

Working with Quotation Apprentice Knowledge Packs

To customize Quotation Apprentice to produce designs or quotes for a business, a “knowledge pack” must first be created or loaded. A knowledge pack is a set of files that are used by the Quotation Apprentice to define products and services and how they relate to one another. Typically these files are:


- 1) A Microsoft Access database
- 2) One or more Visio Stencils, one for each product type.
- 3) A Visio Template, to define the background for the design drawing.

Apprentice Systems provides the Landscaping Knowledge Pack as part of the Quotation Apprentice download package. To get started, a knowledge pack must either be installed (if you have obtained from another party) or created from scratch. These options are described below.

Installing a Knowledge Pack

If a Knowledge Pack is obtained from Apprentice Systems or some other party, it will need to be installed.


- Knowledge Packs obtained from Apprentice Systems typically will come in the form of a .exe self-extracting install file. Running this file will take all of the Knowledge Pack files and place them into my documents\quotation apprentice\knowledge directory. Please make sure that there is not already a Knowledge Pack with the same name existing on the target machine as it might be overwritten by the new install. Once the install is complete and the files are copied the knowledge pack is ready to use.
- If receiving a Knowledge Pack from some other party, it may simply be a folder of files (or a zipped folder). If the files are zipped, please extract them to a folder. Once the files are extracted, simply copy the folder to your \my documents\quotation apprentice\knowledge directory. Once this is done, the Knowledge Pack is ready to use.


 For more information about working with knowledge packs see [Knowledge Pack Menu](#).

Create A New Knowledge Pack

This command on the Knowledge Pack menu creates a new, blank knowledge pack containing a Microsoft Access database with all of the tables in the appropriate format, but with no data records. No stencils or templates are included in this blank knowledge pack and must be added.

Once the new Knowledge Pack is created, start Quotation Apprentice use the Edit command from the Knowledge Pack menu to add records to the .mdb file. You will also need to add stencils and a template (if desired) to the new knowledge pack.

 For more information about the setting up the Access database see [Setting Up the Database](#).

 For more information about working with knowledge packs see [Knowledge Pack Menu](#).

 For information on install a Knowledge Pack see [Installing a Knowledge Pack](#).

Working with Knowledge Packs – The Knowledge Pack Menu

This menu provides commands to create and edit Quotation Apprentice Knowledge Packs. A Knowledge Pack is a folder of files that define a quotation application to Quotation Apprentice. A Knowledge pack named "Landscaping" is included with Quotation Apprentice. The knowledge pack can contain three types of files:

- A Microsoft Access database with specific pre-defined tables. Records are added to the table to define additional products and services. The Columns of the tables cannot be changed or Quotation Apprentice may not work correctly. For more information about these tables see [Setting up the Database](#).
- Visio Stencils. Any Visio stencil placed into the knowledge pack folder will be included in the Stencils window when Quotation Apprentice opens the knowledge pack. Data in the Microsoft Access database defines which parts/products are associated with the shape.
- Visio Template. This template defines the look, scale and size of the pages in the Design Drawing. If no template is included, a default template is used. If multiple templates are included, the first one encountered will be used.

The Knowledge Pack Menu contains the following commands:

- [New](#) (Creates new, blank knowledge pack)


- [Edit](#) (modifies existing knowledge pack)
- [Copy](#) (Copies existing knowledge pack to new knowledge pack)


 For information on install a Knowledge Pack see [Installing a Knowledge Pack](#).

Create A New Knowledge Pack

Creates a new, blank knowledge pack containing a Microsoft Access database with all of the tables in the appropriate format, but with no data records. No stencils or templates are included in this blank knowledge pack and must be added.

Once the new Knowledge Pack is created, start Quotation Apprentice use the Edit command from the Knowledge Pack menu to add records to the .mdb file. You will also need to add stencils and a template (if desired) to the new knowledge pack.

 For more information about the setting up the Access database see [Setting Up the Database](#).


 For more information about working with knowledge packs see [Knowledge Pack Menu](#).


 For information on install a Knowledge Pack see [Installing a Knowledge Pack](#).

Editing a Knowledge Pack

Opens the Microsoft Access Database from the knowledge pack for editing. There are two main functions used to modify a Knowledge Pack.

- Editing the Microsoft Access Database (as in this function). This command opens the database for editing in Microsoft Access. See Setting up the Database for more info about editing this file.
- Adding Stencils or Templates. This should be done using the Windows explorer window to copy and paste the appropriate files into the Knowledge Pack folder. The knowledge Pack folder is in the my documents directory under \Quotation Apprentice\Knowledge.

