



# **Loyalty app Voucher Layout Documentation**

Version 1.1.0

Revision 2

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## Contents

Introduction .....	1
Features .....	1
Sample Layouts .....	1
Layout Elements.....	2
Sizing Parameters.....	2
“margin” Attribute .....	2
“width” Attribute .....	2
“border” Attribute .....	3
“padding” Attribute .....	3
Element Descriptions .....	3
“div” Element .....	3
“text” Element .....	3
“br” Element .....	4
“img” Element.....	4
“qr” Element .....	4
“value” element .....	4
“grid”, “row”, and “cell” Elements.....	4
Available Data .....	6
Sample Layouts .....	7
Pay with Cash Layout .....	7
Pay with Cash Embedded Layout.....	8
Pay with Points Layout.....	8

# Introduction

The Loyalty app voucher templating system allows a developer to supply an HTML-like layout to the layout engine, in order to generate paper vouchers.

This document describes the layout language in detail.

## Features

The provided example layouts in the SDK showcase the major functionality of the templating system.

The features of the templating system are shown below:

- Box-sizing layout elements
- Grid layout container
- Images
- QR code display
- Margin, padding, and border sizes
- Pixel and percentage sizing
- Font family, size, style, and alignment
- Dynamic text from data source
- Formatting dynamic text (e.g. date format)

## Sample Layouts

Sample layouts are available from the demo app in the SDK's "Demo App/Templates" folder.

# Layout Elements

The following layout elements are available in the templating system:

- **div** – A layout element to contain other elements in its own self-contained box-sized area.
- **text** – A static text area.
- **br** – A line break element. Starts a new box-sized area to begin.
- **img** – Embedded image. Image is loaded from a file.
- **qrcode** – Displays a QR code on the voucher.
- **value** – Insert value from data source, with optional formatting. Only valid inside **text** elements.
- **grid, row, cell** – Grid-layout container.

## Sizing Parameters

All display and layout elements support several sizing parameters. These include:

- **margin** – Top, right, bottom, and left outside margins. Supports pixel sizes or percentage.
- **width** – Total element width. Supports pixel sizes or percentage.
- **border** – Border width. Only supports pixel sizes.
- **padding** – Top, right, bottom and left inside padding. Supports pixel sizes or percentage.

### “margin” Attribute

This attribute defines an external margin around the element, which other layout elements may not occupy. No content from the element will appear in this area. Values may be expressed in either pixel sizes or percentages (ex. “5, 20%, 0, 20%”).

Default value for this attribute is 0.

This attribute supports 1, 2, 3 or 4 size parameters:

- 1 parameter: Top, right, bottom, and left margins are set to the same value.
- 2 parameters: Top and bottom are set to the first value, right and left are set to the second.
- 3 parameters: Top is set to the first value, right and left are set to the second, and bottom is set to the third.
- 4 parameters: Top, right, bottom, and left values are set to the first, second, third, and fourth value, respectively.

### “width” Attribute

This attribute sets the width of the element. The height of an element is dynamic and cannot be set. “Width” refers to the entire encompassing width of an element, including padding, border, and margin. Values may be expressed in either pixel sizes or percentages (ex. “5”, or “20%”).

Default value for this attribute is 0.

This attribute only supports a single parameter.

## “border” Attribute

This attribute sets the border thickness of an element. This thickness is accounted for when laying out the element and will detract from the available area of internal elements. Values must be expressed in pixel sizes (ex. “5”). Percentage sizing is not supported.

Default value for this attribute is 0.

This attribute only supports a single parameter.

## “padding” Attribute

This attribute defines an internal padding inside the element’s border. No content from the element will appear in this area. Values may be expressed in either pixel sizes or percentages (ex. “5, 20%, 0, 20%”).

Default value for this attribute is 0.

This attribute supports 1, 2, 3 or 4 size parameters:

- 1 parameter: Top, right, bottom, and left margins are set to the same value.
- 2 parameters: Top and bottom are set to the first value, right and left are set to the second.
- 3 parameters: Top is set to the first value, right and left are set to the second, and bottom is set to the third.
- 4 parameters: Top, right, bottom, and left values are set to the first, second, third, and fourth value, respectively.

## Element Descriptions

The following is a list of available layout and data elements.

### “div” Element

Container element. This element provides a new vertically separate box-sizing area. It will start a new vertical layout section, taking up the maximum available width of its parent element.

This element may be supplied without content, to create a break between layout areas, or it may contain child element, which will be laid out inside this element.

