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Interview Assessment

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Interview Assessment

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Q1. Support Question 1

Question.	Response.	Assumption/ Notes.
From: john.doe@anenduser.com **To:** support@piano.io **Subject:** Piano ID login Hello Piano, I am struggling to understand how to create a login button on my website. Can you send me a code snippet for me to use that shows how to have a login button? Regards, John	**To:** john.doe@anenduser.com **From:** support@piano.io **Subject:** Piano ID login Hello John, Thank you for your support enquiry. The code you require can be achieved in two steps: Firstly, please have your application id (AID) ready for use in the button code. An example of an AID code is o1sRRZSLlw and the length of your AID should also be exactly 10 characters. Secondly, the button code you require is a link button that you can embed on your website. The HTML code below will display only the login controls and exclude any registration controls. The code is shown at the end of this email. Please replace <AID> with your application id. You can further configure the login template elements such as height, width and more by going to Manage-->Templates-->Piano ID. Please let me know if you require further assistance. Regards Jeneby Mathews Technical Consultant	-- • It is assumed that the default login page URL is: https://id.piano.io/id/api/v1/identity/vxauth/authorize? • It is assumed that the client is not asking about the look and feel of the login page, so parameters for height, width, modal etc. excluded. This can be dealt with if requested in a follow-up question. • It is assumed that the client is NOT using an inline template, so the detailed instructions for embedding inline button have been excluded. • The tp.pianoId.show() JavaScript settings for login have been disregarded because it is assumed that the client request is for a simple code to embed a "Button" on their website and not code to reconfigure a template.

HTML Rendering :

[Piano ID Login]

HTML Code:

```html
<style>
  .button {
        background-color: gray; /* Green */
        border: 1px;
        color: white;
        width: 180px;
        padding: 5px;
        text-align: center;
        display: inline-block;
        font-size: 16px;
        cursor: pointer;
        border-radius: 12px;
    }

    .link {
        color: white;
        font-family: 'Century Gothic':Verdana,Arial;
        text-decoration: none;
        font-size: 18px;
    }
</style>

<div class="button">
        <a class="link"
        href='https://id.piano.io/id/api/v1/identity/vxauth/authorize?response_type=code&client_id=<AID>&stage=mobile&disablesign
        up=true&screen=login&displaymode=popup' width=400px
        target="_blank">Piano ID Login</a>
</div>
```

Testing the Support Response For Code:

I have tested the log-in button using the Piano.io, sandbox.tinypass.com and application id "o1sRRZSLlw". I do this to confirm that the information being given to the client is accurate as part of my support process.

The login page for the support ticket and for the sandbox appears as shown on image the right.
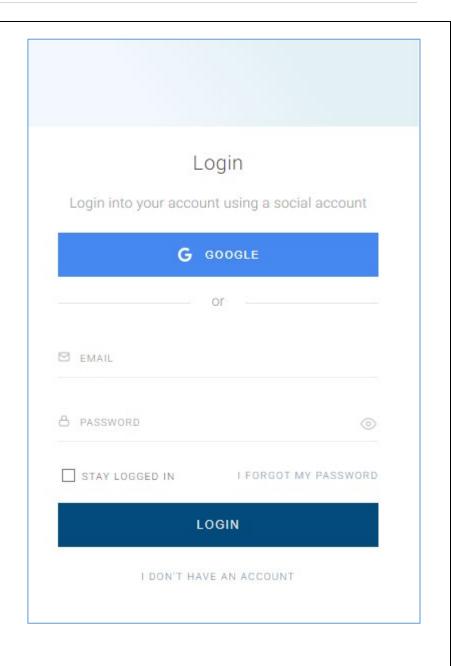
Login button for the sand-box is:

```
<div class="button">
<a class="link"
href='https://sandbox.tinypass.com/id/?response_type=code&client_id=o1sRRZSL
lw&stage=mobile&disablesignup=true&screen=login&displaymode=popup&width=400p
x' target="_blank">Piano ID Login</a>
</div>
```

