

Simple Calendar - Part One

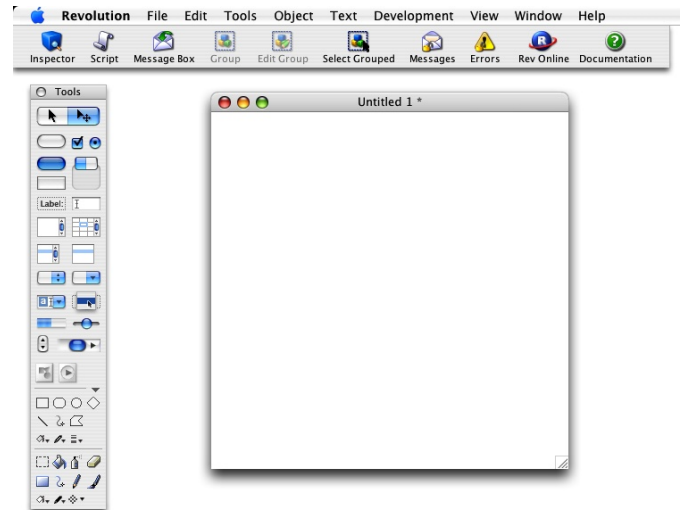
This tutorial will take you through how to create a simple calendar application which will contain buttons, fields and images. The application will contain multiple cards, one for each month of the year, and demonstrate how to navigate between them.

Creating a Stack

The first thing you must do is create a stack for your application. To do this go to

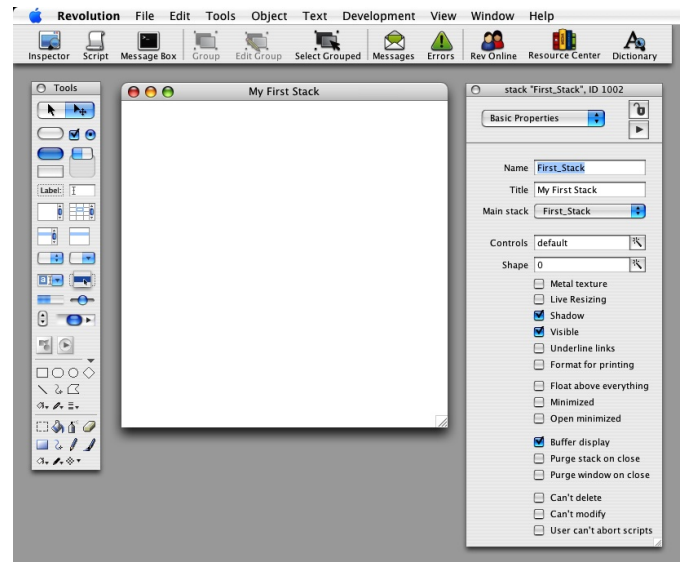
File -> New Mainstack

This will create a stack which contains one card. The stack is a mainstack as it has no parent stack. That is, messages will be passed through the stack and then directly to the backscripts if no handler has been found, there will be no other stacks to handle the message in-between.



Editing Stack Properties

You should give the stack a name by altering it's properties using the *Property Inspector*. You view this by clicking the *inspector* icon in the *menu bar*. This will open a new stack displaying all of your stack's properties including texture, shadow and editing preferences. You should enter a new name for your stack in the *name* field. This represents the name which your stack will be saved as. You can also give your stack a *title*. This is the name which will appear in the title bar at the top of your stack. If you leave this field blank your stack's title will be the same as it's name.

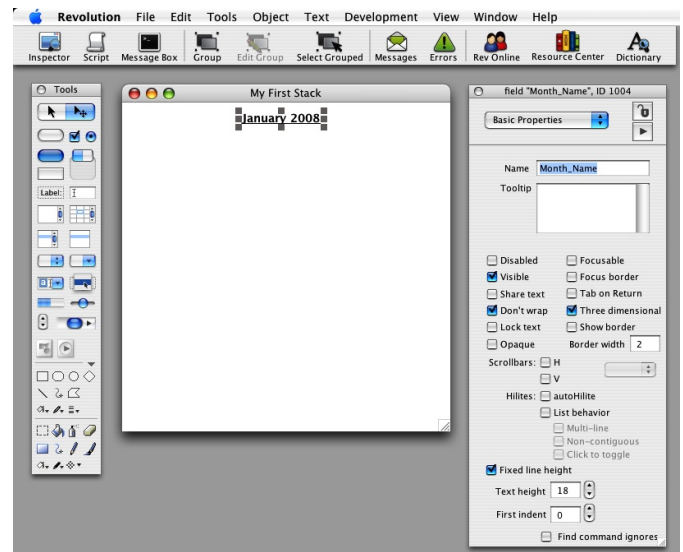


Adding Objects - What is required

Now we have a stack we need to put objects on to the card of it. To create a calendar application we need to display the days in the month, the month name, and buttons to navigate between the different months. I have also included an image to improve the look of the card and make it more standardized.

