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In this step, you'll learn how to propagate a local change to the application through to Heroku. As an example, you'll modify the application to add an additional dependency and the code to use it.

Modify Gemfile to include a dependency for the cowsay gem. Your file will look something like this:

```
gem 'cowsay'

# Bundle edge Rails instead: gem 'rails', github: 'rails/rails'
gem 'rails', '4.1.4'
...
```

 $\label{thm:modify app/views/welcome/index.erb} \mbox{ so that it uses this gem. Your final code should look like this:}$

```
<h1>Getting Started with Ruby</h1>

    Welcome!

     </pe>
```

Now test locally:

```
> jruby -S bundle install
> heroku local web -f Procfile.windows
```

Visit your application at http://localhost:5000 (http://localhost:5000). You should see an ASCII picture displayed.

Now, deploy this local change to Heroku.

Almost every deploy to Heroku follows the same pattern. First, add the modified files to your local Git repository:

```
> git add .
```

Now commit the changes to the repository:
> git commit -m "Demo"
Now deploy, just as you did previously:
> git push heroku master
Finally, check that everything is working:
> heroku open

Log in to report a problem (/login?back_to=%2Farticles%2Fgetting-started-with-jruby%23push-local-changes)

I can push local changes (push-local-changes)

 $(Log\ in\ (\textit{/login?back_to=}\%2Farticles\%2Fgetting-started-with-jruby\%23push-local-changes)\ to\ save\ and\ track\ your\ progress)$