

Card Maker 0.99.1.7 (beta)

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Introduction

Card Maker is an application for generating layouts of information in a graphical representation. (a wordy way of saying “it can make business cards or game cards”) Card Maker was inspired by the need to generate cards for prototyping board games quickly without a lot of overhead to make minor changes. The goal of the application is to simplify the process by which a card layout is created and decrease the amount of time required to make minor changes.

Warning

All information in this document is subject to change... of course. Card Maker should be used AT YOUR OWN RISK. The author of the application is not responsible for any damages caused by its use. (though I certainly hope nothing horrible will happen)

User Interface

Main Window

The main window has limited functionality and acts as a container for all of the other windows.

| File Menu Item | Function |
|-----------------------------|--|
| New Project | Creates a new default project. |
| Open Project... | Opens a project file. |
| Save Project... | Saves the current project to the loaded file (or prompts the user if the file does not yet exist). |
| Save Project As... | Allows the user to save the project as a different file name. |
| Print Preview Project... | Displays the standard Print Preview dialog for the project. |
| Print Project... | Displays the standard Print dialog for the project. |
| Export Project to Images... | Displays the Image Export dialog for the project. |
| Export Project to PDF... | Displays the PDF Export dialog for the project. |
| Close | Exits Card Maker |

| Edit Menu Item | Function |
|----------------|--|
| Undo | Undoes the last element or layout change. |
| Redo | Performs the last undone element or layout change. |

| View Menu Item | Function |
|----------------------------------|---|
| Draw Element Borders | Toggles the red outline drawn around each element in the Canvas window. |
| Draw Formatted Text Word Borders | Toggles an outline drawn around each word in a formatted text field. |
| Update Preview | Triggers the preview window to update. |

| Project Menu Item | Function |
|---------------------|--|
| Clear Image Cache | Clears any cached images from memory forcing them to reload from disc. (allowing changes made by external programs) |
| Update Known Issues | Displays / Updates the known issues dialog. Each problem area will be transitioned to upon clicking on an issue. Note: Your project must be saved to use this feature. |
| Refresh Layout | Refreshes the current layout (including the reference data). Shortcut: F9 |

| Tools Menu Item | Function |
|--|--|
| Project Manager | Viewer for all projects within a given directory structure. |
| Remove Layout Templates | Dialog for removing layout templates. |
| Illegal File Name Character Replacement... | Configures the characters to replace those that are invalid on export of the project. (empty by default) |
| Update Google Credentials... | Allows you to update the AccessToken used when connecting to a Google Spreadsheet reference. |
| Settings... | Configure the general settings for Card Maker. |

| Windows Menu Item | Function |
|-------------------|------------------------|
| (Window Name) | Opens the given window |

Project window

The Project window contains a tree view indicating the card layouts and their associated reference files.

Renaming a Layout

To rename a Layout left-click a layout node and don't move the mouse until the editable text field appears. (like renaming a folder in windows explorer)

Re-Order Layouts

You can drag and drop layouts in the project view to change the order in the project.

Context Menu Items (Layouts Node)

| Menu Item | Node Type | Function |
|----------------------------------|-----------|--|
| Add Card Layout... | Layouts | Adds a new layout based the parameters supplied in the dialog. |
| Add Card Layout From Template... | Layouts | Adds the selected Layout template from the dialog with the name specified. |

| Menu Item | Node Type | Function |
|--------------------|-----------|--|
| Set Name Format... | Layout(s) | <p>Adjusts the naming scheme associated with the project when exporting images.</p> <p>Special codes in the name format: @[column_name] – A value from the reference / define ## – card number #L – layout name</p> |

