Support Engineer Interview: Written Questions (Public)

Thanks for much for chatting with me about the Support Engineer role!

As you might imagine, we do a lot of writing here at Stripe, so we'd like to get a better idea of how you'd handle support questions similar to what we typically see. I've attached a set of questions and a sample Stripe response; when you have a few hours, it'd be great if you could answer these as if they were from real Stripe customers and you are a Field Engineer.

When answering, you should feel free to use any resources available to you, such as the Stripe documentation at https://stripe.com/docs and https://support.stripe.com/, Stack Overflow answers, search engine results, and testing against the API yourself. *There is no strict time-limit, but the aim is not for perfect answers and we suggest that you set aside an hour or two to work on these. If you're stuck on an answer or haven't been able to solve all the user's issues, we'd love to see a partial answer that is as helpful as you can be.* We will evaluate your responses in order to assess your ability to interact with users of varying levels of expertise as well as your technical background. Optionally, feel free to give a short summary after each answer of anything additional you'd like us to know about why you answered that way. Please don't hesitate to reach out if you have any questions about what is expected or what is being asked in any prompt.

Question #1

Hi Stripe,

Really awesome product---I was able to get my site up and running with 1000 live charges in a week! Now, I've been trying to do some data retrieval/analytics and I'm really running into serious problems... So, I wanted to grab all of my charges which I'm doing with:

charges = Stripe::Charge.list()

as the documentation suggests. That seems to return ten charges rather than all of them, though! Can you show me how to get all of my charges? Is that even possible? It would be really awesome if you could show me how to produce a list of the charge id and charge amount for all 1000 charges. Thanks so so much!

Cheers,
Donald

Question #2

Hi,
I'm a developer working on a new Stripe integration mostly in C#. Before you ask, I can't use the `stripe-dotnet` library, because I'm on a framework that doesn't support it. I'm pretty sure nothing changed on our end, but we started getting an error message "invalid_request_error", saying "we did not provide an API key." What did you break? I've found some of the third-party libraries on github, but I can't use them and must work directly against the API. I've written integrations like this tons of times! I've provided our code down below. Let me know if you see anything as we're hoping to go live tomorrow. Fix whatever it is you broke on my account so I can make a new working payments page again!
- James

```
public ActionResult CreateCharge(string token) {
        /*
         * Accepts token id (eg. tok_xxx) and creates charge using the
Stripe API.
         * https://stripe.com/docs/api#create_charge
         */

        // Get the Stripe Secret API Key from Configuration File.  (eg.
sk_test_W8xJYzw56NCHun0FT9iGIJeI)
        string clientSecretKey = ConfigurationManager.AppSettings
["ClientSecretKey"];

        const string ChargeUrl = "https://api.stripe.com/v1/charges?amount=
{0}&currency={1}&source={2}&description={3}";
        string requestUrl = HttpUtility.UrlPathEncode(
                String.Format(ChargeUrl, 1000, "usd",
"tok_19xLu8HN9aKw9vrkUsflNWOI", "Test charge to text@example.com")
        );

        HttpWebRequest request = WebRequest.Create(requestUrl) as
HttpWebRequest;
        request.Headers.Add("Authorization",
"sk_test_W8xJYzw56NCHun0FT9iGIJeI");
        request.ContentType = "application/x-www-form-urlencoded";
        request.Method = "POST";

        dynamic response;
        using (HttpWebResponse httpResponse = request.GetResponse() as
HttpWebResponse)
        {
                StreamReader reader = new StreamReader(httpResponse.
GetResponseStream());
                string jsonResponse = reader.ReadToEnd();
                response = JsonConvert.DeserializeObject(jsonResponse);
        }

        // Write the Charge ID to the console.
        System.Console.WriteLine(response.id);

        return RedirectToAction("Index", "Home");
}
```

Tips:

- *Is this a question about C# or is this a question about his understanding of how a request should look? "Know the difference, you must." :yoda:*

Question #3

Woo-hoo!! We signed up with Stripe a couple weeks ago just before our launch and everything went really awesome. You all really helped us out. We just did something simple with single payments but it looks like subscriptions may be even better for us. That all looks pretty easy to use, but webhooks are totally new to me and we've been having trouble understanding how failed payments work. I just have some questions:

1) I think webhooks can tell my computer that something happened, like getting paid for a subscription. But how does that really work? I don't know if I need to use the API to ask for new activity every month.

