

HW6 Programming: Deployment, Social, Analytics, Payments: Instructions

When you're ready to submit your solution, go to the [assignments list](#).

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Homework 6: Deploy, Social, Analytics, and Payments

In the previous assignments you set up your basic HTML/CSS skeleton. In this assignment we're going to start improving the development process by adding the dev/staging/production flow. We'll also add some basic frontend JS scripts to your site to add social, analytics, and payments functionality. The visible modifications to the bitstarter page are as shown; your page will morph as follows:

Before/After

Your page should have functional social and payments buttons (visible) and analytics code (seen in View Source).

Before

The screenshot shows a placeholder image area labeled "480 x 300". To its right is a dark sidebar containing a progress bar with the text "1000 backers | \$6000 of \$10,000 | 10 days left". Below the progress bar are two buttons: "Preorder" and "Twitter | Facebook".

+Social, Payments,
Analytics

After

The screenshot shows a placeholder image area labeled "480 x 300". To its right is a dark sidebar containing a progress bar with the text "1000 backers | \$6000 of \$10,000 | 10 days left". Below the progress bar are three buttons: "Preorder with Bitcoin", "Facebook", "Twitter", and a plus sign icon. There is also a small "0" counter.

That is, you added two visible buttons (Coinbase and AddThis) and some invisible code (Google Analytics). All of these are just frontend JS scripts that change the behavior of the page. Note that we didn't need any new backend code yet, because much of the action is happening on the Addthis, Coinbase, and Google servers.

Part 1: Set up a dev/staging/production flow

First, go through the [lecture 7 notes](#) and convert your github repository to use the dev/staging/production flow. As a very first task, update your `index.html` to the new version here ([link](#)); this fixes a bug with missing `row-fluid` classes and adds `alt` attributes to all image properties. See if you can do this by editing `index.html` in the `develop` git branch, merging into the `staging` branch, previewing, and then merging into the `master` branch.

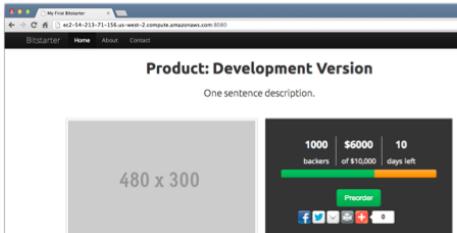
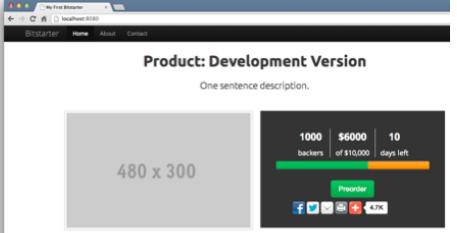
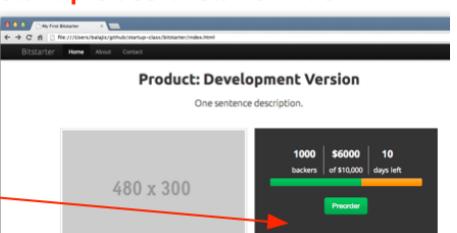
Submit: Upload a file with a link to your `staging` branch on github. This confirms that you've set up remote branches on github. For example, a file with the line <https://github.com/username/bitstarter/tree/staging> would work.

Part 2: Set up Social Sharing with AddThis

For the next few parts, using an EC2 dev server to preview the installation and placement of the social and payment buttons will make your life a bit easier. If you do want to run develop locally, you will need to connect to `localhost` rather than trying to just open the file in your browser. The reason is that some widgets require the page to be "served" in a sense, rather than browsed from a local computer. Serving from localhost will work for many of these widgets, but not all, at least with default Chrome. If you really want to develop on a local machine, here's a reference explaining the concept of the Same Origin Policy, and how to disable it via a Chrome command line flag: bit.ly/132hIYr. If you don't want to worry about this kind of thing, you can simply use the EC2 machines for dev preview over the public internet and not be too concerned at the present time with local dev issues. The PDF version of this figure is [here](#).

How to preview your buttons

Start a web server and preview at `localhost:8080` or `ec2*.com:8080`, not on your local machine at `file:///`. If you preview on your local machine without running a web server, you won't see the buttons.

<p>Option 1: Start a server remotely SSH into an EC2 instance, execute node <code>web.js</code> and preview at the EC2 URL. This style of preview (i.e. over the public internet via an obscure URL) is closest to the deployed site.</p> <pre>[ubuntu@ip-172-31-29-196:~/bitstarter]\$node web.js Listening on 8080</pre>	 <p>http://ec2-54-213-71-156.us-west-2.compute.amazonaws.com:8080/</p>
<p>Option 2: Start a server locally Execute node <code>web.js</code> and preview at <code>http://localhost:8080</code>. For some buttons/assets you may need to start Chrome without XSS checking. See bit.ly/132hIYr</p> <pre>[balajis@junit:~/github/startup-class/bitstarter]\$node web.js Listening on 8080</pre>	 <p>http://localhost:8080</p>
<p>Option 3: Try opening up index.html This will fail, as the buttons won't appear.</p> <div style="border: 2px solid red; padding: 10px; text-align: center; margin-top: 20px;"> Buttons missing </div>	 <p>file:///Users/balajis/github/startup-class/bitstarter/index.html</p>

In general, a good convention when picking APIs is to just pick the most popular one in a given domain as a first cut, and then use others as time progresses. With that in mind, when it comes to adding social buttons [AddThis.com](#) is one of the very few sites on the web with a [PageRank of 10](#) - up there with google.com itself! The reason it ranks so highly is that it provides the social buttons you see everywhere, so it has incredible backlinks. Given our timeframe, we don't want to learn the entire [Twitter](#) and [Facebook APIs](#), which are significant topics in their own right and also changing frequently enough to require constant maintenance. A useful alternative is to let AddThis keep on top of that for you. Sign up for AddThis here and

configure it as shown below:

AddThis

After you sign up, here's how to configure AddThis.

Click Share Buttons, switch to big buttons, and then grab the code.

Preview

AddThis boosts sharing by automatically showing the right buttons to each user based on their location and activity across the web. [Disable and select your own buttons.](#)

Add to your site

Copy and paste the code below into your page between the <body> and </body> tags. The buttons will appear wherever you place them. Want to customize? Use our API.

```
<!-- AddThis Button BEGIN -->
<div class="addthis_toolbox addthis_default_style addthis_32x32_style">
<a class="addthis_button_preferred_1"></a>
<a class="addthis_button_preferred_2"></a>
<a class="addthis_button_preferred_3"></a>
<a class="addthis_button_preferred_4"></a>
<a class="addthis_button_compact"></a>
<a class="addthis_counter addthis_bubble_style"></a>
</div>
<script type="text/javascript">var addthis_config = {"data_track_ac...</script>
<script type="text/javascript" src="//s7.addthis.com/js/300/addthis...</script>
<!-- AddThis Button END -->
```

By publishing this code, you are accepting our [Terms of Service](#).