Context Menu Items (Layout Node)

| Menu Item | Function |
|-------------------------------------|--|
| Duplicate Layout | Duplicates the selected layout |
| Define as Template Layout... | Adds the selected layout to the list of layout templates. All aspects of the layout (including elements) are persisted except the name. |
| Remove Card Layout | Removes the selected layout |
| Print Preview Card Layout... | Displays the standard Print Preview dialog for the selected layout. |
| Print Card Layout... | Displays the standard Print dialog for the selected layout. |
| Export Card Layout as Images... | Displays the Image Export dialog for the selected layout. |
| Add Reference... | Adds a reference file (CSV) to be associated with the selected layout |
| Add Google Spreadsheet Reference... | Adds a reference to a Google Spreadsheet. Each time you open the project the AuthToken will be requested. |
| Configure Image Export... | <p>Configures numerous settings for the export of images:</p> <p>Naming scheme associated with the project or layout:</p> <p>Special codes in the name format: @[column_name] – A value from the reference ## – card number #L – layout name</p> <p>Export rotation if your images need to be rotated 90/-90 degrees.</p> <p>Export width and height for export to stitch multiple images together into one.</p> <p>Export with a transparent background instead of a white one</p> |

Context Menu Items (Reference Node)

| Menu Item | Function |
|--------------------------|---|
| Set as Default Reference | Sets the selected Reference as the default for the layout associated with it. |
| Remove Reference | Removes the selected Reference from the list associated with the parent layout. |

Layout Control window

Card Count Group

| Control | Function |
|--------------|---|
| # | Sets the default card count. This is intended for layouts that do not have a reference. Layouts with references only use this number if no items are in the associated reference (either due to a sparse reference or the use of the allowed layout functionality). |
| Card Numeric | This sets the card index for this layout. Use this to cycle through all of the cards associated with this layout. |
| Row Numeric | This sets the current row from the reference source, jumping duplicates. |

Card Layout

| Control | Function |
|-------------|---|
| Buffer | Sets the vertical and horizontal buffer between cards when printing. |
| DPI | Sets the DPI of the given layout. This only affects the exported file DPI (not printing). The layout is still rendered 1:1 on the screen. (example: if you want a 3.5" wide card at 300dpi then the width needs to be $3.5 \times 300 = 1050$) |
| Width | The width of the layout in pixels. |
| Height | The height of the layout in pixels |
| Draw Border | Draws a black border 1 pixel wide on the edges of the layout. This is primarily intended for cutting cards out after printing. |
| Elements | <p>A list of all of the elements in the layout. If an element is highlighted it is the selected item and can be affected in the Canvas and Element Control windows. The enabled value indicates whether to draw the element or not. You can toggle an elements visible by double-clicking or pressing the space bar.</p> <p>The order of the elements indicates how the items will be drawn. The bottom item is draw first and proceeds to draw the others up to the top element.</p> |
| Add | Adds a new element. |
| Dupe | Duplicates the selected element. If multiple elements are selected the same number of new element names must be specified to duplicate. |
| Remove | Removes the selected element. |
| Rename | <p>Renames the selected element.</p> <p><u>Note:</u> Duplicate names of elements are not allowed within a layout.</p> |
| Scale | Scales the selected elements by a decimal value (1.0 is no change) |

| | |
|-----------|---|
| Resize | Scales the selected elements by the specified amounts (0 is no change). Negative values indicate the shrink the elements. |
| Up / Down | Moves the element up or down in the list affecting draw order. |

The table below contains shortcuts for use in the Elements list box.

| Description | Keyboard Shortcut |
|------------------------------------|-------------------|
| Move selected element up 1 level | Shift + Up |
| Move selected element down 1 level | Shift + Down |
| Select the element 1 level up | Up |
| Select the element 1 level down | Down |

Multi-Select

You can also select 1 or more of the layout elements to move them together in the Canvas window. This will maintain their relative location to one another. Other changes, such as resizing, in the Canvas with multiple items selected will only affect the given selected element you are manipulating. If multiple items are selected all elements will be affected by changes to the Element Control, such as changing the font or border. **The multi-select functionality is experimental at this time.**