 For more information about the setting up the Access database see [Setting Up the Database](#).


 For more information about working with knowledge packs see Knowledge Pack Menu.

 For information on install a Knowledge Pack see Installing a Knowledge Pack.

Setting up the Database

Once a Quotation Apprentice Knowledge Pack has been loaded, it may need to be edited to tailor it to your business. To do this you will need to choose "Edit" from the Knowledge Pack menu and then choose the appropriate Knowledge Pack to open and edit. this process will open the database using Microsoft Access table editors. You may also open it directly in Microsoft Access. The databases are found in the knowledge pack directory under \my documents\quotation apprentice\knowledge. Navigate to and open this database using Microsoft Access. There are three tables in the database that can be modified.

- **Context:** contains basic settings such as Labor Rate, Tax Rates, Labor Cost and Measurement Units. See Setting up the Context Table.
- **Items:** contains records representing products and services that will be displayed when a shape is dropped from one of the stencils. See Setting up the Items Table.
- **Relationships:** defines "Related Items" for each shape in the stencils (if desired). See Setting up the Relationships Table.

 For more information about working with knowledge packs see Knowledge Pack Menu.

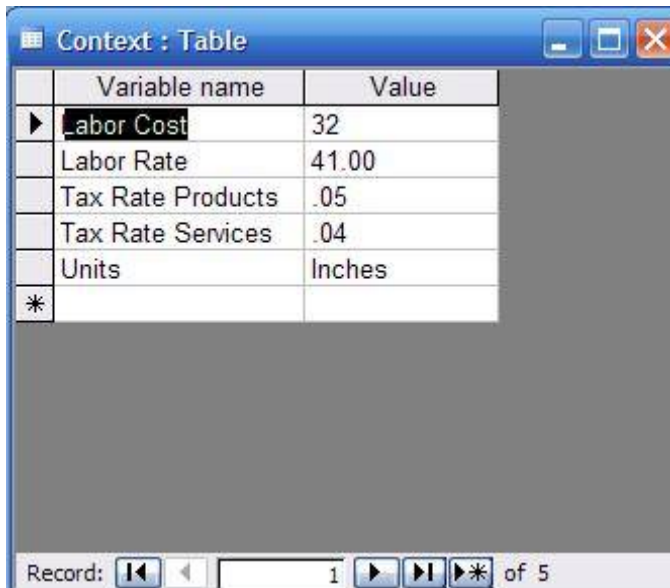
 For information on install a Knowledge Pack see Installing a Knowledge Pack.

Setting up the Context Table

This table contains basic global settings for the designs. These settings may be overridden on any individual job, however values entered into this table will be the defaults for all jobs. To update this table, open it in Access. Each record in the table represents a setting that is displayed in the context dialog box. There are two columns in the table, 'variable name' and 'value' (see Table Example below). It is very important that you do not change the variable name column.

To update the values, simply enter the desired value in the 'value' column next to the variable name of the setting you want to change. When you have completed your updates, close the table.

Table Example:



	Variable name	Value
▶	Labor Cost	32
	Labor Rate	41.00
	Tax Rate Products	.05
	Tax Rate Services	.04
	Units	Inches
*		

Record: 1 of 5

Labor Cost - The amount you pay per hour for labor. This is used for calculating job profit. (example: 10.50)

Labor Rate - The amount you charge per hour for labor. (example: 19.50)

Tax Rate Products- The tax rate you charge for products sold, this rate is added to the job products total. (example, for 5% enter: .05)

Tax Rate Services- The tax rate you charge for labor sold, this rate is added to the job labor total. (example, for 5% enter: .05)

Units - Inches or Feet. This sets the default measurement units for both the Design Drawing and for ShapeWidth and ShapeHeight fields in the item table. If "Inches" is selected, enter the ShapeWidth and ShapeHeight in inches and if "Feet" is selected, enter the ShapeWidth and Shape Height in Feet.

For more information about setting up the database see [Setting up the Database.](#)

For more information about working with knowledge packs see [Knowledge Pack Menu.](#)

For information on install a Knowledge Pack see [Installing a Knowledge Pack](#).

Setting Up Relationships Table

This table defines relationships for "Related Items" for shapes on the stencils. Related items will appear in the "Related Items" control on the shape's dialog box.