Then add it to the `index.html` file in your git repo. You will probably want to reduce the number of buttons, so the actual thing you paste in will look something like the snippet below. Note that we are showing the enclosing div with the `span8 offset2 social` class for context.

```
<div class="span8 offset2 social">
<!-- AddThis Button BEGIN -->
<div class="addthis_toolbox addthis_default_style addthis_32x32_style">
<a class="addthis_button_preferred_1"></a>
<a class="addthis_button_preferred_2"></a>
<a class="addthis_button_compact"></a>
<a class="addthis_counter addthis_bubble_style"></a>
</div>
```

```

<script type="text/javascript">var addthis_config =
{"data_track_addressbar":true};</script>
<script type="text/javascript"
src="//s7.addthis.com/js/300/addthis_widget.js#pubid=ra-51e5f5d9549fdf9b"></script>
<!-- AddThis Button END -->
</div>

```

And to center the sharing buttons on the page, you will want to add a snippet like this right before the `</style>` closing tag, in the `<head>` of the page. To understand this trick, read this [link](#) (especially this [image](#)).

```

/* http://support.addthis.com/customer/portal/questions/1136093-share-buttons-in-center-position */
div.addthis_toolbox {
width:180px;
margin: 0 auto;
}
</style>

```

Note that this is a bit of a hack; in general you do not want to specify explicit horizontal widths in a responsive design rather than percentages. In this case, the fact that these images are so small and of fixed size (36, 36, 40, and 62 pixels) even as the page shrinks means we can get away with it without having to do something more complex.

Test it out by confirming that a visitor can use the social buttons. You might need to sign up for a Twitter or Facebook (FB) account to test this. Note that AddThis is fairly smart, in that it shows the buttons which your user is most likely to click on, likely by detecting whether they are logged-in to Twitter or FB.

Submit: Upload a file with the `pubid=ra-....` string from your AddThis Snippet. This is just a unique string that identifies your AddThis installation which you'll get once you complete this part.

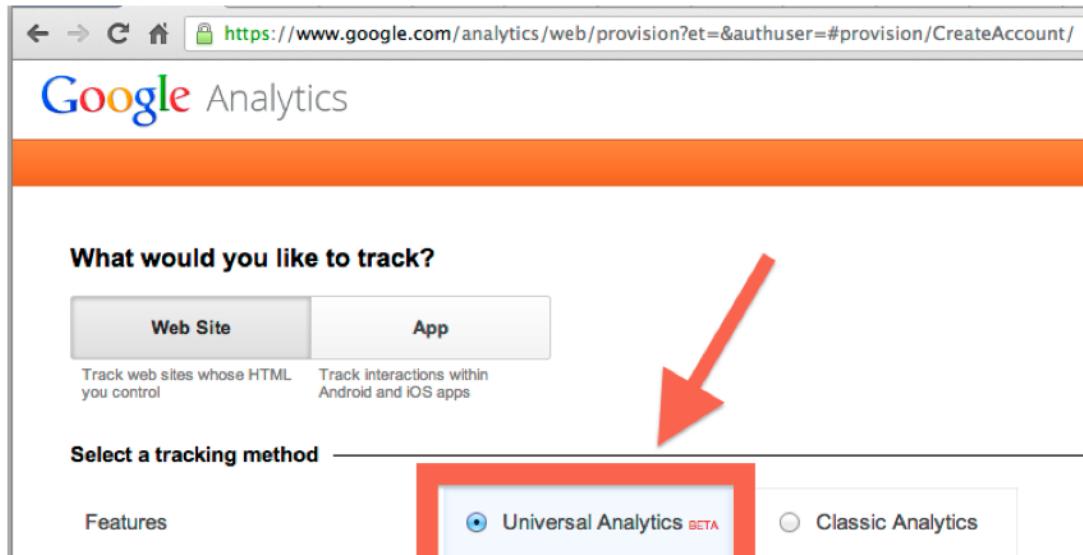
Part 3: Set up analytics with Google Analytics

[Google Analytics](#) is a widely used tool for determining who's viewing your website, from what location, and so on. Sign up for an account and then configure it as shown below. To confirm verification, you will want to use BOTH the new `analytics.js` and `ga.js` (see the Google documentation [here](#)) in your page. The snippet for `analytics.js` will appear if you select "Universal Tracking" when you sign up, while the snippet for `ga.js` is at [this link](#). The PDF version of this figure is [here](#).

Google Analytics

Here's how to install and configure Google Analytics.

1. Select Universal Analytics (`analytics.js`) during signup



Basic GA features (Visitor acquisition, behavior, and conversion data)	<div style="width: 75%; background-color: red; height: 10px;"></div>	<div style="width: 25%; background-color: green; height: 10px;"></div>
Event tracking	<div style="width: 100%; background-color: green; height: 10px;"></div>	<div style="width: 100%; background-color: green; height: 10px;"></div>
AdWords account linking	<div style="width: 100%; background-color: green; height: 10px;"></div>	<div style="width: 100%; background-color: green; height: 10px;"></div>
Custom variables	Upgrade to custom dimensions & metrics	<div style="width: 100%; background-color: green; height: 10px;"></div>
Custom dimensions & metrics	<div style="width: 100%; background-color: green; height: 10px;"></div>	
Online/offline data sync	<div style="width: 100%; background-color: green; height: 10px;"></div>	
Multi-platform tracking	<div style="width: 100%; background-color: green; height: 10px;"></div>	
Simplified configuration controls	<div style="width: 100%; background-color: green; height: 10px;"></div>	
Select new feature releases	<div style="width: 100%; background-color: green; height: 10px;"></div>	
Advanced advertisement tools (AdSense, Content Experiments, DFA, Remarketing)	Coming soon	<div style="width: 100%; background-color: green; height: 10px;"></div>

Setting up your web property**Website Name**

Bitstarter

2. Make note of your Tracking ID

The screenshot shows the Google Analytics Administration interface. At the top, there's a navigation bar with a home icon, a lock icon indicating https, and the URL <https://www.google.com/analytics/web/?et=&authuser=#management/Settings/a42843113w72>. Below the URL is the Google Analytics logo. The main content area has a header "New Analytics Administration". A sub-header "Welcome to the new Analytics Administration page. We've given administration a new look, and e" is followed by a "Learn more" link. At the bottom, the page title is "Administration > Property Settings" and the specific property is "Bitstarter Analytics / Bitstarter".