Element Control window

Element

| Control | Function |
|------------------|--|
| Type | The type of element. |
| X | The x position of the element. 0 is the far left. X increases moving right. |
| Y | The y position of the element. 0 is the far left. Y increases moving down. |
| Width | The width of the element. |
| Height | The height of the element |
| Opacity | The opacity of the element. (applies to all types) |
| Rotation | Rotation of the element around the center of the element definition position. |
| Spreadsheet Data | Above the Definition text area there is a view of the current data associated with the given card index. You can right-click in the view to add a reference (to the given column) to the Definition field. |
| Definition | The text string defining the element contents. (see Definition / Scripting Reference for more details) |

| Control | Function |
|---------|--|
| | <p>When working with a Graphic element type the “...” button may be used to browse to and select supported graphic files.</p> <p>The “+” button to the right of the Definition field will pop up a list of possible items to insert into the Definition text area. (see Definition / Scripting Reference for more details)</p> |

Font (Text Elements)

| Control | Function |
|--------------|---|
| Font | The font to render the text with. |
| Color | The color to render the text with. |
| Bold | Draws the font in bold. (may not be supported by all fonts) |
| Italic | Draws the font italicized. (may not be supported by all fonts) |
| Strikeout | Draws a line through the rendered text. (may not be supported by all fonts) |
| Underline | Draws a line under the rendered text. (may not be supported by all fonts) |
| Size | The size of the font to render. |
| Auto-Scale | Attempts to scale the font of any text that overlaps the element borders down to the desired element size. Warning: This can be CPU intensive. You should also setup your element with an optimal font size. The font size you specify in the element is the target font size maximum The more scaling performed the less accurate the output. (though your string should still appear in its entirety) Note: This can only be used with <u>Text</u> elements. |
| Line Spacing | Adjusts the spacing between text lines. Note: This can only be used with <u>FormattedText</u> elements and <u>Text</u> elements where \n is used. |
| Word Spacing | Adjusts the spacing between words (can be negative). Note: This can only be used with <u>FormattedText</u> elements. This is used to tweak the size of a space (and space markup). |
| H Alignment | The horizontal alignment of the text within the element space. |
| V Alignment | The vertical alignment of the text within the element space. |

Notes:

- The text will appear to be red until the font has been set once.
- Any strings that are too large to fit in the desired element will be drawn with ellipsis to help find issues. The ellipsis will **not** be present if Auto-Scale is used.

Graphic (Graphic Elements)

| Control | Function |
|--------------------|---|
| Lock Aspect Ratio | Locks the image aspect ratio when drawing. |
| Keep Original Size | Locks all drawing of the image to the original size. If oversized the image is cropped (based on alignment settings). The Lock Aspect Ratio option has no effect on this setting (as it will be the original image aspect ratio). |
| H Alignment | The horizontal alignment of the graphic within the element space. <i>Note: This only applies when Lock Aspect is checked.</i> |
| V Alignment | The vertical alignment of the graphic within the element space. <i>Note: This only applies when Lock Aspect is checked.</i> |
| Set Size To Image | This will set the size of the element to be that of the original image file. |

Shape (Shape Elements)

| Control | Function |
|---------|-------------------------------------|
| Color | The color to render the shape with. |

See shape information in the Definition / Scripting Reference section. There is also an assistant to help define the shape. Each time you change a property value the definition of your element will automatically change to the settings indicated.

Border

Border is an outline for the element itself (the rectangle defining the object).

| Control | Function |
|-----------|---|
| Color | The color of the element border. |
| Thickness | The thickness of the border (in pixels). If this is 0 no border is drawn. |

Outline

Outline is an outline for the drawn element itself. (text/shape outline)

| Control | Function |
|-----------|---|
| Color | The color of the outline border. |
| Thickness | The thickness of the outline (in pixels). If this is 0 no outline is drawn. |

Canvas window

The Canvas is a WYSIWYG (what you see is what you get) editor for the element shape and location. It directly effects the Element Control window values. It is highly recommended that you further tweak any location/scale values in the Element Control window for neatness sake!

The currently selected Element in the Layout Control window will be drawn with a green

border. This item can be moved and manipulated like many other standard graphics tools. I'm not going to detail out how to do this. If you're new to graphics editing you should spend some time in the Canvas manipulating an element to see how it functions.

Note: The green border on selected items will not appear if you have disabled the **Draw Element Borders** option.