Type	RelatedCategories
Boulder	'Manual Labor'
Brick Patio	'Hardscape Additional Items','Accessories'
Brick Wall	'Hardscape Additional Items'
Broadleaf Evergreen	'Plant Additional Items'
Cactus	'Plant Additional Items'
Climber	'Plant Additional Items','Trellis'
Concrete Patio	'Hardscape Additional Items','Accessories'
Concrete Wall	'Hardscape Additional Items'
Conifer Shrub	'Plant Additional Items'
Conifer Tree	'Plant Additional Items'
Curved Brick Path	'Hardscape Additional Items'
Curved Brick Wall	'Hardscape Additional Items'
Curved Concrete Path	'Hardscape Additional Items'
Curved Concrete Wall	'Hardscape Additional Items'
Curved Stone Path	'Hardscape Additional Items'
Curved Stone Wall	'Hardscape Additional Items'
Curvy Brick Path	'Hardscape Additional Items'
Curvy Brick Wall	'Hardscape Additional Items'
Curvy Concrete Path	'Hardscape Additional Items'
Curvy Concrete Wall	'Hardscape Additional Items'
Curvy Stone Path	'Hardscape Additional Items'

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It is important to fill in all of the fields in the table. Below is a description of each field.

Category - the name of the shape (or type) to which the item is associated.
(Example: Brick Wall)

Related Categories - Defines the Categories (or Types) that will appear under "Related Items" for the Type given. If a Type is given, all individual items for that type will be shown in the "Related Items" list. The format of this field is very important, each choice must be enclosed in single quotes (for example:

'Flowering Perennial') and each choice must be separated by a comma (for example: 'Accessories', 'Bed Labor'). Please note the format of the preloaded examples.

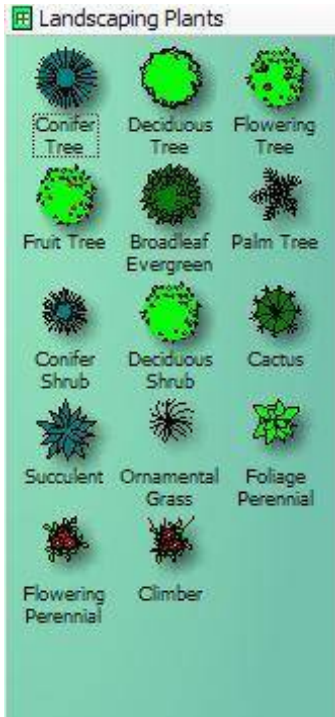
☒ For more information about setting up the database see [Setting up the Database](#).

☒ For more information about working with knowledge packs see [Knowledge Pack Menu](#).

☒ For information on install a Knowledge Pack see [Installing a Knowledge Pack](#).

Setting Up the Items Table

This table contains the choices for all shapes on the Stencils included in the Knowledge Pack. Any shape included in the Knowledge Pack without a corresponding entry in the items table will NOT be added to the Bill of Materials and is treated simply as Annotation. When a shape is dropped from one of these stencils, a list of items matching the shape type (Conifer Tree for example) is shown in the dialog box for the user to choose from. (for example in Landscaping Knowledge Pack, dropping "Conifer Tree" gives a list containing Cedar, Cypress, Fir, Hemlock, etc.). These choices are to be entered into the Items table. A Knowledge Pack will come preloaded with some choices which can be used or modified to suit individual needs. The key to matching a data entry to a shape is the "Type" field in the table. The Type field should match the name of the shape, which is shown in the text below the shape on the stencil. (see example below). Types would be Conifer Tree, Deciduous Tree, Flowering Tree, etc.



So for each shape on the stencil there should be at least one entry in the Materials table with a Type field that matches the shape name. It is important to also fill in the remaining fields in the table. (see instructions below). In the table below is an example showing Items table entries defining Items for each type. For example six types of Cactus (Barrel, Cholla, Saguaro, Bishop's Cap, Prickly Pear and Hedgehog) that will be displayed when a "Cactus" shape is dropped. The remaining items displayed define items for other Type entries.