Administration > Property Settings

Bitstarter Analytics / Bitstarter**PROPERTY**

Bitstarter

Basic Settings**Tracking ID**

UA-42843113-1

Property name

Bitstarter

Default URL

The screenshot shows the Bitstart.net dashboard under the 'Startup Engineering' assignment. On the left, there are three tabs: 'Remarketing', 'Custom Definitions', and 'Social Settings'. On the right, the 'Default Profile' is set to 'All Web Site Data'. The 'Industry Category' is set to 'Internet and Telecom'. A link to 'Advanced Settings' is visible.

3. Click "Tracking Info" and "Tracking Code". Copy the analytics.js snippet and paste into your bit starter's index.html right before the </body> closing tag.

The screenshot shows the Google Analytics 'Tracking Info' page for the 'Bitstarter' property. The 'Tracking ID' is listed as 'UA-42843113-1'. The status is 'Tracking Not Installed'. Below this, the 'Website tracking' section provides instructions for cross-domain tracking. A large box contains the 'Tracking Code' snippet:

```

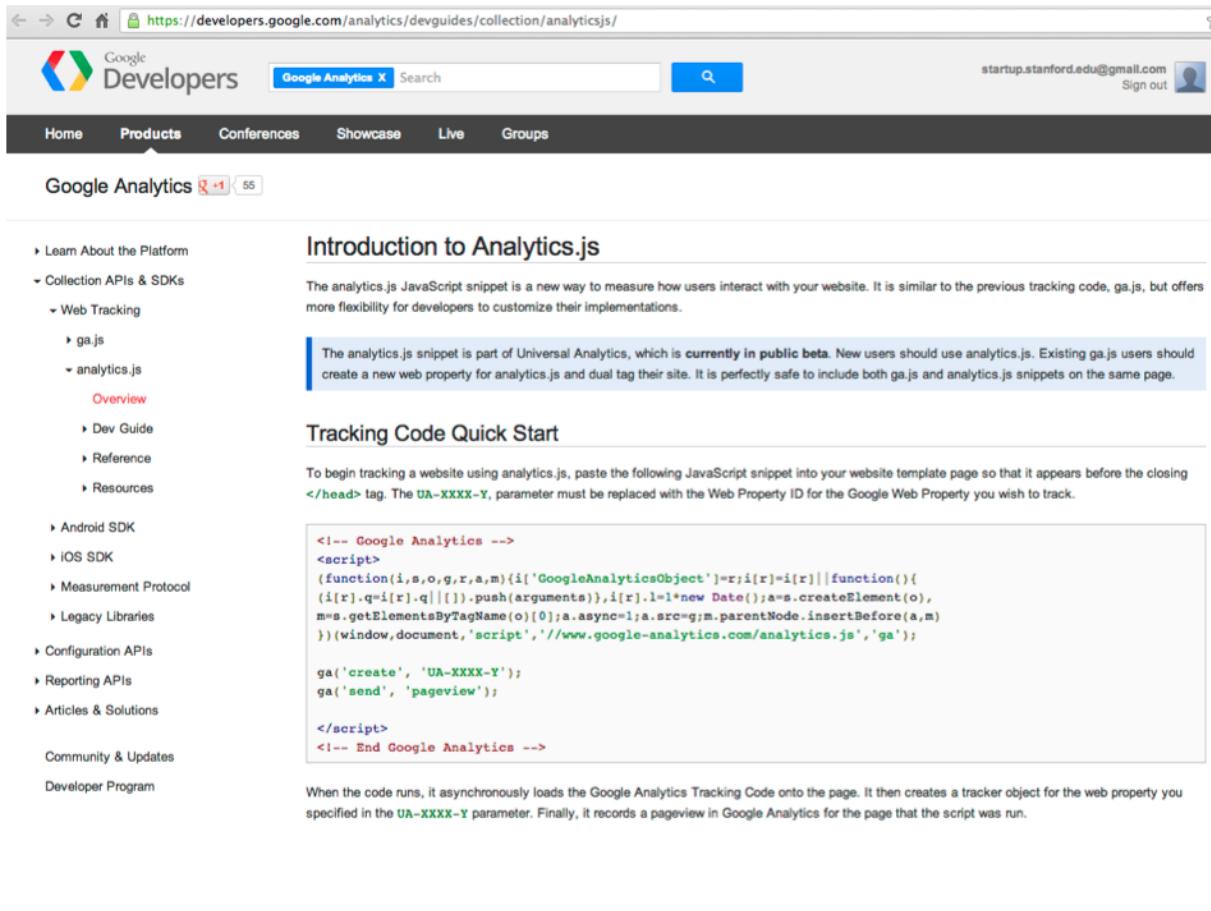
<script>
(function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;r[i]=function(){
(i[r].q=i[r].q||[]).push(arguments),i[r].l=1*new Date();a=s.createElement(o),
m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m)
})(window,document,'script','//www.google-analytics.com/analytics.js','ga');

ga('create', 'UA-42843113-1', 'amazonaws.com');
ga('send', 'pageview');

</script>

```

4. Note the instructions on this page. The new Universal Analytics (analytics.js) and Classic Analytics (ga.js) can coexist on the same page.



The screenshot shows a browser window with the URL <https://developers.google.com/analytics/devguides/collection/analyticsjs/>. The page title is "Introduction to Analytics.js". On the left, there's a sidebar with navigation links for the Google Developers platform, including "Learn About the Platform", "Collection APIs & SDKs" (with "Web Tracking" expanded), "Android SDK", "iOS SDK", "Measurement Protocol", "Legacy Libraries", "Configuration APIs", "Reporting APIs", "Articles & Solutions", "Community & Updates", and "Developer Program". The main content area starts with a heading "Introduction to Analytics.js" and a paragraph about the analytics.js JavaScript snippet. It then features a callout box stating: "The analytics.js snippet is part of Universal Analytics, which is currently in public beta. New users should use analytics.js. Existing ga.js users should create a new web property for analytics.js and dual tag their site. It is perfectly safe to include both ga.js and analytics.js snippets on the same page." Below this is a section titled "Tracking Code Quick Start" with a code snippet:

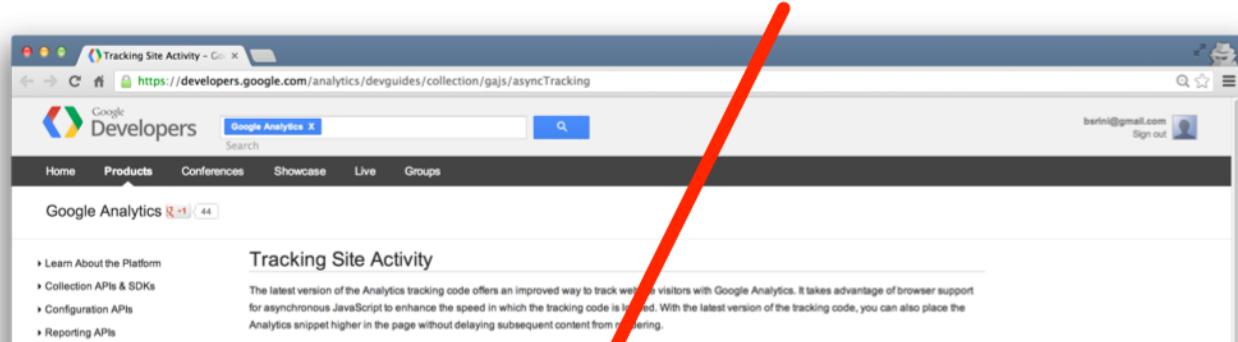
```
<!-- Google Analytics -->
<script>
(function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;i[r]=i[r]||function(){
(i[r].q=i[r].q||[]).push(arguments),i[r].l=1*new Date();a.createElement(o),
m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m)
})(window,document,'script','//www.google-analytics.com/analytics.js','ga');

ga('create', 'UA-XXXX-Y');
ga('send', 'pageview');

</script>
<!-- End Google Analytics -->
```

Below the code, a note explains: "When the code runs, it asynchronously loads the Google Analytics Tracking Code onto the page. It then creates a tracker object for the web property you specified in the UA-XXXX-Y parameter. Finally, it records a pageview in Google Analytics for the page that the script was run."

5. Go to developers.google.com/analytics/devguides/collection/gajs/asyncTracking to get the ga.js snippet. Paste into your index.html before the </head> tag. You must replace UA-XXXXX-X with your Tracking ID!



The screenshot shows a browser window with the URL <https://developers.google.com/analytics/devguides/collection/gajs/asyncTracking>. The page title is "Tracking Site Activity". The main content area contains a paragraph about the latest version of the Analytics tracking code and its benefits. A red diagonal line points from the text "You must replace UA-XXXXX-X with your Tracking ID!" in the previous slide to the placeholder "UA-XXXX-X" in the tracking code snippet on this page.

- » Articles & Solutions
- Community & Updates
- Developer Program

Although asynchronous tracking uses a different Analytics snippet and a different syntax for tracking calls than the [traditional snippet](#), it supports the exact same tracking customizations as the traditional snippet. In fact, the asynchronous tracking syntax is also more flexible than the traditional snippet. For more details, see the [Usage Guide](#).

Use the Tracking Snippet to Track Your Website

The Analytics snippet is a small piece of JavaScript code that you can paste into your pages. It activates Google Analytics tracking by inserting `ga.js` into the page. To use this on your pages, copy the code snippet below, replacing `UA-XXXXX-X` with your web property ID. Paste this snippet into your website template page so that it appears before the closing `</head>` tag.

If you need to do more than basic page tracking, see the [Tracking reference](#) for a list of methods available in the API and see the [Usage Guide](#) for details on using the asynchronous syntax. For step-by-step instructions on setting up tracking, see the Help Center article on [setting up tracking](#).

```
<script type="text/javascript">
  var _gaq = _gaq || [];
  _gaq.push(['_setAccount', 'UA-XXXXX-X']);
  _gaq.push(['_trackPageview']);

  (function() {
    var ga = document.createElement('script'); ga.type = 'text/javascript'; ga.async = true;
    ga.src = ('https:' == document.location.protocol ? 'https://ssl' : 'http://www') + '.google-analytics.com/ga.js';
    var s = document.getElementsByTagName('script')[0]; s.parentNode.insertBefore(ga, s);
  })();
</script>
```

6. Now deploy your site to a production URL with the analytics code in it (after testing it on dev and staging as usual). View source to confirm that both `ga.js` and `analytics.js` are present, as shown.

Product: Development Version

One sentence description.

480 x 300

1000 | \$6000 | 10
backers of \$10,000 days left

Preorder with Bitcoin

f t + 0

480 x 300

Placeholder text: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec porta, dui sagittis hendrerit rutrum, nunc leo tempus nisl, eu mollis justo velit at nunc. Fusce nec egestas sem. Donec fringilla ante lectus, a pellentesque lacus dignissim ac. Sed volutpat lorem ut congue malesuada. In facilisis scelerisque turpis sed lacinia. Donec in orci lectus. Donec auctor semper quam, eget rhoncus purus fringilla id. Phasellus id nibh eu risus ultrices adipiscing. Lorem ipsum dolor sit amet,

```

286      data-parent="#accordion2" href="#collapseOne">
287      What does FAQ stand for?
288    
```

```

289    </div>
290    <div id="collapseOne" class="accordion-body collapse">
291      <div class="accordion-inner">
292        Frequently Asked Question.
293      </div>
294    </div>
295  </div>
296  <div class="accordion-group">
297    <div class="accordion-heading">
298      <a class="accordion-toggle" data-toggle="collapse"
299      data-parent="#accordion2" href="#collapseTwo">
300        What's a Frequently Asked Question?
301      </a>
302    </div>
303    <div id="collapseTwo" class="accordion-body collapse">
304      <div class="accordion-inner">
305        Frequently Asked Question.
306      </div>
307    </div>
308  </div>
309
```

```

    </div>
  </div>
  <!-- Not crucial, but we put this under a CC By-SA 3.0 license. -->
  <!-- http://creativecommons.org/licenses/ -->
<div class="row-fluid footer">
  <div class="span12">
    <p>This work is licensed under
      the <a href="http://creativecommons.org/licenses/by-sa/3.0/">CC
      By-SA 3.0
    </a>, without all the cruft that would otherwise be
    put at the bottom of the page.</p>
  </div>
</div>
</div>

<script>
(function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;i[r]=i[r]||function(){
(i[r].q=i[r].q||[]).push(arguments),i[r].l=+new Date();a=s.createElement(o),
m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m)
})(window,document,'script','//www.google-analytics.com/analytics.js','ga');

ga('create', 'UA-42843113-1', 'bitstart.net');
ga('send', 'pageview');

</script>
</body>
</html>