You can use the right mouse button to select the element under the cursor. If more than one item is under the cursor a context menu will display a list to select from.

The table below contains shortcuts for use in the Canvas.

| Description | Keyboard Shortcut |
|--|--|
| Move selected element up 1 level | Shift + Up |
| Move selected element down 1 level | Shift + Down |
| Select the element 1 level up | Control + Up |
| Select the element 1 level down | Control + Down |
| Move selected elements up/down 1 pixel | Up / Down |
| Move selected elements left/right 1 pixel | Left / Right |
| Lock to axis | Shift (and move the mouse along the desired axis to lock to) |
| Zoom In / Out | Ctrl + +/- (+ zooms in, - zooms out) |
| Toggle Mode – switch between resize-and-move(normal) and move-only | m |

Note: Zoom may result in a slightly inaccurate representation on things that are measured programatically(this is a bug). Formatted Text elements in particular may be laid out slightly differently when zoomed in. It is recommended that you always review your work at a zoom of 1.0.

Logger window

Context Menu

| Control | Function |
|----------------------------|--|
| Copy Line to Clipboard | Copies the selected line to the clipboard. |
| Copy all text to Clipboard | Copies all of the text in the logger to the clipboard. |

Preview window

The preview window is opened by pressing F5 or accessing the View > Update Preview menu item. This dialog allows you to see a scaled version of the Canvas. You can adjust the zoom from 10% to 100% using the numeric field.

Defines window

The defines window is used to display the current applicable defines. You can use Ctrl+C to copy the selected define as a data reference item (“@[define]”). There is a right-click context menu with similar options.

CSV Reference Files

Creation

CSV reference files have 4 strict content rules:

1. The separator character must be a comma. Some editors may switch this on you!
2. The first row must contain the column names. The columns may be named with spaces but should not use the [or] characters (or anything else that might confuse the parser when trying to translate references).
3. The first column may be named anything, but the contents should always be the card count of the given row. (an empty entry assumes 1 instance of the given row)
4. Never use quotes in the strings in Excel or Calc (OpenOffice). Both applications handle this differently and it makes a mess of things. The automatic quotes around a string (if you look at your CSV file in a text editor) are necessary and should be left as is. See the escape codes in the Text Elements section.

Special Functions

| Function | Definition Details |
|-----------------------|--|
| Comment out a line. | In the first column set the card count to 0. |
| Specifying the layout | You can specify the allowed layout for a card by name. Any row without a matching layout name with the current layout will not be included in the list of cards. Name the column allowed_layout in your CSV file and specify the desired layout for every card. |

Color String Format

RGB Color Format

Colors are formatted into strings as follows:

RRRGGBBB or RRRGGBBBAAA

Each block is a 3 digit representation of the color value for the given color. (R – Red; G – Green; B – Blue; A - Alpha)

Example: 012123167

You can also specify a color using hexadecimal values:
RRGGBB or RRGGBBAA

Example: 882859

Be sure to include any leading zeroes. The type of color value you specify (hex vs. decimal) is based solely on string length: 6/8(hex)

Some editors may remove the leading zeroes. If you are specifying the color as hex you can insert **0x** at the beginning of the string (ie. 0X882859). **I highly recommend doing so.**

Color Name Format

You may also specify colors by using the names supported by the .NET framework. See: <https://msdn.microsoft.com/en-us/library/ie/aa358802%28v=vs.85%29.aspx>

Font String Format

Fonts are formatted into strings as follows:

fontname;fontsize:bold;underline;italicized;strikeout

fontname – string name of a font (“Arial”)

fontsize – size of the font (like the size in a word processor)

bold – 1 or 0 (on or off)

underline – 1 or 0 (on or off)

italicized – 1 or 0 (on or off)

strikeout – 1 or 0 (on or off)

Note: See one of your project files for an example font string (they are viewable in notepad or any other text editor). An invalid font string will be ignored and may result in crashes or other undesirable outcomes!