Adding a Title

To display the month name a *label* field should be used. This is located on the left-hand side of the *toolbar*, fifth object down, next to the *Text Entry Field* object. To place a label on the card, click its icon in the *toolbar* and drag it to the position you want it to appear at on the stack. To enter a value into the label open its *property inspector* using the icon in the menu bar. As this field will appear on every card in the stack, it should be given a meaningful but general name. I have therefore called it `Month_Name`. As this label does not do anything there is no need for a tool tip. It should also not be focusable or have a focus border and the lock text property should be set to true. This will stop the user from editing the field contents. To put the month name into the label select the *Contents* option from the drop down list at the top of the *property inspector*. In the big box replace 'Label:' with the month name and year. As we are currently on the first card I have entered 'January 2008'. You will notice this is currently right aligned, which is standard for labels. As the label is going to act as a title however, we want it to have centered justification and do this by selecting *Text Formatting* from the drop down list and clicking the middle icon of the *Align* options. You can also underline the text, give it bold font, or change its size using the options on this card. If the writing becomes too big for the field, the field can be extended by dragging the selection handles or changing the width value on the *size&position* card of the *property inspector*.

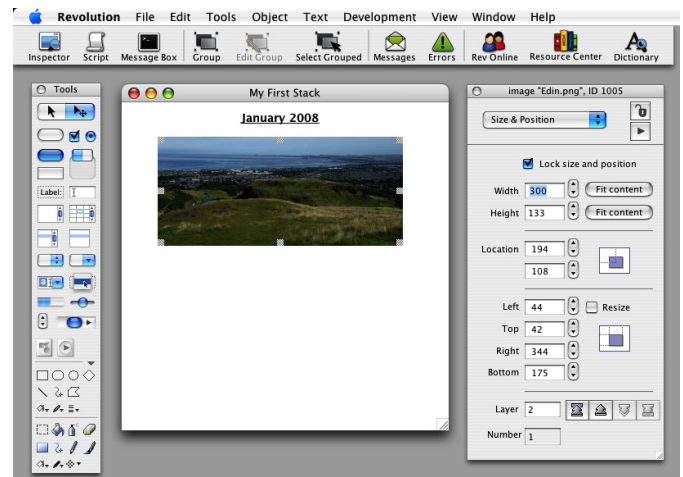


Adding an Image

The next step is to add an image. You can do this by *importing the image as a control*. Go to

File -> Import As Control -> Image File

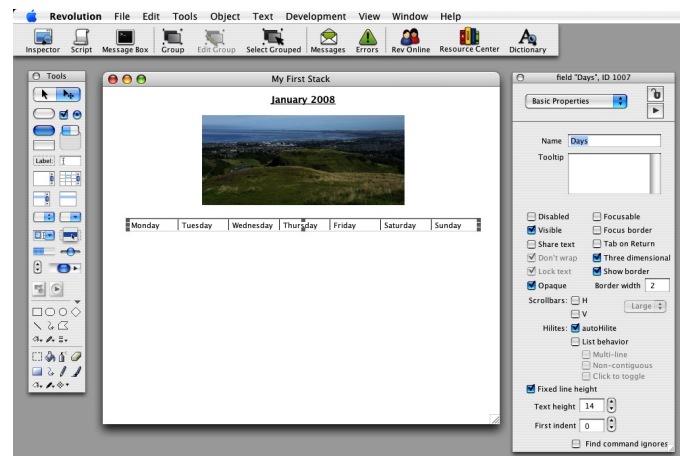
This will bring up an *image selector*. Choose your image by double clicking it. Your image will appear on the card. If you need to alter the size of it use the *property inspector*. Once the image is of the correct size and position select *Lock size and position* to stop the user moving it.



Adding the Calendar - Days

We now need to create the actual calendar. This needs to display the days of the week as well as the actual dates. To create the calendar we will use *table fields*. This will create a grid formatted calendar. For the purpose of this tutorial we will use two tables; one to display the days of the week and the second the month dates.