```

```

/* Marketing Copy and Footer */
.copy {
  padding-top: 2.5%;
  padding-bottom: 2.5%;
  text-align: justify;
}
.asset {
  padding: 2.5% 0;
}
.footer {
  color: #cccccc;
  text-align: center;
}
.footer p {
  font-size: 11px;
}
.footer a {
  color: #ccccff;
}

/* http://support.addthis.com/customer/portal/questions/1136093-share-buttons-in-center-position */
div.addthis_toolbox {
  width: 174px;
  margin: 0 auto;
}

</style>
<script type="text/javascript">
var _gaq = _gaq || [];
_gaq.push(['_setAccount', 'UA-42843113-1']);
_gaq.push(['_trackPageview']);

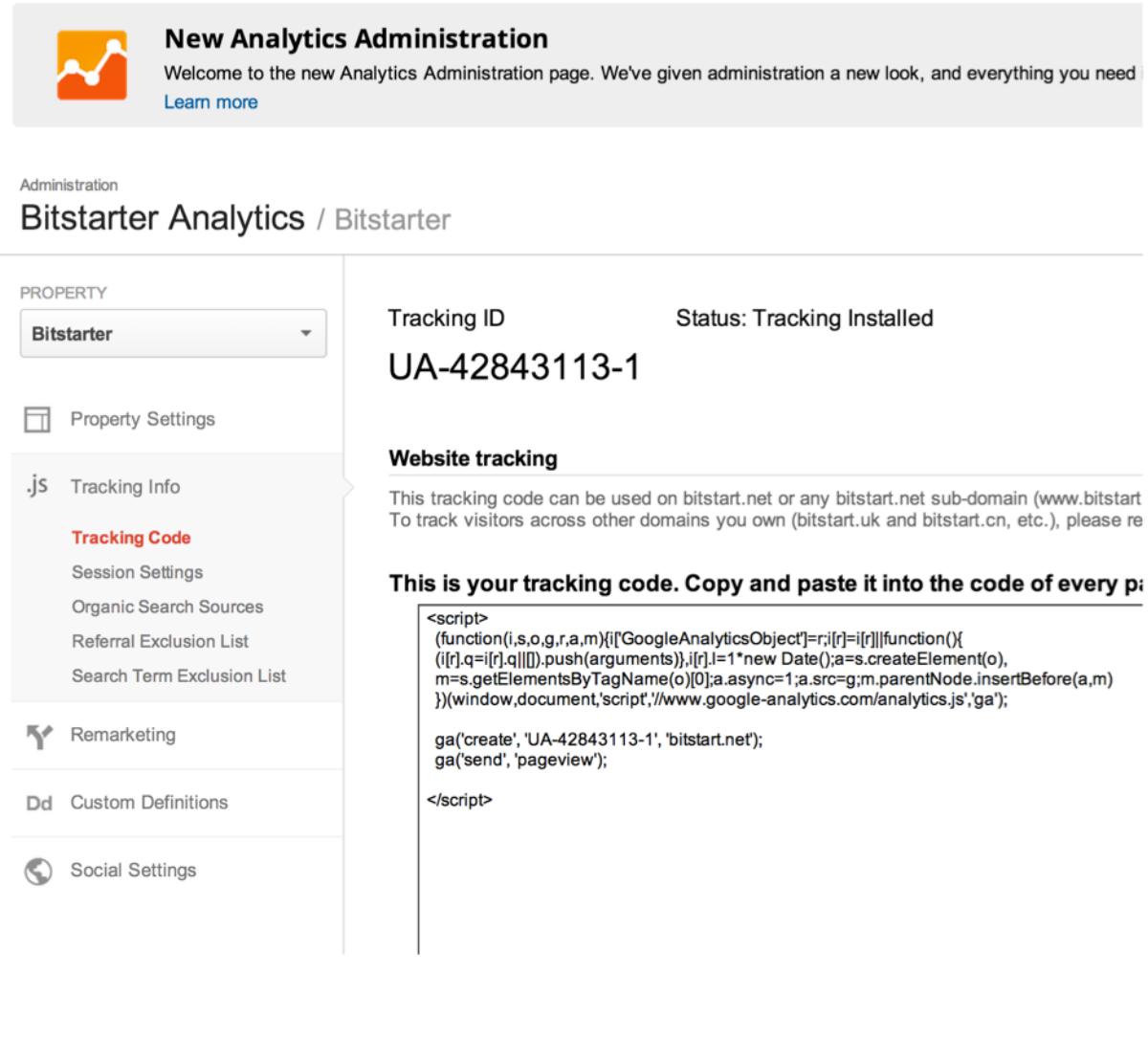
(function() {
  var ga = document.createElement('script'); ga.type = 'text/javascript'; ga.async = true;
  ga.src = ('https:' == document.location.protocol ? 'https://ssl' : 'http://www') + '.google-analytics.com/ga.js';
  var s = document.getElementsByTagName('script')[0]; s.parentNode.insertBefore(ga, s);
})();

</script>
</head>
<body>

<!-- Mobile-friendly navbar adapted from example. -->
<!-- http://twitter.github.io/bootstrap/examples/starter-template.html -->
<div class="navbar navbar-inverse navbar-fixed-top">
  <div class="navbar-inner">
    <div class="container">
      <button type="button" class="btn btn-navbar"
        data-toggle="collapse" data-target=".nav-collapse">
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
      </button>
      <a class="brand" href="#">Bitstarter</a>
    </div>
  </div>
</div>

```

7. After you refresh the production URL a few times with the ga.js code included as well, you should come back to the Analytics dashboard and see the magic words "Tracking Installed".



New Analytics Administration

Welcome to the new Analytics Administration page. We've given administration a new look, and everything you need

[Learn more](#)

Administration

Bitstarter Analytics / Bitstarter

PROPERTY

Bitstarter

Tracking ID: UA-42843113-1 Status: Tracking Installed

Website tracking

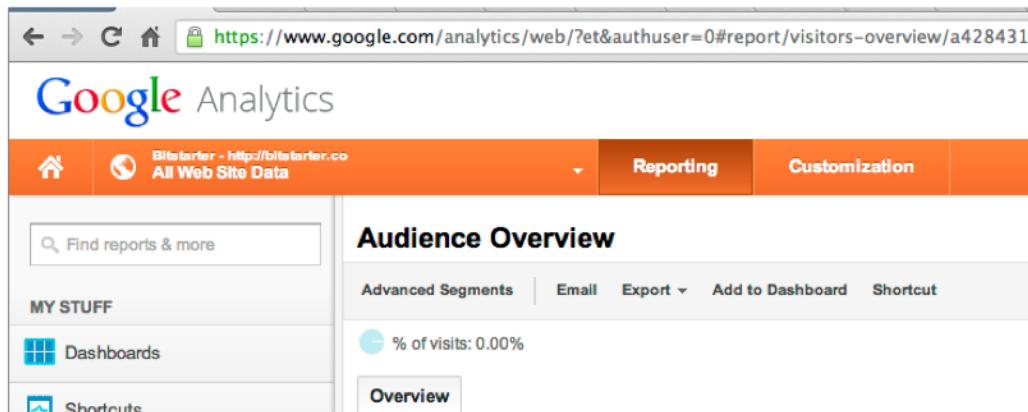
This tracking code can be used on bitstart.net or any bitstart.net sub-domain (www.bitstart To track visitors across other domains you own (bitstart.uk and bitstart.cn, etc.), please re