Element Overrides

You can override an element's settings per card in the CSV by providing a column with the following format:

override:[element name]:[element value]

Example: **override:text_field:x**

Any values specified in this column will override the **text_field** element's **x** value. When rendered the element's x location would be that of the override value. (locking the horizontal position in the example)

Any colons involved in the name of an element will cause the override to fail. **DO NOT USE COLONS IN YOUR ELEMENT NAME.**

This will completely override any changes you make in Card Maker. When rendered the override will take effect. Any empty value specified within the column is ignored.

The various field type values must be specified correctly for the program to function correctly. See the table below for formatting the content of your override column. This table also contains the recognized field names. All field names are lower case.

| Fields | Override string format |
|--|--|
| x y width height borderthickness opacity outlinethickness lineheight wordspace (+/-) | (int) Integer number values. |
| autoscalefont enabled lockaspect | (bool) Boolean values: true or false (case should not matter) |
| rotation | (float) In the case of rotation use only integer number values. |
| bordercolor elementcolor outlinecolor | (string) (See the section Color String Format) |
| font | (string) (See the section Font String Format) |
| verticalalign | (int) Numeric value indicating the vertical alignment: 1 – Near 2 – Center 3 – Far |
| horizontalalign | (int) Numeric value indicating the horizontal alignment: 1 – Near 2 – Center 3 – Far |
| variable | (string) The Definition field. |

| Fields | Override string format |
|--------|--|
| type | (string) One of the following strings: Text Shape Graphic FormattedText |

Define File

In addition to a CSV reference file you can have a set of defines associated with each reference. This is for the definition of values so you do not have to repeat them in the main reference file. Sample of a define file shown below:

| Define | Value |
|-------------|---|
| coin | Awesome Token |
| roll_hint | You must roll 1D6 to determine the outcome. |
| game_title | Space Adventure 2048 |
| nested_coin | (@[coin]) |

Notes:

- Each define name follows the same rules as a column name in a reference file.
- The first row is ignored. The column names are there only for reference. The first column in all rows after the first contains the define name and the second column contains the value.

The define file should be named the same as the main reference file with **_defines** appended to the name and should reside in the same folder as the reference file. Example:

- Reference file: **items.csv**
- Define file: **items_defines.csv**
- Project Wide Defines: [project file name without extension]**_defines.csv**

Google References / Defines

References stored as Google spreadsheets follow the same general pattern as local CSV References. The one exception is that the **defines** functionality operates based on a sheet in the same spreadsheet with **_defines** appended to the name. Sample:

- Main sheet: **items**
- Defines sheet: **items_defines**
- Project Wide Defines
SpreadSheet Name: [project file name without the extension] (this is case sensitive!)

Sheet Name: **defines**

Google Authentication Setup

Configuring Google connectivity is reasonably easy. It used to be as trivial as entering you Google credentials but Google has disabled that style of authentication in favor of OAUTH2. See the instructions below for enabling access to your Google spreadsheets.

1. Launch CardMaker and select **Tools > Update Google Credentials...**
2. Either copy the Auth URL and browse to it in your preferred browser or click **Browse To URL**
3. Google should prompt you to allow CardMaker to access your spreadsheets and then navigate to the CardMaker site with the AccessToken field already selected.
4. Copy the **AccessToken** value and return to CardMaker.
5. You can manually paste the **AccessToken** value into the **Access Token** field or press the **Paste Token** button. If you use the **Paste Token** button the dialog will close immediately (slight time savings!).
6. Now when you add a Google Reference you should be able to access your Spreadsheets. You will need to setup the Access Token each time you run CardMaker. No credentials data is persisted to any files and the Access Token has an expiration anyway.

Definition / Scripting Reference

The information below is intended for use in the Definition field of the Element Control or in the CSV Reference (or define) file itself.