Added new registration using the Sandbox. Using Piano API I was able to check that the login button works by creating a new user:
Request URL:
https://sandbox.tinypass.com/api/v3/publisher/user/search?aid=o1sRRZSLl
w&api_token=zziNT81wShznajW2BD5eLA4VCkmNJ88Guye7Sw4D&email=te
st-login&limit=100&offset=0

```
{
  "code": 0,
  "ts": 1601192999,
  "user": {
    "first_name": "J",
    "last_name": "Mathews",
    "personal_name": "J Mathews",
    "email": "test-login@assessments.io",
    "uid": "PNIwGolcnqhazws",
    "image1": null,
    "create_date": 1601187149,
    "reset_password_email_sent": true,
    "custom_fields": []
  }
}
```
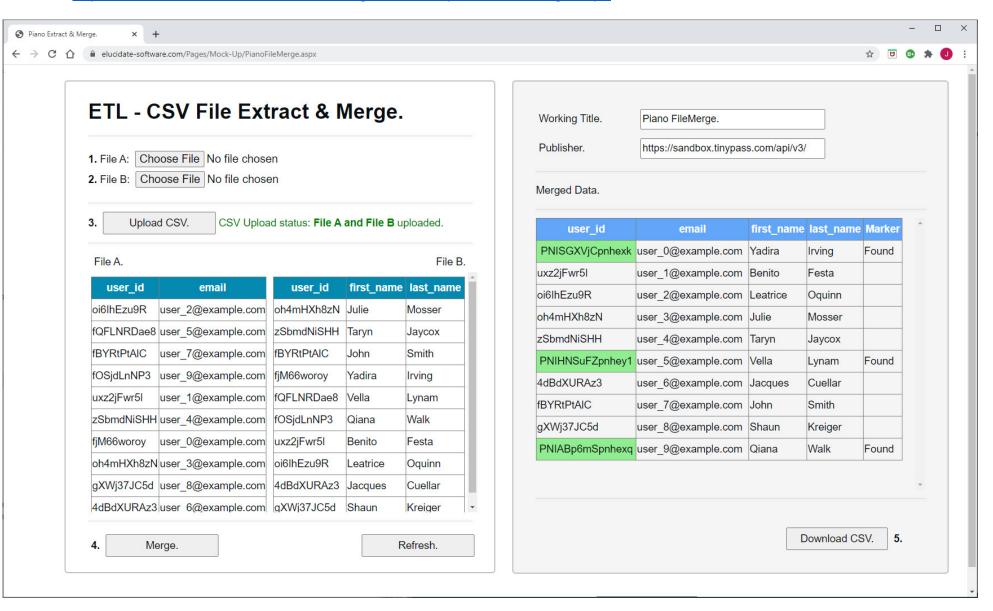
Login

Login into your account using a social account

G GOOGLE

or

✉ EMAIL

🔒 PASSWORD 👁

☐ STAY LOGGED IN   I FORGOT MY PASSWORD

LOGIN

I DON'T HAVE AN ACCOUNT

Q2. Support Question 2

Question.	Response.	Assumption/ Notes.
From: keyuser@somepublisher.com **To:** support@piano.io **Fwd:** Not able to sign up. Our team has received a ticket from an individual who is having trouble setting up his digital access account. When he tries to log in, he gets the message "You have successfully logged in". But then when he opens an article he gets the message asking him to purchase a subscription. Here is his contact information: Ryan Kanp - Enduser@anenduser.com The Piano dashboard confirms his account, but there are no payment details. Can you please look into Mr. Kanp's account and help us resolve this issue? Regards	**To:** keyuser@somepublisher.com **From:** support@piano.io **Subject:** Piano ID login Hello Key user, The "successfully" logged-in message indicates that you have granted Ryan access to the Piano ID platform. However, you need to perform further tasks to enable his access to digital material. Please use the Piano dashboard to add : 1. Ryan's user account for digital material. 2. A new subscription to digital material. 3. Reclaim revenue/engagement you might have otherwise lost from these subscriptions. Both user account and payment terms are needed before can save the subscription details. To subscribe Ryan, who is an existing user, click the subscribe button (shown as a silhouette with a plus sign) from your dashboard, then add the payment terms and subscription(s). For more information and screenshot on how to do this, please refer to https://docs.piano.io/creating-subscriptions-for-new-or-existing-users/#subanexistinguser Please advise if you require further assistance. Regards Jeneby Mathews - Technical Consultant.	Assumptions: • Details of Mr Ryan Kamp not found on sandbox for test, so could not see exact information on dashboard. • After successfully creating the user account, payment terms and subscriptions it is assumed the dashboard will be with the current status.