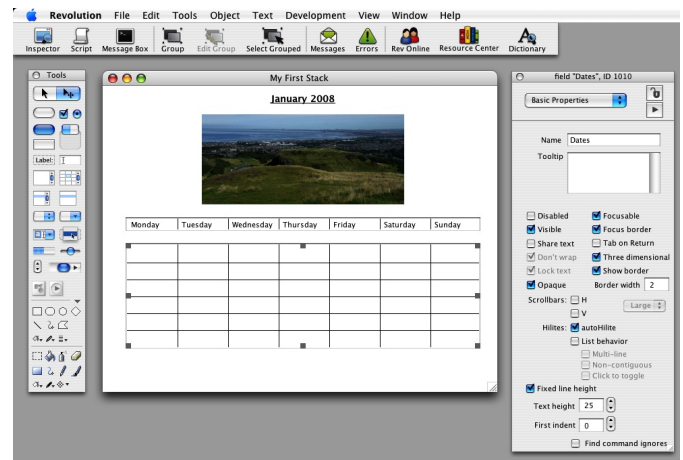
The first table can be placed on the card using the same drag and drop action as for the label field. Once the table appears use the selection handles to extend it so it has seven cells per line (i.e. grid spaces) and only one line visible. Open the table's *property inspector*. Give the table a name such as 'Days' and uncheck the focusable, focus border and vertical scroll-bar properties. Move to the *contents* page and, if you cannot see the grid lines, click the middle icon above the large field. Enter the days of the week into the top row of cells, pressing tab after each one. This will result in one day per cell.



Adding the Calendar - Dates

A second table should be placed underneath the first. This should have six rows with seven cells in each (as months can have up to 31 days.) The table should not have a scroll-bar but should be focusable so users can add events to cells within it. You should match the grid lines of this second table up with those of the first so it is clear which dates correspond to which days.

As the cells in this second table may contain details of multiple events the default cell size is not large enough. To increase the height of the cells use the *text height* property on the *basic properties* card of the *property inspector*.

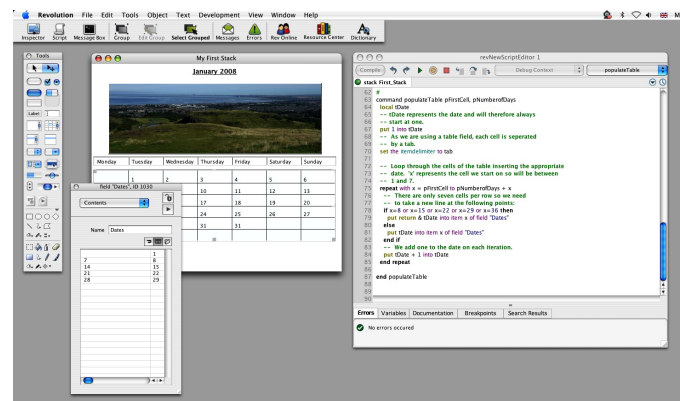


Populating the Calendar

The calendar can be populated manually using the table field's *property inspector* or by writing a short *script*.

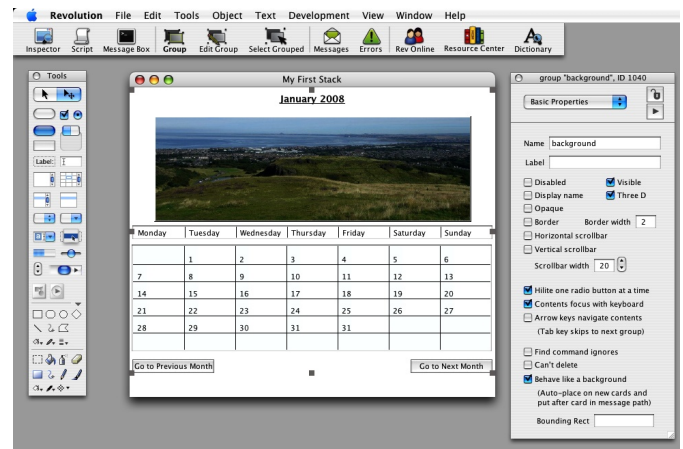
The *contents* card of the *property inspector* should be used as described in the steps above. To write a script you must select the item whose script you want to implement and click the *script* icon on the *menu bar*. Alternatively you can right click on the stack or item and select *Edit Script* from the menu which appears. This will open a *script editor* in which you write your code.