#empty – This can be used in place of an empty string. Example:

#if(x == then a)#

is the same as

#if(x == #empty then a)#

All Elements

| Function | Definition Details |
|--------------------------------|---|
| Referencing a Data Source item | @[columnname] Replace columnname with the desired column name or define from the referenced data source. |

| Function | Definition Details |
|--|---|
| Referencing a Data Source item with parameters | <p>@[columnname,parameter1,parameter2,(repeats...)]</p> <p>Replace columnname with the desired column name or define from the referenced data source.</p> <p>Replace parameter1 (etc.) with the desired input for the define. When constructing the resulting value any instances of {#} will be replaced with the given parameter. Be aware that spaces after/before the commas will be included in the parameter strings.</p> <p>Example:</p> <p>Defines smallImgTag = <img={1};.90;0;3> theCoin = \images\coin.png</p> <p>Input @[smallImgTag,@[theCoin]]</p> <p>Output <img=\images\coin.png;.90;0;3></p> |
| Counter | <p>##x;y;z#</p> <p>This will display a number based on the following properties:</p> <p>x + (current card index * y) with left padded 0's numbering z</p> <p>Example (on card index 5) with ##1;1;5# would be 00005</p> |
| Sub Counter | <p>#sc;x;y;z#</p> <p>The sub card index is the index of the card based on the number of items indicated in the count column of the reference file.</p> <p>This will display a number based on the following properties:</p> <p>x + (sub card index * y) with left padded 0's numbering z</p> <p>Example (on sub card index 5) with #sc;1;1;5# would be 00005</p> |

| Function | Definition Details |
|------------------------|---|
| If Statement | <p>Samples:</p> <pre>#(if x == y then a)# #(if x != y then a)# #(if x == y then a else b)# #(if x != y then a else b)#</pre> <p> == - x is equal to y (case insensitive) != - x is not equal to y (case insensitive) > - x is greater than y < - x is less than y >= - x is greater than or equal to <= - x is less than or equal to </p> <p>x,y,a,b – string values</p> <p>#nodraw is supported as a result to trigger the element to not be drawn at all.</p> <p>You can specify an empty string by simply entering nothing.</p> <p>An example of an empty comparison is as follows:</p> <pre>#if(x == then a)#</pre> |
| If Statement (grouped) | <p>You can use the if statement with groups. The x and y values listed above can be formatted as:</p> <pre>[val1;val2;val3]</pre> <p>Allowing multiple items to be compared to multiple other items. The x set of strings is sought in the y set. The comparison is successful if all of the items in x exist in y. (the y set is not checked for existing in x)</p> <p>NOTE: This does not apply to numeric comparisons. Only == and != are supported.</p> <p>TBD – keep this functionality?</p> |

| Function | Definition Details |
|------------------------|--|
| Switch Statement | <p>#(switch;key;keytocheck1;value1<repeat>)#</p> <p>key – The value to check the others for. keytocheck1 – A comparison string value1 – A value string (this will be the overall result if key matches keytocheck1)</p> <p>;keytocheck1;value1 can be repeated multiple times with varying strings. There should always be a key and a value. (an empty string is valid)</p> <p>If the keytocheck is #default the value will be the default if no other keys match. (example: #(switch;15;10;Y;#default;Z)# – would default to Z because “15” is not the same string as “10”)</p> <p>#nodraw is supported as a result to trigger the element to not be drawn at all.</p> |
| Greater than character | &gt; ; This is critical for anyone needing to use the > character in a value used by an if statement. |
| Less than character | &lt; ; This is critical for anyone needing to use the < character in a value used by an if statement. |

Graphic Elements

| Function | Definition Details |
|----------------------|--|
| Referencing an Image | <p>The path to the file should be specified. The path may also be relative to the project file.</p> <p>Supported Image Types: BMP, GIF, EXIF, JPG, PNG, TIFF, and PSD. PSD file support is rudimentary. 8 bit per channel PSD images should be functional. (RGBA)</p> <p>Relative path example: images\file.bmp would be valid if the project file were stored in the folder where the folder images existed</p> |
| Draw no image | <p>#nodraw is supported like other elements. none may also be specified to indicate to draw no image (note that this is different than no draw as the other components of the element will be rendered (example: border).</p> <p>Note: Any invalid file path / name will also not draw.</p> |

Text Elements

| Function | Definition Details |
|-----------------|--|
| New Line | <code>\n</code> – Will be replaced with a new line |
| Quote Character | <code>\q</code> – Will be replaced with a “ (necessary for CSV file annoyances such as OpenOffice and Excel handling of strings with commas in them) |
| Comma | <code>\c</code> – Will be replaced with a comma |

Formatted Text Elements

These elements support HTML like tags for mid-line formatting. Some fonts do not display the same between styles. They will appear to be vertically offset by some number of pixels. I recommend finding a font that does not have this issue (as there may be little I can do to resolve the issue on a per font basis).

