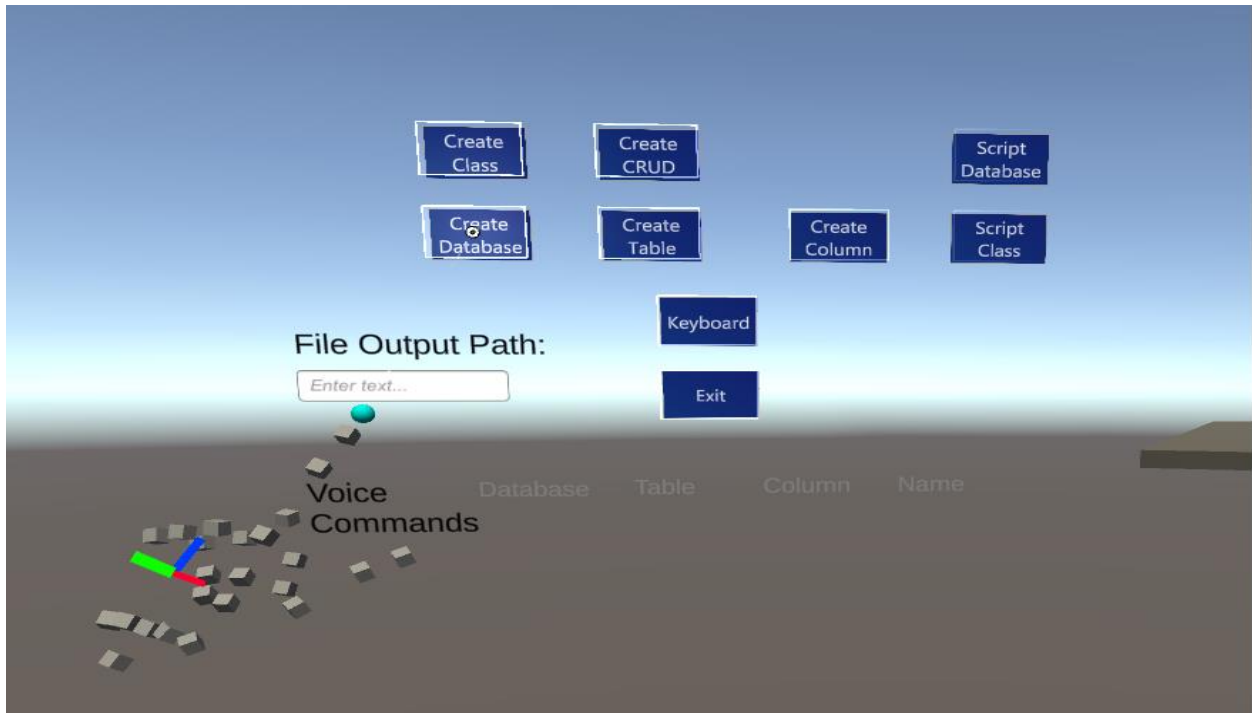The platform starts off as the color grey and will turn blue when gazed upon by the user.