This is your tracking code. Copy and paste it into the code of every page.

```
<script>
(function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;i[r]=i[r]||function(){
(i[r].q=i[r].q||[]).push(arguments)},i[r].l=1*new Date();a=s.createElement(o),
m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m)
})(window,document,'script','//www.google-analytics.com/analytics.js','ga');

ga('create', 'UA-42843113-1', 'bitstart.net');
ga('send', 'pageview');
```

8. It will take up to 24 hours for your analytics to show up in the dashboard.



https://www.google.com/analytics/web/?et&authuser=0#report/visitors-overview/a428431

Google Analytics

All Web Site Data

Reporting Customization

Find reports & more

MY STUFF

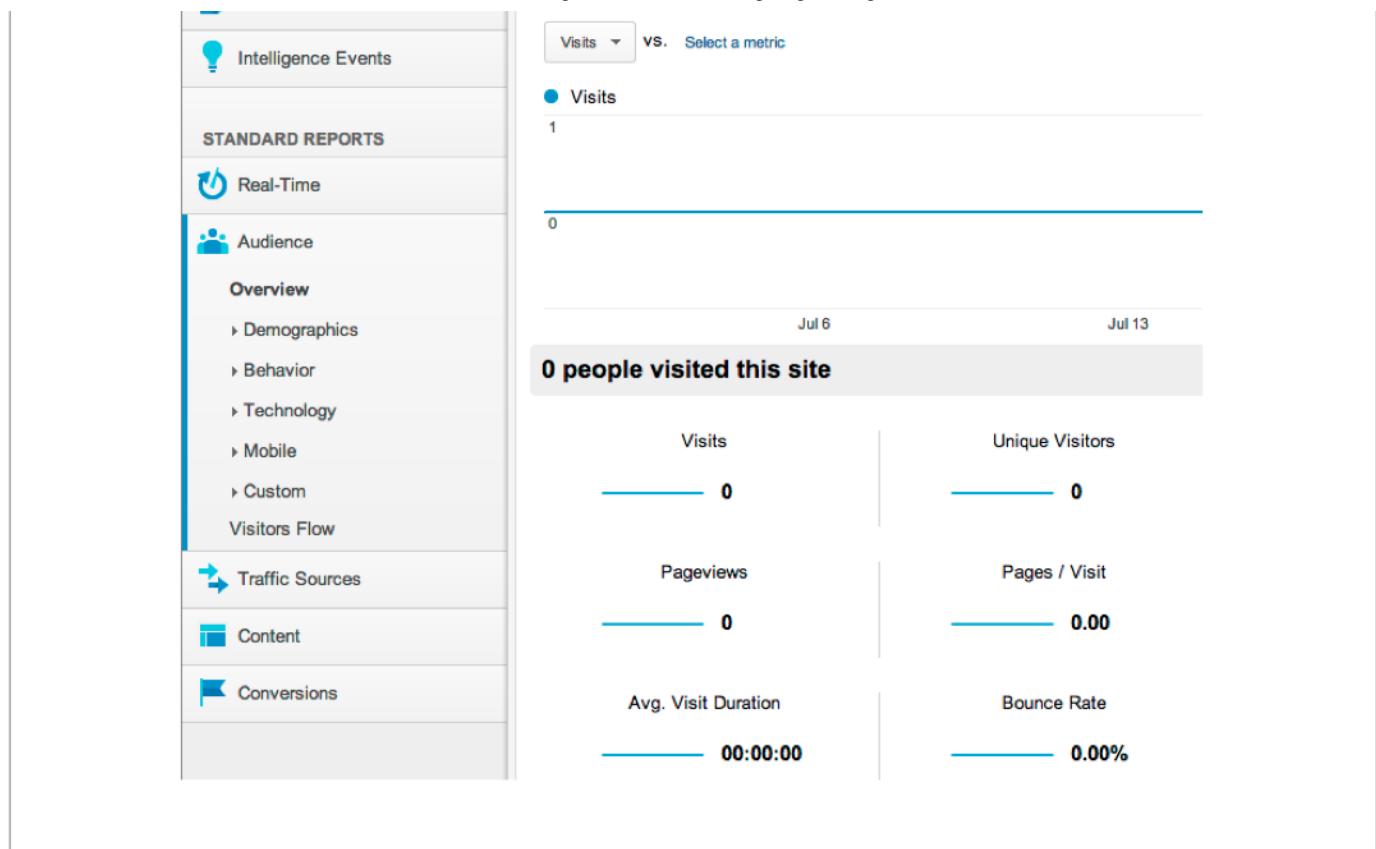
Dashboards Shortcuts

Audience Overview

Advanced Segments Email Export Add to Dashboard Shortcut

% of visits: 0.00%

Overview



The most important part of your Google Analytics setup is the UA string, which is `UA-42843113-1` in this example. This isn't a secure API key; it's visible to everyone on the web that visits your page and hits 'View Source'. But it's how Google identifies your site on their servers.

Once you deploy your site to the production URL (in this example, bitstart.net) with a `ga.js` snippet, the Google Analytics Admin page will say 'Tracking Installed' after you visit the page a few times. The tricky part is that if you only use `analytics.js` and don't also use `ga.js`, the Analytics Admin page won't say 'Tracking Installed'. This is a bug on Google's end in terms of their documentation. You can debug your setup with this Google link: [Verify your web tracking setup](#), though things should work if you followed the above instructions.

Another note: even if "Tracking Installed" shows up, it can take up to 24 hours for the first data to appear in your dashboard at <https://www.google.com/analytics/web/?hl=en#home>. It is not set up to provide realtime responsiveness. Note that if you want to explore more, newer startups like Mixpanel, Gauges, and Chartbeat are complementary to Google Analytics. Mixpanel focuses heavily on action monitoring ([more](#)), Gauges is about multi-site monitoring ([screenshots](#)), and Chartbeat centers on the realtime experience ([example](#)); these are areas that Google Analytics isn't optimized for.