Using the outline functionality with Formatted Text is not recommended. There are numerous draw issues that may come up. Be very careful to check the results before assuming everything is working correctly if you use outlined Formatted Text. Generally in the documentation below just about anything you specify in the definition field (even words and spaces) translate internally to a markup (a component to determine how to render).

| Function | Requires Closing Tag | Definition Details |
|------------------|----------------------|---|
| Bold | Y | <code></code> – Will change the text within to bold |
| Italic | Y | <code><i></code> – Will change the text within to italicized |
| Strikeout | Y | <code><s></code> – Will change the text within to be drawn struck out |
| Underline | Y | <code><u></code> – Will change the text within to be underlined |
| New Line | N | <code> </code> – Will be replaced with a new line |
| Space | N | <code><spc=#></code> - Number of spaces to add. May also be used without specifying the number to indicate a single space: <code><spc></code> The width of this markup is <code>numberOfSpaces * (fontWidthSize + WordSpacing)</code> . |
| Push | N | <code><push=#;#></code> - (x;y) The amount to push the current x/y values. <code><push=#></code> - (x) The amount to push the current x value. This provides direct control over the position of the next markup (including text/spaces). |
| Background Color | Y | <code><bgc=#####></code> - Will create a background color within the tag. (See the section Color String Format) |

| Function | Requires Closing Tag | Definition Details |
|------------------|----------------------|---|
| Background Image | N | <p><bgi=[filename]></p> <p>OR <bgi=[filename];[#];[#];[#];[#]> - Will create a background image behind each given word in the tag. The first option will draw the image at full size in the upper left hand corner of the given word. The second option has the following fields:</p> <ol style="list-style-type: none"> 1. x offset 2. y offset 3. width 4. height |
| Image | N | <p><img=[filename]> OR <img=[filename];[percent]> OR <img=[filename];[xoffset];[yoffset]> OR <img=[filename];[percent];[xoffset];[yoffset]> OR <img=[filename];[xoffset];[yoffset];[width];[height]></p> <ul style="list-style-type: none"> • percent – percentage of the line space the image height should be (aspect ratio is maintained) – value from 0.00 to 1.00 would be smaller than the line. 1.00 represents 100%. • xoffset – The x draw offset • yoffset – The y draw offset • width – The width to draw • height – The height to draw <p>This will render an image and consume horizontal space like text does. If an image is too wide it will be shrunk horizontally to fit.</p> |
| Font Size | Y | <fs=#> - Will change the size of the font for the words within the tag. |
| Font Color | Y | <fc=#####> - Will change the font color within the tag. (See the section Color String Format) |
| Font | Y | <f=fontname;fontsize:bold;underline;italicized;strikeout> (See the section Font String Format) |
| Y Draw Offset | Y | <yo=#> - Will affect the Y offset of the markups when drawing. This is recommended when a style (bold or italic) does not align correctly with normal text. The number value may include the decimal point for more precise tuning. |

| Function | Requires Closing Tag | Definition Details |
|---------------|----------------------|--|
| X Draw Offset | Y | <xo=#> - Will affect the X offset of the markups when drawing. This is recommended when a style (bold or italic) does not align correctly with normal text. The number value may include the decimal point for more precise tuning. |
| Quote | N | <q> - Will be replaced with a double quote (") character |
| Comma | N | <c> - Will be replaced with a comma (,) character |

NOTE: The line spacing must be configured. Without configuring the line spacing each line will draw on top of the previous.