- Once a design has been started, use the hand gesture pinch to drag parts of the design to the left platform to shrink the design components.
- When design components have been shrunk to the left platform drag the components from the left platform to the right platform to re-enlarge
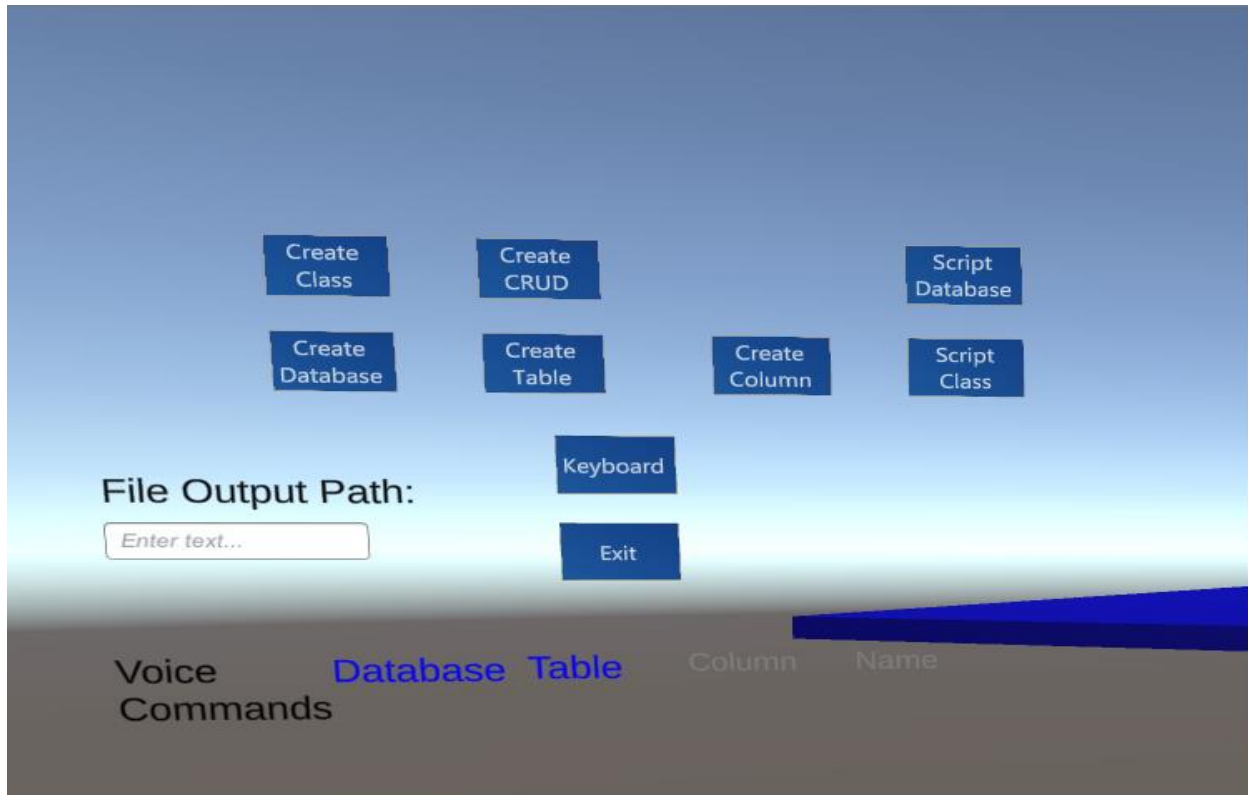
The Menu System

The menu system allows the user to use hand gestures to complete tasks. The menu system also gives the user feedback as to which Voice Commands are currently available while using the system.

The user can click on any of the blue holographic buttons to initiate a task. In the below example the user is selected "Create Database":

The user can see which voice commands are available to be used on the menu system by seeing which voice commands are enabled (colored blue) while using the software. In the below example the user is gazing at the Workspace and the voice commands "Database" and "Table" are available as they are highlighted in blue, while the voice commands "Column" and "Name" are not as they are greyed out..

Create Class: This button is used to create a new holographic representation of a class. **THIS FEATURE IS STILL UNDER DEVELOPMENT**

Create Database: This button is used to create a new holographic representation of a database.

Create Table: This button is used to create a new holographic representation of a database table.

Create Column: This button is used to create an new holographic representation of a database table column.

Script CRUD: This button allows the user to create the Create, Read, Update and Delete stored procedures based on the current database tables in the design.

Script Database: This button allows the user to create the database, table and column creation script that can be run on a Microsoft SQL Server to create the actual schema based on the design.

Script Class: This button allows the user to create the C# code files based on the Class design.

Keyboard: This button allows the user to open a holographic keyboard in order to be able to type text in various textboxes available in the system (Example: The File Output Path shown)

File Output Path: This textbox allows the user to specify the output location of the scripts and code files. The default location if this value is left blank is the directory where the app is installed.