Submit: Upload a file with your `UA-XXXXX-X` Google Analytics tracking code. This is just a unique string that identifies your Analytics installation which you'll get once you complete this part.

Part 4: Set up payments with Coinbase

In terms of practicalities, all you need to know for the purposes of the course is that Bitcoin (BTC) is a decentralized currency which will allow you to send and receive payments in any country without bureaucracy. You can see the current BTC exchange rates at <http://bitcoinity.org/markets>; at the time of writing 1 BTC is about \$100 USD, and has been for a while. To obtain a few BTC for the purposes of testing, you will want to check out [howtobuybitcoins.info](#). You can also check out [17 different ways](#) to buy Bitcoin (BTC), and there is more information at the [Buying Bitcoins \(newbie version\)](#) article on the Bitcoin Wiki. And if you're in the US, Coinbase now offers [instant bitcoin purchases](#).

Depending on how much time you have, please take a look at the following four resources to learn more about Bitcoin:

1. Two minutes: Video introduction. ([We Use Coins](#))
2. Ten minutes: Unfazed by Bitcoin's Wild Swings And Mysterious Origins, Silicon Valley VCs Place Their Bets ([TechCrunch](#))
3. Several hours: Second Market's Bitcoin Education Center ([Second Market](#))
4. Several days: Jon Matonis' roundup of Bitcoin educational resources, including links to the [Udemy](#) and [Khan Academy](#) courses. ([Matonis at Forbes](#))

For the purposes of the class the main advantage of Bitcoin is that you can get set up with merchant accounts with little or no hassle relative to

traditional payment gateways.

Coinbase is a Bitcoin payment provider with no international restrictions on merchant accounts at the present time, which is the primary reason we're using them in such an international class. Currently the [best funded team](#) in the space, one can think of them as "Paypal for Bitcoin", or "Stripe for Bitcoin". They provide both a simple way to buy Bitcoin and a fairly sophisticated API for running merchant accounts.

To get started with Coinbase sign up [here](#). You'll then want to set up a payment button as described [here](#). We'll use a few of the custom fields, including `data-button-style` and `data-button-text` (see [Customizing the Embed HTML](#)). Below we see the full flow of setting up a Coinbase account, getting a button, pasting it in, deploying it to production, placing a payment, seeing that payment hit your Coinbase account, and finally seeing it reflected in the global Bitcoin blockchain (see [here](#) and [here](#)). The PDF version of this figure is [here](#).

Coinbase for Bitcoin Payments

Here's how to install and configure Coinbase.

1. Sign up for Coinbase, configure your Company Profile, then get the Payment Button snippet from [coinbase.com/merchant_tools](#). Paste it into your index.html; you can customize it to be something like this (note bolded parts):

```
<a class="coinbase-button"
    data-button-style="custom_large"
    data-button-text="Preorder with Bitcoin"
    data-code="e853ae7e5a4d309e6df512e4dbb68700"
    href="https://coinbase.com/checkouts/
e853ae7e5a4d309e6e5512e4dbb68700">
    Preorder with Bitcoin</a>
<script src="https://coinbase.com/assets/button.js"
type="text/javascript"></script>
```

The screenshot shows the Coinbase Merchant Settings interface. On the left, there's a sidebar with links: Transactions, Buy/Sell Bitcoin, Recurring Payments, **Merchant Tools** (which is selected), and Account Settings. A promotional sidebar on the left says 'Get And Give Free Bitcoin' and includes social sharing icons for Twitter, Facebook, and Google+.

The main content area has tabs: Orders, Tools, Subscribers, and Settings (which is selected). Under the Company Profile section, there are fields for Company name (Acme Widgets Inc.), Logo (choose file), Website (http://example.com), Phone (+1 123 123 1234), Address (123 Main St.), City, State Zip, and Country. There are also radio buttons for Retail location: 'This is a retail location' (unchecked) and 'We have an online presence only' (checked). At the bottom is a 'Save Changes' button.

Below the main form, there's a link to 'Instant Payment Notifications' with a note about receiving order notifications to your website and a 'read more' link.

At the very bottom of the page, there's another navigation bar with links: Home, About, Merchants, Charts, Blog, Help, and an email address: startup.stanford.edu@gmail.com.

The screenshot shows the Coinbase Merchant Tools interface. At the top, there are tabs for 'Transactions', 'Buy/Sell Bitcoin', 'Recurring Payments', 'Merchant Tools' (which is selected), and 'Account Settings'. Below these are buttons for 'Payment Buttons', 'Payment Pages', 'Payment iFrames', and 'Email Invoices'. A banner at the top right says 'Create A Payment Button' with the subtext 'Accept bitcoin with an embedded payment window on your website.' and a 'Read more' link.

The main area is titled 'Get And Give Free Bitcoin' with a subtext: 'Invite your friends to Coinbase. We'll send you both 0.01 BTC for every friend who completes purchase of 1 BTC or more!' It includes social sharing icons for Twitter, Facebook, and Google+.

Below this, there are sections for 'Payment Type' (radio buttons for 'Buy now', 'Donation', and 'Subscription'), 'Button Style' (radio buttons for 'Pay with Bitcoin' in orange and 'Pay With Bitcoin' in blue), and 'Item Name' ('Bitstarter Tier') and 'Amount' ('BTC \$ 0.01'). An 'Item Description' field contains the text 'The first tier of my bitstarter product.' There is also a 'Show Advanced Options' link.

A large button labeled 'Generate Button Code' is present. To the right, there is a preview section with a 'Preview:' heading and a 'Pay with Bitcoin' button.

Payment button embed code:

```
<a class="coinbase_button" data-code="663aa7e5a4d309a6e5512edcbb68700" href="https://coinbase.com/checkouts/663aa7e5a4d309a6e5512edcbb68700">Pay With Bitcoin</a><script src="https://coinbase.com/assets/button.js" type="text/javascript">
```

2. If you customized the button and deployed it, your URL will look something like this. Experiment with a payment as shown. You'll need some Bitcoin in another Coinbase account to test it out. If in the US, just get some from Coinbase. If not in the US, try [howtobuybitcoins.info](#) first, and then go here if that doesn't work: <https://startupstanford.wufoo.com/forms/startup-engineering-bitcoin-test-request/>

The screenshot shows a web page titled 'Product: Development Version'. The page has a header with 'One sentence description.' and a placeholder image box with dimensions '480 x 300'.