All standard sizing attributes apply.

### “text” Element

Special container element. This element emits text onto the voucher. While this element is a box-sized element, the content of this element is rendered as in-line.

Several font attributes are available for styling the text. This element will also act as a container element for **value** elements (see below). The output of a **value** element is inserted in-line into the displayed text.

This element may be supplied without content, to provide a paragraph break.

### Styling Attributes

- **family** – Optional. Sets the font family name. Valid values are “**monospace**”, “**sansserif**”, and “**serif**”.

- **size** – Optional. Font size, in system font units.
- **style** – Optional Comma separated list of styles to apply to font. Valid values are “**bold**”, “**italic**”, “**underline**”, and “**strikeout**”.
- **align** – Optional. Text horizontal alignment. Valid values are “**left**”, “**center**”, and “**right**”. Culture reading order is respected and will swap left and right alignments in RTL cultures.

### “br” Element

This element provides a vertical break between layout sections. It is like a **div** element however it may not contain child elements. It is provided for backwards compatibility.

### “img” Element

This element inserts an embedded image into the voucher. Images are supplied as files. The templating system will request each file it encounters from the host application.

The image file name is supplied using the **src** attribute.

Images are automatically scaled to take up as the entire display are inside this element, respecting margins, borders, and padding.

### “qr” Element

This element embeds a QR code in the voucher. The QR code will be centred horizontally in this area.

QR code data can be supplied using two attributes:

- **source** – The name of a value in the data source to retrieve.
- **value** – A static value to display in the code.

If the **value** attribute is supplies and is not empty, then the QR code will attempt to retrieve its data from the data source, using the **source** attribute as the value name.

### “value” element

This is a special element and is only valid inside a **text** element. It is used to insert values from the data source into the displayed text, before rendering. Values retrieved by this element appear in-line with the parent element’s text.

This element has two attributes:

- **source** – Required. The entry name in the data source to retrieve a value from.
- **format** – Optional. A format to apply to the retrieved value.

The exact meaning of the **format** attribute changes depending on the data type of the retrieved value. Supported data types are: Decimal, integer, long, float, double, date, and string. The layout system uses the **ToString()** style of formatting. Please refer to the Microsoft .NET Framework formatting strings document on the web for further details.

### “grid”, “row”, and “cell” Elements

The **grid** element is a parent element for creating flexible table layouts in vouchers. Each **grid** element contains one or more **row** elements. Each **row** element contains one or more **cell** elements. Cells in each row are sized independently of other rows.

A cell will may be specified in pixel values, or percentage values. Cells that have a specified with attribute will always take up the defined width. Any width left over is shared equally between cells that do not specify a width.

For instance, if a row with three cells, containing the widths 25%, undefined, 25%, the middle cell will get the remaining space after the first and last cells are sized, meaning it will get a size of 50%.

```
<grid>
  <row>
    <cell>...</cell>
  </row>
  <row>
    <cell>...</cell>
  </row>
</grid>
```

## Available Data

When using the **GetDataFromTransaction** static function, the following data values are available to the voucher layout:

- **TransactionID** – Integer. The ID number of the transaction this voucher represents.
- **TransactionTimestamp** – Date. The date this transaction was created.
- **Amount** – Decimal. The dollar amount this transaction is for.
- **Token** – String. The token value that should be displayed in the QR code.
- **PointsEarned** – Integer. The number of points the customer is earning on this transaction.
- **PointsSpent** – Integer. The number of point the customer is spending in this transaction.
- **StoreName** – String. Store name string passed to **GetDataFromTransaction** function.

Other data may be added to the data source by the POS application before passing the data source to the voucher layout engine. This data will then be available to the voucher layout.



# Sample Layouts

These are some standard layouts supplied by Loyalty app. It is suggested that POS integrators use these layouts, to keep voucher look-and-feel consistent between systems.