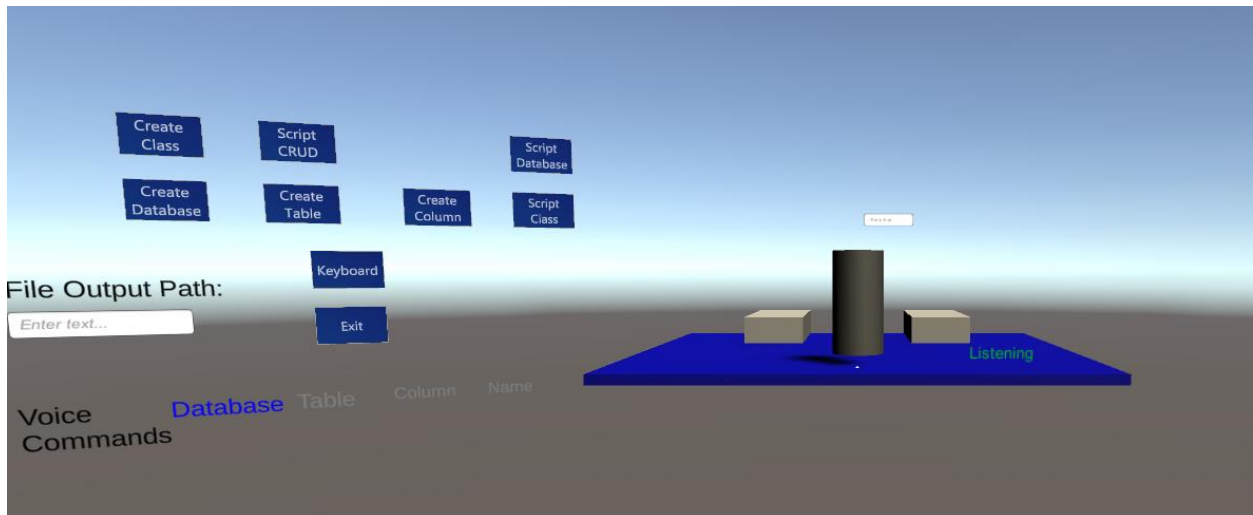**Exit:** This button allows the user to exit the application

Voice Commands: These 4 options allow the user to see which current voice commands are available to be used at various stages of the design process. The active voice commands are shown in blue and the inactive voice commands are shown in grey.

- Database: When the Database voice command is available the user can say the command "Database" and a new database holographic representation will be created.
- Table: When the Table voice command is available the user can say the command "Table" and a new table holographic representation will be created.
- Column: When the Column command is available the user can say the command "Column" and a new column holographic representation will be created for a table.
- Name: When the Name command is available the user can say the command "Name" to name various design components such as a database, table, column, class or property.

Create New Database:

The database is the main component to a database design. All tables created throughout the design need to be associated with a database and creating a database should be the first step in the design. There are two ways to create a new database:

1. While gazing at the workspace, which will turn blue and active once gazed at, the user can say the command "Database" to create a new holographic representation of a database.
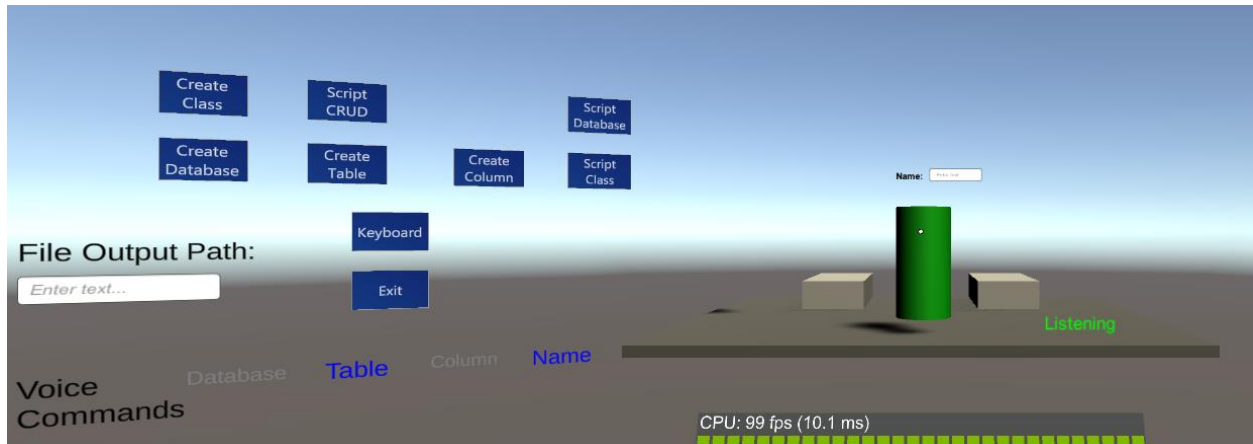2. The user can use a hand gesture to click the "Create Database" holographic button on the Menu System.