To the right is a dark-themed sidebar with a progress bar and a 'Preorder with Bitcoin' button. The progress bar shows '1000 backers' and '\$6000' of '\$10,000' with '10 days left'. Below the sidebar is a second placeholder image box with dimensions '480 x 300'.

At the bottom, there is a paragraph of placeholder text: 'Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec porta, duis sagittis hendrerit rutrum, nunc leo tempus nisl, eu mollis justo velit at nunc. Fusce nec egestas sem. Donec fringilla ante lectus, a pellentesque lacus dignissim ac. Sed volutpat lorem ut congue malesuada. In facilisis scelerisque turpis sed lacinia. Donec in orci lectus. Donec auctor semper quam, eget rhoncus purus fringilla id. Phasellus id nibh eu risus'

The image is a composite of three screenshots illustrating a Bitcoin payment process:

- Top Screenshot:** A Bitstarter product page titled "Product: Development Version". It features a "Pay With Bitcoin" button. The button's modal window displays a QR code for sending 0.01 BTC to a specific address, along with a "Copy Address" and "Confirm Payment" button.
- Middle Screenshot:** A Coinbase.com payment confirmation dialog. It shows a Chrome logo and asks if the user is sure they'd like to continue paying 0.01 BTC to "New User". It includes "Cancel" and "OK" buttons.
- Bottom Screenshot:** A payment completion message. It says "Payment Complete" with a checkmark icon. It states: "Success! Your 0.01 BTC payment has been sent to startup.stanford.edu@gmail.com. Your confirmation number is G9ZK9KJT." It also includes a "Close This Tab" button.

Share This: I just paid NEW User in bitcoin using @Coinbase!
http://bitstart.net

[Tweet](#) 0 [Like](#) [Sign Up to see what your friends like.](#)

[Close Window](#) [Start A New Payment](#)

3. Once you actually receive some BTC, you will see it show up in your account. If you find the address associated with the transaction, you can also find it in the global block chain. At first the transaction will say "unconfirmed", and will be confirmed after 10 mins.

Welcome back startup.stanford.edu@gmail.com!

Balance: 0.01 BTC ≈ 1.00 USD

[Send Money](#) [Request Money](#)

Transaction	Date	Status	Amount
You received bitcoin from [redacted]	Jul 31, 2013	COMPLETE	+0.01

My Bitcoin Addresses

Advanced users may find the list of bitcoin addresses below useful. New bitcoin addresses are automatically generated for each payment on Coinbase and stay associated with your account forever (so it is safe to reuse them).

You can add a label or callback URL to an individual address by clicking 'Edit'. Callback urls can be used to receive automated notifications when a payment arrives.

Address balances are not related to your total account balance, and do not reflect funds held in offline storage.

Address	Balance	Label	Callback URL	Created
18y5qT2gJxR3HtDTs9pqFph5qv5BwZ	0.01 BTC			2 minutes ago
17HG3HPg14551J4995L4W8e6my2mJ1dzq	0.00 BTC			about 1 hour ago

OKOS SERVICES LIMITED [GB] https://blockchain.info/address/18y5qT2gJxR3HtDTs9pqFph5qv5BwZ

Blockchain

Home Charts Stats Markets Developers Wallet

The screenshot shows a Bitcoin address summary and transaction history. At the top, there's a QR code and a summary table with fields like Address, Hash 160, and Tools. Below this is a 'Transactions' section with two entries. The first transaction is highlighted with a red box and labeled 'Unconfirmed Transaction!'. It has a green arrow pointing to it. The second transaction has a blue arrow pointing to it and is labeled '53 Confirmations'. Both transactions show a value of 0.01 BTC.

Summary		Transactions	
Address	18yx5qT2gLXd3HlDTs9pqFph5qjv5BwZ	No. Transactions	1
Hash 160	578e27d720fbfae4d31e0886378cb87fe257cd0e0	Total Received	0.01 BTC
Tools	Taint Analysis - Related Tags - Unspent Outputs	Final Balance	0.01 BTC

Transactions (Newest First)

Hash	Date	Value
670edf77e352a567582d76416f5770ce0ca89a07d138c47fb79aa61bf7774036	2013-07-31 13:18:51	0.01 BTC
1CWS511ZADQxzG78Txowpnv9ujw5fAkjkjwR 1Pw8yLj28KuvUxGr8yMYY31xhBomjs5xb	2013-07-31 13:18:51	0.01 BTC
670edf77e352a567582d76416f5770ce0ca89a07d138c47fb79aa61bf7774036	2013-07-31 13:18:51	0.01 BTC
1CWS511ZADQxzG78Txowpnv9ujw5fAkjkjwR 1Pw8yLj28KuvUxGr8yMYY31xhBomjs5xb	2013-07-31 13:18:51	0.01 BTC

In order to test out Coinbase preorders through your site, you'll need some BTC. In the US it's easy and fast to purchase from Coinbase itself. If you are a non-US resident, first try [howtobuybitcoins.info](#). If all else fails, sign up at [this form](#) and we will send you a small amount of BTC (less than \$1 USD) to test. You provide a Bitcoin address from your Coinbase account by going [here](#), clicking "Create New Address", and then pasting it into the appropriate form field. *Please only use this if you are outside the US and truly can't get BTC in your country via howtobuybitcoins.info.* We reserve the right to cut this off if it becomes abusive. Note that you can use even \$1 USD (~.01 BTC) for quite a lot of testing because transaction fees are now either 0 BTC (for small transactions with large outputs and high priorities) or .0001 BTC as of version 0.8.2 of the client (see [here](#) and [here](#) for details).

Submit: Upload a file with one line containing your data-code="e853ae7e5a4d309e6e5512e4dbb68720" Coinbase identifier code. This is a unique string that identifies your Coinbase button which you'll have once you complete this part.

Part 5: Set up USD payments with Stripe (optional, requires SSL certificate and US/Canadian Bank Account)

If you do not want to use Bitcoin/Coinbase for payments, and are located in the US or Canada, you can try using Stripe [here](#). The main issue here is that to deploy Stripe in production, you will need an SSL certificate (see [here](#)), which will run you \$20-100 or so if you use DNSimple. You can work around this to an extent by using the HTTPS URLs provided by Heroku (e.g. <https://yourapp.herokuapp.com>). If you do want to use Stripe, read the very last section of [Lecture 7](#) ("Setting up HTTPS and Google Apps"). Then sign up for a Stripe account. You'll need a US or Canadian bank account and will need to google around to find your bank's routing number ([example](#)). You can then test your Stripe set up using the test credit cards [here](#), and then a real credit card. We do recommend getting an SSL certificate if you plan to do something serious with your domain.