Q3. Coding Assignment.
3.1 C # /ASP.NET Solution.

Question.	Response.	Assumption/ Notes.
The client has provided 2 csv files with user data that they would like to import to the system: However some user IDs are incorrect, because these users already exist in the system under different user_id value. Generate a merged file in the format: But make sure that for the incorrect records, user_id is taken from the system, rather than from the list provided from the client.	**1, Quick Review C# Solution:** Please consider a quick review UI using this link: **https://www.elucidate-software.com/Pages/Mock-Up/PianoFileMerge.aspx** The solution on this link uses four buttons to quickly demonstrate file merge, as follows **Button 1 & 2** : Select source csv FileA and then FileB. **Button 3** : Upload both files using single button and display data on two Grids Views on the UI. **Button 4** : Cross-check & Validate UIDs using Piano.io APIs and then Merge Files. Highlight existing UIDs in green on a third Grid View. **Button 5** : Download Merged CSV file, labelled File C.	Assumption 1. Folder and File read/write permissions where FileA.csv and FileB.csv are located.

Live Link: **https://www.elucidate-software.com/Pages/Mock-Up/PianoFileMerge.aspx**

ETL - CSV File Extract & Merge.

1. File A: [Choose File] No file chosen
2. File B: [Choose File] No file chosen

3. [Upload CSV.]   CSV Upload status: **File A and File B** uploaded.

Working Title.   Piano FileMerge.

Publisher.   https://sandbox.tinypass.com/api/v3/

Merged Data.

File A.

user_id	email
oi6IhEzu9R	user_2@example.com
fQFLNRDae8	user_5@example.com
fBYRtPtAIC	user_7@example.com
fOSjdLnNP3	user_9@example.com
uxz2jFwr5l	user_1@example.com
zSbmdNiSHH	user_4@example.com
fjM66woroy	user_0@example.com
oh4mHXh8zN	user_3@example.com
gXWj37JC5d	user_8@example.com
4dBdXURAz3	user_6@example.com

File B.

user_id	first_name	last_name
oh4mHXh8zN	Julie	Mosser
zSbmdNiSHH	Taryn	Jaycox
fBYRtPtAIC	John	Smith
fjM66woroy	Yadira	Irving
fQFLNRDae8	Vella	Lynam
fOSjdLnNP3	Qiana	Walk
uxz2jFwr5l	Benito	Festa
oi6IhEzu9R	Leatrice	Oquinn
4dBdXURAz3	Jacques	Cuellar
gXWj37JC5d	Shaun	Kreiger

user_id	email	first_name	last_name	Marker
PNISGXVjCpnhexk	user_0@example.com	Yadira	Irving	Found
uxz2jFwr5l	user_1@example.com	Benito	Festa	
oi6IhEzu9R	user_2@example.com	Leatrice	Oquinn	
oh4mHXh8zN	user_3@example.com	Julie	Mosser	
zSbmdNiSHH	user_4@example.com	Taryn	Jaycox	
PNIHNSuFZpnhey1	user_5@example.com	Vella	Lynam	Found
4dBdXURAz3	user_6@example.com	Jacques	Cuellar	
fBYRtPtAIC	user_7@example.com	John	Smith	
gXWj37JC5d	user_8@example.com	Shaun	Kreiger	
PNIABp6mSpnhexq	user_9@example.com	Qiana	Walk	Found

4. [Merge.]   [Refresh.]

[Download CSV.] **5.**

3.2 Python Coding Solution.

Question.	Response.	Assumption/ Notes.