2) Webhooks, can't do this, I don't think, but I'd love to see when a charge doesn't go through too!

Can webhooks give more than just info about subscriptions? It'd be so great if we can also find out about things like charges not going through.

Hope we can figure all of this out! I really like Stripe and want to use more of it (:

Thanks
Jessica

Question #4

Hi Stripe,

First, have to say, great product! I'm a pretty season Python developer with no web dev experience who, for whatever reason, has been tasked with building payments for my university's website. I think I have everything working with token creation and understand the basics of charge requests, but I'm running into some messy issues in testing that I just can't figure out how to resolve... First is that I can see in my logs that charges are happening on the backend but I'm expecting it to be for $100 not $1 and then to top it all off, I'm getting a weird error on the frontend when trying to handle error messages I'm passing back? In that, I don't see my error messages. I'm sorry this probably all too basic... Anyway, you can find my code at https://gist.github.com/anelder-stripe/b1647282fbffae35bdbd29439da1f522 and the site itself up at https://dry-tundra-35932.herokuapp.com/. Your help would be really appreciated because I'm really spinning my wheels here! Thanks so much!

Cheers,
Francesca

Question 1:

Hi Donald,

Wow! 1000 live charges per week. I'm so excited for you! I'm happy to hear that you are a fan of our product, I am too! Let's see if I can help you with your data retrieval issue.

It looks like you called the `Stripe::Charge.list()` method by default with no additional arguments were passed in. When this method is called <u>by default, it will automatically fetch 10</u> of your most recent charges. We can expand the number of charges to <u>at most 100</u> by inputting the number in an additional limit argument[1]:

```
Stripe::Charge.list({limit:100})
```

100 is better, but it still is not 1000! Let's see if we can do better. We're going to get a bit into pagination. Pagination is exactly as it sounds, and I like to visualize it as turning back a page or turn a page forward when reading a book. If you make a list request for 100 objects(like the code above), we can assign the last object on the list to a variable(for example, let's say `lastObj`).[2] This time call the method again with the ending_before argument:

```
Stripe::Charge.list({limit:100, ending_before:lastObj.id})
```

This way, we get back the 100 previous charges since the lastObj. This is better, but it is still not all of your charges. To request all of your charges, we can use the Auto-Pagination[3]:

```
charge_array=[]

Stripe::Charge.list().auto_paging_each do |charge|
     #do something with each charge
     #i.e. push each charge into an array to access later
     charge_array.push(charge)
end
```

You should be able to request all of your charges this way! Please feel free to contact me with any further clarification and questions. I'm always happy to help. I hope your site continues to grow as much as it has been!

Best Wishes,

[1]https://stripe.com/docs/api/charges/list?lang=ruby#list_charges-limit
[2]https://stripe.com/docs/api/charges/list?lang=ruby#list_charges-ending_before
[3]https://stripe.com/docs/api/pagination/auto?lang=ruby

Summary:

Donald'wrote his email enthusiastically and I decided to respond with the same excited tone. It seems he had some questions regarding the functionality of the Stripe Pagination API. Though I could've provided him with the concise solution that directly pointed him to the Auto-pagination methods, I decided to expose him to the ending_before method first. Donald sounded very curious about functionalities and I thought exposing him to other related methods can help him understand and explore our API better.

Question 2:

Hi James,

Going live by tomorrow is sounds like an urgent deadline, I know this can be a very stressful time. I'm going to do all I can to help you.

I noticed in your code where you imported the secret API Key from the configuration file into a variable called: `clientSecretKey`.

```
string clientSecretKey = ConfigurationManager.AppSettings ["ClientSecretKey"];
```

I also noticed this variable `clientSecretKey` is not used in the request header, instead, a hard-coded string that looks very much like an API key was in its place:

```
request.Headers.Add("Authorization", "sk_test_W8xJYzw56NCHun0FT9iGIJeI");
```

I would suggest trying switching the `"sk_test_W8xJYzw56NCHun0FT9iGIJeI"` string with the variable `clientSecretKey` in the request header. Let me know if this works, if not, I will gladly explore other possible solutions with you. I'm more than happy to be of further assistance!