Items : Table								
ID	ItemCode	ItemName	Description	Type	FixedProductPrice	FixedServicePrice	MaterialRate	L
1	10001	Azalea	Azalea	Broadleaf Evergreen	\$60.00	\$0.00	\$0.00	
2	10002	Cotoneaster	Cotoneaster	Broadleaf Evergreen	\$60.00	\$0.00	\$0.00	
3	10003	Euonymus	Euonymus	Broadleaf Evergreen	\$60.00	\$0.00	\$0.00	
4	10004	Jasmine	Jasmine	Broadleaf Evergreen	\$60.00	\$0.00	\$0.00	
5	10005	Laurel	Laurel	Broadleaf Evergreen	\$80.00	\$0.00	\$0.00	
6	10006	Rhododendron	Rhododendron	Broadleaf Evergreen	\$80.00	\$0.00	\$0.00	
7	10008	Broadleaf Evergreen	Broadleaf Evergreen	Broadleaf Evergreen	\$70.00	\$0.00	\$0.00	
8	10009	Barrel	Barrel	Cactus	\$100.00	\$0.00	\$0.00	
9	10010	Cholla	Cholla	Cactus	\$100.00	\$0.00	\$0.00	
10	10011	Saguaro	Saguaro	Cactus	\$500.00	\$0.00	\$0.00	
11	10012	Mammillaria	Mammillaria	Cactus	\$50.00	\$0.00	\$0.00	
12	10013	Bishop's Cap	Bishop's Cap	Cactus	\$50.00	\$0.00	\$0.00	
13	10014	Prickly Pear	Prickly Pear	Cactus	\$150.00	\$0.00	\$0.00	
14	10157	Hedgehog	Hedgehog	Cactus	\$30.00	\$0.00	\$0.00	
15	10015	Bougainvillea	Bougainvillea	Climber	\$35.00	\$0.00	\$0.00	
16	10016	Clematis	Clematis	Climber	\$35.00	\$0.00	\$0.00	
17	10017	Honeysuckle	Honeysuckle	Climber	\$40.00	\$0.00	\$0.00	
18	10018	Ivy	Ivy	Climber	\$10.00	\$0.00	\$0.00	
19	10019	Passion Flower	Passion Flower	Climber	\$30.00	\$0.00	\$0.00	
20	10020	Wisteria	Wisteria	Climber	\$40.00	\$0.00	\$0.00	
21	10021	Climber	Climber	Climber	\$40.00	\$0.00	\$0.00	
22	10022	Cedar	Cedar	Conifer Tree	\$200.00	\$0.00	\$0.00	
23	10023	Conifer Tree	Conifer Tree	Conifer Tree	\$200.00	\$0.00	\$0.00	
24	10024	Cypress	Cypress	Conifer Tree	\$200.00	\$0.00	\$0.00	
25	10025	Fir	Fir	Conifer Tree	\$200.00	\$0.00	\$0.00	
26	10026	Hemlock	Hemlock	Conifer Tree	\$200.00	\$0.00	\$0.00	
27	10027	Holly	Holly	Conifer Tree	\$200.00	\$0.00	\$0.00	
28	10028	Juniper	Juniper	Conifer Tree	\$200.00	\$0.00	\$0.00	
29	10029	Pine	Pine	Conifer Tree	\$200.00	\$0.00	\$0.00	
30	10030	Spruce	Spruce	Conifer Tree	\$200.00	\$0.00	\$0.00	
31	10031	Barberry	Barberry	Deciduous Shrub	\$50.00	\$0.00	\$0.00	

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Below is a description of all table fields and instructions for entering or editing values:

ID - A sequence number for each item. Must be numeric and should be unique.

Item Code - A number representing the item. This must be unique (i.e. no other item can have the same number).

Item Name - The name of the item, shown in reports. (example: Elm Tree)

Description - The description of the item, shown in reports. (example: Medium sized Elm Tree)

Type - The name of the shape to which the item is associated. This field is very important for matching the data records in the item table with the Visio shape being dropped. The Type field should match the name of the shape, which is shown in the text below the shape on the stencil. See example and discussion above.

Fixed Product Price- The fixed portion of the product price for each unit of an item. For a Unit ApprenticeType item (such as a Tree), this is just the price per unit, for example \$75.95. For other ApprenticeType values, this would be the fixed portion of the price. In a case where the price is say \$10 plus \$1 per square foot. The \$10 is entered into this field. the \$1 (per square foot) is entered into the Material Rate field. This portion of the price is (eventually) multiplied times the Quantity and the Tax Rate Products value.

Fixed Service Price- The fixed portion of the service price for each unit of an item. If a service is priced as a fixed amount (for example \$50 to mow a lawn), the \$50 would be entered into this field. If the service is priced as a fixed and variable portion (for example \$100 plus a labor rate per hour), then the \$100 portion is entered into this field and the typical # of hours is entered into the Labor hours field. This portion of the price is (eventually) multiplied times the Quantity and the Tax Rate Services value.

Material Rate- This is the variable portion of the product price. For an Area, Line or 1D Area ApprenticeType this is the amount per "size" of the shape. An Area or 1D Area ApprenticeType will be entered in amount per square foot or square inch, depending on the value entered for Units in the Context table. A Line ApprenticeType will be entered in the amount per foot or inch (depending on the Units value in the Context table). For example, if the price of a piece of pipe is \$1 per foot, enter \$1 in this field. This value will eventually be multiplied by the "size" of the and quantity of the item and the Tax Rate Services value.