The database holographic representation then appears on the workspace.

Name the Database
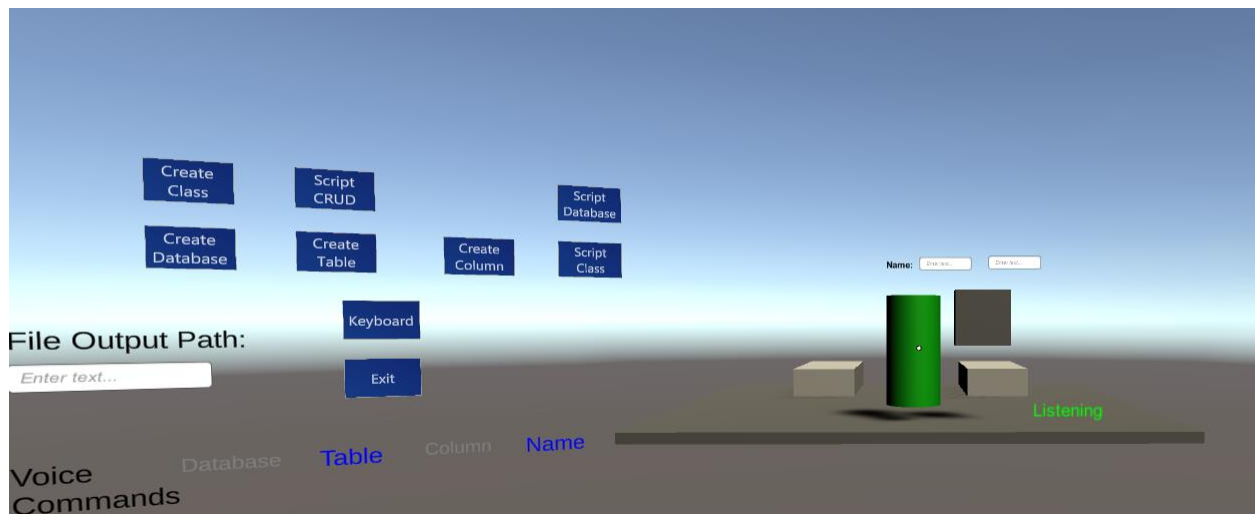
There are two ways to name a database:

1. While gazing at the database, which will turn green when gazed at, the user can issue the Voice Command "Name" followed by the name they would like to give the database
2. The use can use a hand gesture to click on the textbox next to the database to type the name of the database

Create a Database Table

The database table can be created independently of a database but will need to be associated with a database in order to be included in the Create Database script. There are two ways to create a database table:

1. While gazing at a database, which will turn green when gazed upon, issue the Voice Command "Table".
2. The user can use a hand gesture to click the "Create Table" holographic button on the Menu System.
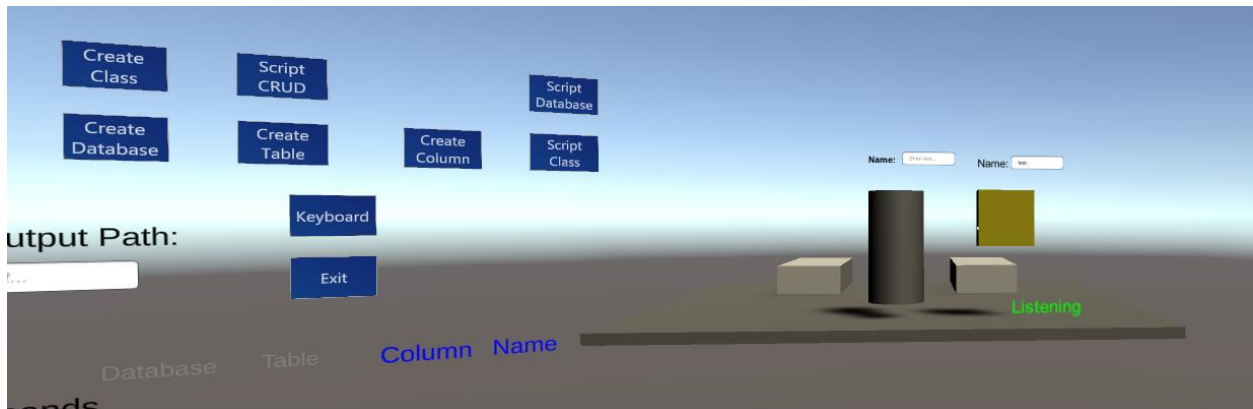

The database table holographic representation then appears on the workspace next to the database.

Name the Database Table

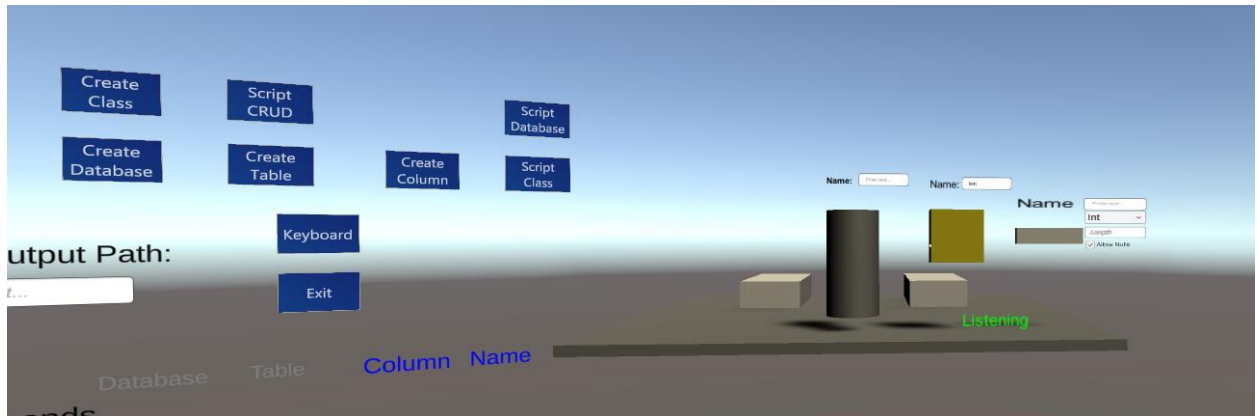There are two ways to name a database table:

1. While gazing at the database table, which will turn yellow when gazed at, the user can issue the Voice Command "Name" followed by the name they would like to give the database table.
2. The use can use a hand gesture to click on the textbox next to the database table to type the name of the database table.

Create a Table Column

One or more table columns is necessary for a design. There are two ways to create a table column:

1. While gazing at the database table, which will turn yellow when gazed upon, the user can issue the Voice Command "Column"
2. The user can use a hand gesture to click the "Create Column" holographic button on the Menu System.

The column holographic representation then appears next to the database table.

Naming the Column and assigning properties

There are two ways to name a table column:

1. While gazing at the table column, which will turn green when gazed upon, the user can issue the Voice Command "Name" followed by the name they would like to give the table column.
2. The use can use a hand gesture to click on the textbox next to the database table to type the name of the database table.