## Pay with Cash Layout

The following is a standard “pay with cash” or “earn points” voucher layout provided in the SDK:

```
<?xml version="1.0" encoding="utf-8"?>
<Layout>
  <text size="150%" style="bold" align="center"><value source="StoreName" /></text>
</text />
  <grid>
    <row>
      <cell width="25%">
        <text>
          <value source="TransactionTimestamp" format="dd/MM/yy" />
        </text>
      </cell>
      <cell width="25%">
        <text>
          <value source="TransactionTimestamp" format="HH:mm tt" />
        </text>
      </cell>
      <cell>
        <text align="right">TRANS ID: <value source="TransactionID" /></text>
      </cell>
    </row>
  </grid>
  <text />
  <text style="bold">TRANSACTION</text>
</text />

  <grid>
    <row>
      <cell>
        <text size="125%" style="bold">TOTAL:</text>
      </cell>
      <cell>
        <text size="125%" style="bold" align="right"><value source="Amount"
format="C2" /></text>
      </cell>
    </row>
  </grid>

  <text />
  <text size="80%" style="bold" align="center">: : : : : : : YOU COULD EARN : : :
: : : : : :</text>
  <text size="250%" align="center" style="bold"><value source="PointsEarned"
format="#,##0" /></text>
  <text size="80%" style="bold" align="center">LOYALTY APP POINTS*</text>
  <text size="90%" />

  <text align="center" size="90%">Scan this QR code using Loyalty app within 7 days of
receipt date to claim now!</text>

  <qrcode margin="0,25%" source="Token" />

  <text size="80%" align="center">NOT A MEMBER YET? Download Loyalty app FREE*
at</text>
```

```


<text size="80%" align="center" margin="0,10%">Follow the sign-up instructions and
activate your account via email or sms.</text>

<text size="80%"></text>

<text size="75%" style="bold" align="center">*See Full T&C's at
www.loyaltyapp.com.au</text>
</Layout>
```

## Pay with Cash Embedded Layout

The following is a standard “pay with cash” or “earn points” voucher layout, suitable for embedding onto existing POS receipts:

```
<?xml version="1.0" encoding="utf-8"?>
<Layout>
  <div>
    <grid>
      <row>
        <cell width="60%">
          <text size="70%" align="center" style="bold">: : : : YOU COULD EARN : : :
: :</text>
          <text align="center" size="200%" style="bold">
            <value source="PointsEarned" format="#.##0" />
          </text>
          <text size="80%" align="center" style="bold">LOYALTY APP POINTS*</text>

          <text size="70%" align="center" margin="2%,0,0,0">Scan this QR code using
Loyalty app within 7 days of receipt date to claim now!</text>
          <text size="70%" align="center" margin="3%,0,0,0">NOT A MEMBER YET? Download
Loyalty app FREE* at</text>

          

          <text size="70%" align="center">
            Follow the sign-up instructions and activate your account via email or
sms.

          </text>
          <text size="60%" align="center" margin="1%,0,0,0">
            *See full T&C's at www.loyaltyapp.com.au
          </text>
        </cell>
        <cell>
          <qrcode source="Token" margin="10%,0,0,0" />
          <text size="70%" style="bold" align="center">TRANS ID <value
source="TransactionID" /></text>
        </cell>
      </row>
    </grid>
    <text size="70%" style="bold" align="center" margin="3%,0,0,0">Don't forget to
redeem your points at <value source="StoreName" /> on your next purchase!</text>
  </div>
</Layout>
```

## Pay with Points Layout

The following is a standard “pay with points” or “spend points” voucher layout:

```
<?xml version="1.0" encoding="utf-8" ?>
```

```

<Layout>
  <text size="150%" style="bold" align="center"><value source="StoreName" /></text>
  <text />
  <grid>
    <row>
      <cell width="25%">
        <text>
          <value source="TransactionTimestamp" format="dd/MM/yy" />
        </text>
      </cell>
      <cell width="25%">
        <text>
          <value source="TransactionTimestamp" format="HH:mm tt" />
        </text>
      </cell>
      <cell>
        <text align="right">TRANS ID: <value source="TransactionID" /></text>
      </cell>
    </row>
  </grid>
  <text />
  <text style="bold">TRANSACTION</text>
  <text />

  <grid>
    <row>
      <cell>
        <text size="125%" style="bold">TOTAL:</text>
      </cell>
      <cell>
        <text size="125%" style="bold" align="right"><value source="Amount"
format="C2" /></text>
      </cell>
    </row>
  </grid>

  <text />
  <text size="80%" style="bold" align="center">: : : : : : : YOU ARE REDEEMING : :
: : : : : :</text>
  <text size="250%" align="center" style="bold"><value source="PointsSpent"
format="#,##0" /></text>
  <text size="80%" style="bold" align="center">LOYALTY APP POINTS*</text>

  <text size="90%" />

  <text align="center" size="90%">Scan this QR code using Loyalty app to redeem your
Loyalty app points* now!</text>

  <qrcode margin="0,25%" source="Token" />

  <text size="75%" style="bold" align="center">*See Full T&C's at
www.loyaltyapp.com.au</text>
</Layout>

```