Best wishes,

Summary:

James wrote his email in a very distressed manner. I decided to first relate to him and empathize with his difficult situation. I felt in distressed situations, it is usually better to keep the pleasantries to a minimum and approach the problem as concisely and directly as I can. Having reviewed his code and provided with the hint that he changed nothing on his end, I felt the most likely issue was the importing of the API key.

Question 3:

Hi Jessica,

I'm really glad you've found us helpful! I'm always happy to hear that!

Webhooks is a pretty neat technology indeed. Webhooks work similarly to other request-response transmission systems.[1] You may set up for specific types of events[2] on your Stripe account(Yes, a failed payment is an event too!), once the specified event is triggered, it will be sent toward your API backend like any other HTTPS request.[3]

Depends on how your server backend is set up, you can then customize what to do with these events once you receive them. There are many different types of events. [4] For example, if a charge does not go through, a `charge.failed` event will be triggered.[5]

Feel free to check out all of the event types that Stripe supports. I'm happy to clarify further any points further if you are still unsure about any topic.

I find sometimes new technologies can be extremely intimidating, at least initially. If you feel like you may want to ask outside developers to help with integrating webhooks or other technologies. There are many freelance developers that may be best suited for your needs. They can be found here:

     - http://www.guru.com/d/jobs/q/stripe/ (Guru)
     - http://www.toptal.com/ (TopTal)
     - https://www.upwork.com/o/jobs/browse/skill/stripe/ (UpWork)
     - http://www.peopleperhour.com/freelance/stripe (PeoplePerHour)
     - https://coworks.com/ (CoWorks)

I hope my answers were helpful! Please feel free to contact me with any further clarification and questions. I'm always happy to help!

Best Wishes,

[1]https://stripe.com/docs/webhooks
[2]https://stripe.com/docs/api/events
[3]https://stripe.com/docs/webhooks/build
[4]https://stripe.com/docs/api/events/types
[5]https://stripe.com/docs/api/events/types#event_types-charge.failed

Summary:

Jessica's sounded as if she was very curious about how webhooks works, and particularly if webhooks can notify her of failed payments. I provided her a high-level explanation while referenced docs to each topic. Though I can not gage her technical proficiency in the email, I decided to provide her with additional resources just in case. Given how generalized her questions are, I expect to receive ongoing follow up from her to further clarify. I believe this is specific enough for the first response email.

Question 4:

Hi Francesca,

I'm so glad that you like our product! Taking on web development for the first time can be very intimidating. Great challenges can also lead to great rewards! Let me see if I can help you with your issues at hand.

Thank you for showing me deployed site and the codes on Github, I'm always excited to see another developer's code and it makes troubleshooting much easier. While looking at your code, I noticed something interesting in your backend file on line 14-15:

```
amount_in_dollars = float(request.form['amount'])
amount_in_cents = int(amount_in_dollars)
```

It seems there is a missing step in converting the payment amount from dollars to cents. While the data type is converted, there is no step for multiplying the amount's dollar value by

100 to reach the amount's value in cents. Adding this step should resolve the $100 vs $1 issue you have been having.

As for the strange error message that shows up, I spotted something interesting as well. On line 17 of the frontend.js file:

```
$form.find('.payment-errors').text(response.error);
```

It looks like the code is calling the JQuery .text method on the `response.error` object. While the error message is nested inside the response.error Object, the method only works on strings, numbers or booleans[1]. In this case, calling the method on an object will return an error.

To amend this problem, one solution would be keying into the error message in the `response.error` object and display the message string instead:

```
let errorMessage= response.error.message
$form.find('.payment-errors').text(errorMessage);
```

I hope that was helpful and don't hesitate to let me know if you have other questions! I think you did a great job for your first time venturing into web development, and I can't wait to see what you come up with next!

Best Wishes,

[1]https://api.jquery.com/text/

Summary:

Francesca sounded concerned that she did not have much experience in web development. I thought to first respond to her hesitations with some encouragement. Having examined her code and used a browser dev tool to debug on her deployed site, I was able to understand and provide solutions to her two issues. I decided to conclude the email with further encouragement.