Properties

The user can give the table 3 property settings:

Data Type: The user can use the hand gesture to select the appropriate data type in the dropdown.
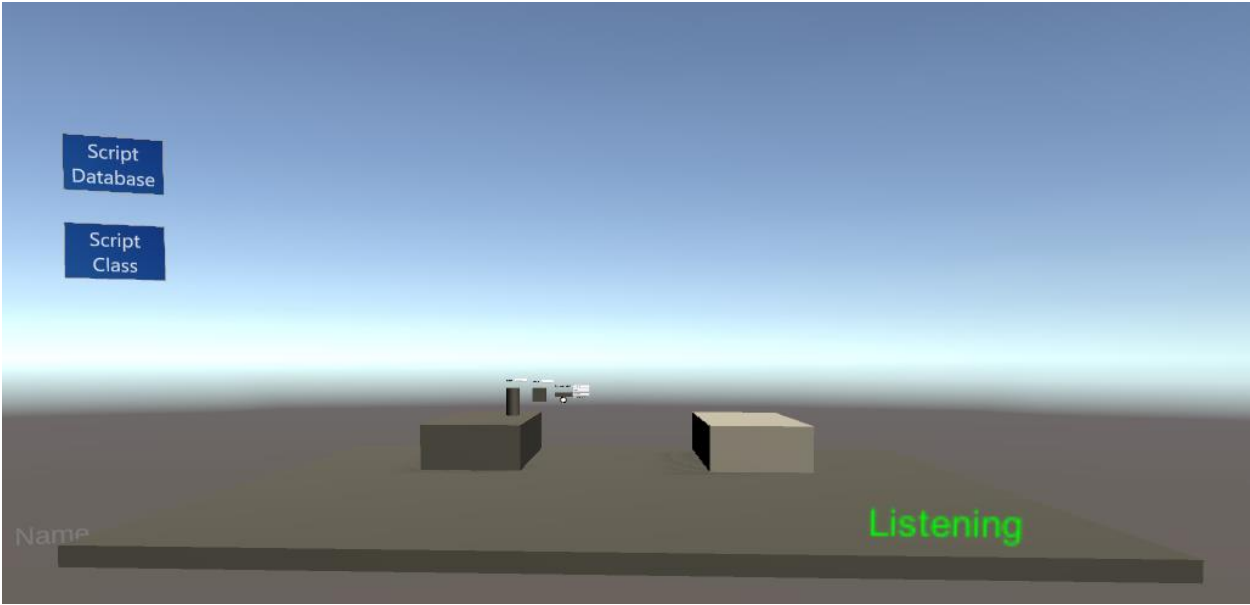
Length: The user can assign a length to the column by clicking on the length textbox and using the keyboard to enter a length.