The client has provided 2 csv files with user data that they would like to import to the system:
 	
However some user IDs are incorrect, because these users already exist in the system under different user_id value. Generate a merged file in the format:
 	
But make sure that for the incorrect records, user_id is taken from the system, rather than from the list provided from the client.
	1, Quick Review Python Solution:
	
	1. Create folder c:\temp\fileuploads
	
	2. Copy three files to folder - two csv source files and code file.
	    #main.py
	    #FileA.csv
	    #FileB.csv
	
	3. Run cmd.exe
	
	4. in Cmd.EXE change active directory to C:\temp\fileuploads.
	
	5.Run main.py application
	
	6.Follow the three prompts by entering
	  Prompt 1 enter:
	C:\temp\fileuploads
	  Prompt 2 enter: FileA.csv
	  Prompt 3 enter: FileC.csv
	
	7 Processing of file A and B. The merged file C is displayed.
		Assumption 1.
		
		No prior python experience.
		
		As indicated in on my resume and in the interviews, I have limited previous python coding project experience. I have great C# experience which I have ported to the basic main.py indicated here in just under a few hours.
		
		No time available to learn Python JSON and the validation shown in the C# project to Piono search/user API is included only in the C# project.

Question.	Response.	Assumption/ Notes.

Select Command Prompt

```
Microsoft Windows [Version 10.0.18362.1016]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\Jeneby Mathews>cd c:\temp\fileuploads

c:\Temp\FileUploads>main.py

Enter Directory for File A and File B
or enter X to Exit: C:\Temp\FileUploads

Enter name of FIRST source file including .csv extension
or enter X to Exit: FileA.csv

nEnter name of SECOND source file including .csv extension
or enter X to Exit: FileB.csv


processing, please wait.....


0 user_id email first_name last_name
1 oi6IhEzu9R user_2@example.com Leatrice Oquinn
2 fQFLNRDae8 user_5@example.com Vella Lynam
3 fBYRtPtAlC user_7@example.com John Smith
4 fOSjdLnNP3 user_9@example.com Qiana Walk
5 uxz2jFwr5I user_1@example.com Benito Festa
6 zSbmdNiSHH user_4@example.com Taryn Jaycox
7 fjM66woroy user_0@example.com Yadira Irving
8 oh4mHXh8zN user_3@example.com Julie Mosser
9 gXWj37JC5d user_8@example.com Shaun Kreiger
10 4dBdXURAz3 user_6@example.com Jacques Cuellar


c:\Temp\FileUploads>_
```

Validations completed in the C# application that have not been included here.

Try catch exception handling
Type validation
I/O file validation

These require a small investment in python training time necessary to complete the python code to the same standard as the C# code.

Areas I have considered and implemented in the C# and NOT implemented in the Python code are:

- Replacing C# API Module with Python module that include the Python JSON much in the same way as the shown in the C# project.
- Replacing C# "while" loops with python while loops.
- Using same C# exception handling using Try....Except in the python program in exactly the same code sections.
- Implementing python classes, same as those in the C# project.

I am looking forward to porting all my C# skills to python coding or the principal code base used at Piano.

Appendix.