Labor Hours - the number of hours of labor per unit of quantity for installation of the item. For example, if the item takes 2 hours of labor to perform (such as Plant Tree), then 2.0 should be entered in this field. In addition Area, Line or 1D Area ApprenticeTypes, this value will be multiplied by the size of the shape (in feet, inches, sq.ft., or sq.in). For these types the value is Labor Hours per size per quantity. For example, if the hours required for an item is .25 for each foot, then enter the .25 into this field. This value will eventually be multiplied by the labor rate of the and quantity of the item and the Tax Rate Services value.

Fixed Cost - This is the fixed portion of the product cost and is used for calculating item and job profitability. For a Unit ApprenticeType item (such as a Tree), this is just the cost per unit, for example \$40.00. For other ApprenticeType values, this would be the fixed portion of the cost. In a case where the cost is say \$5 plus \$.50 per square foot. The \$5 is entered into this field. the \$.50 (per square foot) is entered into the Material Cost Rate field. This portion of the cost is (eventually) multiplied times the Quantity of the item.

Material Cost Rate - This is the variable portion of the product cost and is used for calculating item and job profitability. For an Area, Line or 1D Area ApprenticeType this is the amount per "size" of the shape. An Area or 1D Area ApprenticeType will be entered in amount per square foot or square inch, depending on the value entered for Units in the Context table. A Line ApprenticeType will be entered in the amount per foot or inch (depending on the Units value in the Context table). For example, if the cost of a piece of pipe is \$.50 per foot, enter \$.50 in this field. This value will eventually be multiplied by the "size" of the and quantity of the item.


Status - Active or Obsolete. If the item is marked as Obsolete, it will be flagged with a warning in the dialog box. If you discontinue an item, rather than deleting it from the table, mark it obsolete. If an older design is opened that contain obsolete parts, they will be flagged but will still calculate prices and totals correctly. If the item is deleted, the total for the design can not properly calculate price or show the report.


ApprenticeType - This field is used to define the behaviors of the shape when dropped. There are four values accepted by Quotation Apprentice (Unit, Area, Line, 1D Area). If any value other than these are used for an item, it will be treated as Annotation and not associated with the Bill of Materials. A discussion of each type and when to use it is given below:

- **Unit** - Use this ApprenticeType when the shape represents a discrete object, with no length or Area measurements required.
- **Area** - Use this ApprenticeType when the item requires measurement of the area of the shape. Apprentice will automatically calculate the area (in units determined by the options in the context table, usually sq.ft or sq.meters). The area is multiplied by the Material Rate, Labor Hours and Material Cost Rate to calculate price.
- **Line** - Use this ApprenticeType when the item requires measurement of the length of the shape. Apprentice will automatically calculate the length (in units determined by the options in the context table, usually feet or meters). The length is multiplied by the Material Rate, Labor Hours and Material Cost Rate to calculate price.
- **1D Area** - This type is an advanced type. Use this ApprenticeType when the item requires measurement of the area of the shape, but the Visio shape is built using a line, but with a pattern that can be of varying width. Apprentice will automatically calculate the area (in units determined by the options in the context table, usually sq.ft or sq.meters). The area is multiplied by the Material Rate, Labor Hours and Material Cost Rate to calculate price..

Shape Width -The width (horizontal size on the screen) of the shape on the scaled page in Units that are indicated in the Units field of the Context table. If the Units field of the Context table is Inches, then enter this value in Inches. If it is Feet, then enter this value in Feet.

Shape Height - The height (vertical size on the screen) of the shape on the scaled page in Units that are indicated in the Units field of the Context table. If the Units field of the Context table is Inches, then enter this value in Inches. If it is Feet, then enter this value in Feet.

 For more information about setting up the database see [Setting up the Database](#).

 For more information about working with knowledge packs see [Knowledge Pack Menu](#).

 For information on install a Knowledge Pack see [Installing a Knowledge Pack](#).

Summary

Once the database has been fully setup and at least one Visio Stencil has been loaded into the Knowledge Pack's directory, the Knowledge Pack is ready for use. To test or use it, open Quotation Apprentice for Visio and navigate to the Knowledge directory and then to the directory for the desired Knowledge Pack. Double Click on the .mdb file for the knowledge pack. Quotation Apprentice for Visio should now display a blank design page with the appropriate stencils. At this point, it is ready for use.

See Quotation Apprentice for Visio help for more information on using it to create designs and quotes.