For this example your script should loop through each of the cells in the table and insert an appropriate date into each. An example of how to do this can be found in the script of the stack attached to this tutorial. Once you have written your script you should hit the *apply* button at the bottom of the *script editor*. This will compile and save your script, allowing you to run it.



Adding Navigation Buttons

The next step is to add *buttons* to the card. These will allow users to navigate between the cards representing the different months. It may appear strange that we are adding the means to navigate to new cards before the cards themselves but by doing it this way we can group all the objects on the current card and mark them as a background. This means when we create a new card the objects will automatically appear on it, saving us time and making each card consistent.



The buttons themselves will navigate to the next month and the previous month. You can ensure the two buttons are aligned by selecting them both and opening the *Align Objects* card of the *property inspector*. To add the buttons to a background group, select the buttons and all other objects which are to be part of the background. Next click the *group* icon on the *menu bar*. This will make all the objects move and act as a single object. Open the group's *property inspector* and select the *Behave like a background* option on the *Basic Properties* card.

Adding New Cards

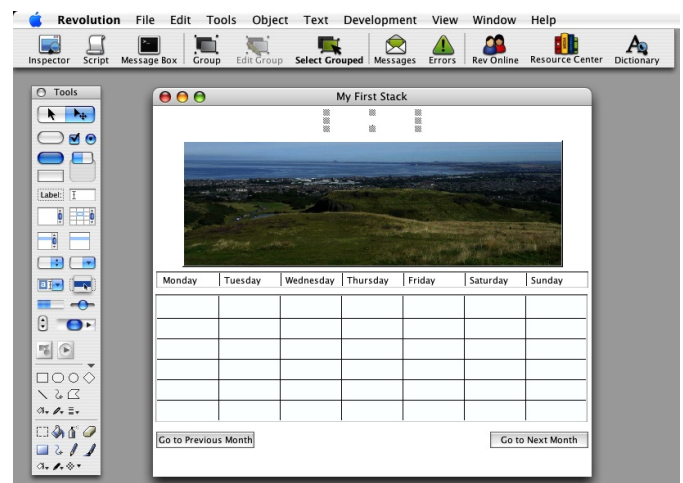
The final step required is to create cards for the eleven remaining months. This can be done via

Object -> New Card

On each new card, change the contents of the title and calendar to reflect the new month.

Ideally, you should disable the 'Go to Previous Month' button from the January 2008 card. To do this go to the card for January, right click on it and select *edit card script*. Paste the following code into the script:

```
on preOpenCard
  disable button "Prev" of group "background" of me
```




```

if the enabled of button "Next" of group "background" of me is false then
    enable button "Next" of group "background" of me
end if
end preOpenCard

```

This will ensure that the 'Go to Previous Month' button is disabled but the 'Go to Next Month' button is enabled. This should be repeated for the December 2008 card, but with the previous button enabled and next button disabled. All other card scripts within the stack should contain the code pasted below:

```

on preOpenCard
    if the enabled of button "Next" of group "background" of me is false then
        enable button "Next" of group "background" of me
    end if

    if the enabled of button "Prev" of group "background" of me is false then
        enable button "Prev" of group "background" of me
    end if
end preOpenCard

```

This will ensure both buttons are enabled. Please note, for the code above to work the buttons must be named "Prev" and "Next" as appropriate and the group which acts as the background should be named "background". You can set these names using the *property inspector* for the buttons and group respectively.

If you wish to have a different image for each month in your calendar you can delete the images from the background group by clicking on the group and then *Edit Group* on the *menu bar*. Now select the image and press delete. This will remove the image from the background. Click *Edit Group* again to get back to the normal mode and add images to each card.

Event Fields

Events can be added into the table as it is but it is possible that the user may accidentally delete the date.

To eliminate this risk make the table non-editable and add a field to every cell.

To make the table non-editable open its *property inspector* and move to the *table* card. Uncheck the *Cell editing* option. To add a field to a cell simply drag it from the *toolbar* and place it over the cell, resizing it so it fits within the cell and does not overlap the date. Open the field's *property inspector* and get rid of its



border. Make sure you place/paste the cells on the card in the order a user would want to tab through them as, when an object is placed on a card, it is assigned a layer which correlates to its place in the tabbing sequence. You can alter which layer an item is on using the *size&position* card of the field's *property inspector*.