Shape Elements

Basic shape elements are described by this format: (Rectangles/ Ellipse)

#shapename;thickness;horizontal_size;vertical_size#

Other complex types have the same basic format with extra parameters:

#shapename;thickness;horizontal_size;vertical_size;[extra parameters]#

| Value | Description |
|---------------------------------|--|
| shapename | the name of the shape to be drawn |
| thickness | The thickness of the pen to draw with. 0 will fill the shape. |
| horizontal_size / vertical_size | The horizontal/vertical size in pixels of the rectangle to draw within. This overrides the Element size. The values may be negative to draw above or to the left of the Element. |

Additional Parameters by Shape Table

| shapename | Additional Parameters |
|---|--|
| roundedrect (rectangle with rounded edges) | [EdgeSize] EdgeSize – The distance to round from the corner. |
| grid | [AllowPartialGrid];[GridWidth];[GridHeight] AllowPartialGrid – Allows the grid to draw in an incomplete form on the right and bottom GridWidth – The width of a single rectangle in the grid. GridHeight – The height of a single rectangle in the grid. |

Grid Note

- The partial grid option is only a best guess. If your thickness and other variables are not configured precisely you may find the last line draw incorrectly or missing entirely

(generally obvious with 1 thickness). This issue may be resolved with a code fix in the future.

Order of Translation

1. Data Source References (@[x])
2. If
3. Switch
4. Text translations (Note: These only apply to Text elements)

Note: It is possible to create an endless loop if you dare enter @[?] values in the csv file.

Printing

Print Settings

The print settings can be found under **Tools > Settings...**

| Setting | Description |
|-----------------------------|---|
| DPI | The DPI to use when printing. The DPI specified on the layout is overridden by this setting. |
| Page Width | The full width of the paper to print to (inches) |
| Page Height | The full height of the paper to print to (inches) |
| Page Horizontal Margin | The size of the horizontal paper margin (inches) – This is the horizontal space on the left/right side of the paper that Card Maker will not draw beyond.** |
| Page Vertical Margin | The size of the vertical paper margin (inches) – This is the vertical space on the top/bottom of the paper that Card Maker will not draw beyond.** |
| Auto-Center Layouts on Page | If enabled layouts will print to the page horizontally centered. Note: When switching layouts while printing the new layout will automatically be placed below the previous layout. |
| Print Layout Border | When printing print the border of the layout. |
| Print Style | (See Print Style below / next page) |

** - If the layout switches to landscape the margins apply as if the output were in portrait.

Printing Layouts

By default Card Maker attempts to print the entire project performing some basic space optimizations to combine as many layouts onto a single page as possible. In some cases you may want to select and print the individual layouts to avoid the combining of multiple layouts.

Print Style

Due to an issue with exporting elements/images that have any sort of opacity Card Maker supports an alternative print style called Image. Image draws the card first to an image and then renders the image onto the print document.

| Print Style | Use when... |
|--------------------|--|
| Direct | Always (generally) |
| Image | When printing to a PDF and your layouts require opacity values (if not, use Direct). The overall quality will be slightly lower if you use this functionality. |

PDF Printing / Printing Issues

Be sure to make your layouts the desired size based on your target DPI. For example: if you want a card to be 4" x 3" and the target print DPI is 300 you will need to configure your layout be 4x300(1200) width and 3x300(900) height. This is especially critical if you are targeting PDF as it compresses to fairly low quality JPEGs when compressing images.

PDF Export vs. PDF Printing

I highly recommend you avoid using a PDF Printer (driver/device/whatever) and instead try to use the **Export to PDF** functionality in the **File/Layout** menu(s). PDF Printing never functioned exactly as desired (ever).

PDF Export

The Export to PDF functionality in the File menu uses the Printer Settings with a few minor differences:

- **DPI** does not apply to PDF Export. – The DPI of the layouts control the DPI of the images rendered into the PDF.
- **Print Style** does not apply

Note

Your home printer is likely not a professional printer. While functionality like two sided printing is great, the pages can become easily misaligned. I suggest you be creative and patient if you really want print two sided layouts from Card Maker.