Allow Null: The user can use a hand gesture to select/de-select the Allow Null checkbox
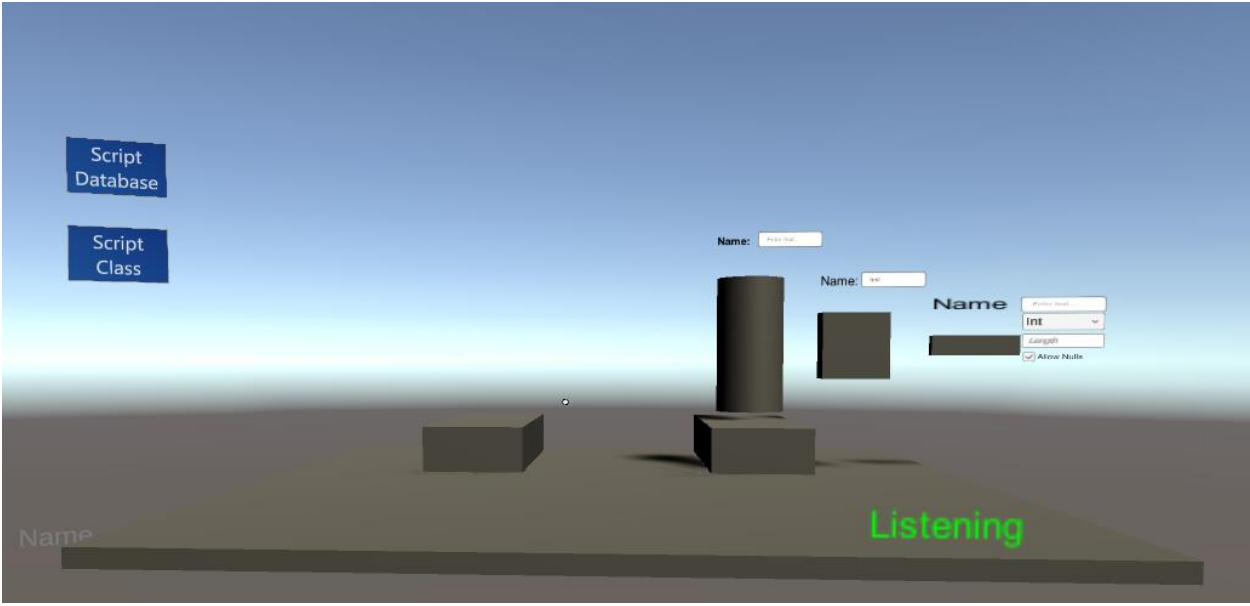
Resizing the database design

As the database design grows the user may have the need to resize portions of the design as the workspace fills up. The user can accomplish this by using the pinch hand gesture to grab any part of the design they would like to shrink and dragging onto the left platform.
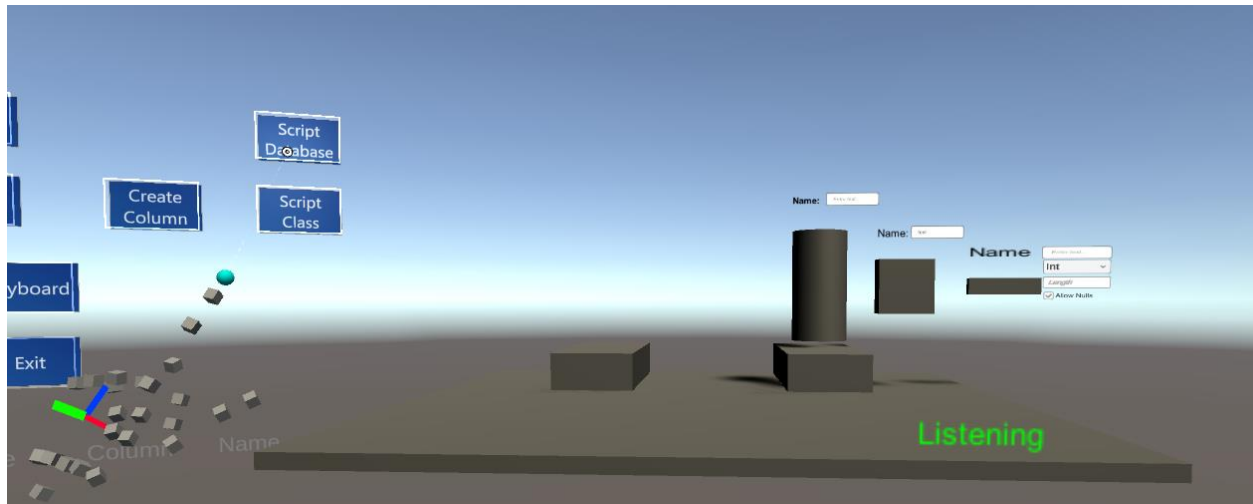

When the user wants to re-enlarge the design this can be accomplished by using the pinch hand gesture to grab any part of the design and dragging onto the right platform.

Scripting the design

Once the design stage is completed a script can then be created that can be run on a Microsoft SQL Server. To accomplish this the user can click on the Script Database holographic button on the Menu System.

If you have any questions or need help please contact us at **support@3dhologroup.com**