Github links

1. https://github.com/ePossumAU/Piano.io

Source Code – Sample C# Piano API calls.

```
PianoFileMerge2                                                      —  ☐  ✕

APIs.cs  ⊹ ✕
PianoFileMerge2              ▾  ⊀ PianoFileMerge2.PianoAPIs      ▾  ⊙ GetUserDetails(string searchEmail)           ▾

105                                                                              ⊹
        1 reference | 0 changes | 0 authors, 0 changes
106     public string Get(string uri)
107     {
108         HttpWebRequest request = (HttpWebRequest)WebRequest.Create(uri);
109         request.AutomaticDecompression = DecompressionMethods.GZip | DecompressionMethods.Deflate;
110
111         using (HttpWebResponse response = (HttpWebResponse)request.GetResponse())
112         using (Stream stream = response.GetResponseStream())
113         using (StreamReader reader = new StreamReader(stream))
114         {
115             return reader.ReadToEnd();
116         }
117     }
118
        1 reference | 0 changes | 0 authors, 0 changes
119     public string[] GetUserDetails(string searchEmail)
120     {
121         string[] retValue = new string[2] { string.Empty, string.Empty };
122
123         //URI builder for user/search
124         var appDomain = "https://sandbox.tinypass.com";
125         var appId = "o1sRRZSLlw";
126         var appToken = "zziNT81wShznajW2BD5eLA4VCkmNJ88Guye7Sw4D";
127         var appFolder = "user/search";
128         var maxRecords = 1;
129         var apiString = $"{appDomain}/api/v3/publisher/{appFolder}?" +
130             $"aid={appId}&" +
131             $"api_token={appToken}&" +
132             $"email={searchEmail}&" +
133             $"limit={maxRecords}&offset=0";
134
135         var userData = Get(apiString);
136
137         UserSearch jsonResult = Newtonsoft.Json.JsonConvert.DeserializeObject<UserSearch>(userData);
138
139         if (jsonResult.Users.Count > 0)
140         {
141             string systemEmail = jsonResult.Users[0].Email;
142             string[] wordSplit = systemEmail.Split('@');
143
144             //Email address without Host portion.
145             retValue[0] = wordSplit[0];
146             retValue[1] = jsonResult.Users[0].Uid; //To be used to replace csv UID.
147
148             return retValue;
149         }
150         else
151             return retValue;
152     }
153     }
154
155 }

100 %    ◂ ◂                                                                  ▸
```

```csharp
using System;
using System.Collections.Generic;
using System.Globalization;
using System.IO;
using System.Net;
using System.Web.UI;
using System.Xml;

namespace PianoFileMerge2
{

    /*Convert Json to C# https://json2csharp.com/Convert
any JSON object to a C# class online.
     * Check out the help panel below to view details on
how to use this converter.*/

public class PianoAPIs : System.Web.UI.Page
    {

        /*Common headers are considered restricted and
are either exposed directly by the API(such as Content-T
 or protected by the system and cannot be changed.*/

private static string[] RestrictedHeaders = new string[]
{
                "Accept",
                "Connection",
                "Content-Length",
                "Content-Type",
                "Date",
                "Expect",
                "Host",
                "If-Modified-Since",
                "Keep-Alive",
                "Proxy-Connection",
                "Range",
                "Referer",
                "Transfer-Encoding",
                "User-Agent"
        };
```

Source Code – Sample C# Piano File Merge.


```csharp
protected void BtnUpload_Click(object sender, EventArgs e)
{
    //Create control objects for both Upload Files and
    FileUpload uploadControl = new FileUpload();
    GridView grvDataFiles = new GridView();

    //Perform file upload iteration twice, first for FileA, then for FileB.
    for (int csvFile = 1; csvFile <= 2; csvFile++)
    {
        switch (csvFile)
        {
            case 1:
                uploadControl = FileUpload1;
                grvDataFiles = GrvDataFileA;
                break;
            case 2:
                uploadControl = FileUpload2;
                grvDataFiles = GrvDataFileB;
                break;
        }

        if (uploadControl.HasFile)
        {
            try
            {
                string currentPath = Server.MapPath("~/") +
                            Path.GetFileName(uploadControl.FileName);
                uploadControl.SaveAs(currentPath);

                grvDataFiles.DataSource = GetDataTableFromCSVFile(currentPath);
                grvDataFiles.DataBind();
                LblStatus.Text = (csvFile == 1) ? "CSV Upload status: <b>File A</b> uploaded." : "CSV Upload statu
                LblStatus.ForeColor = System.Drawing.Color.Green ;
                File.Delete(currentPath);

            }
            catch (Exception ex)
            {
                LblStatus.Text = @"CSV Upload status: The file could not be uploaded.
The following error has occured: " + ex.Message;
                LblStatus.ForeColor = System.Drawing.Color.Red;
            }
        }
        else
        {

            if (FileUpload1.HasFile && !FileUpload2.HasFile)
                LblStatus.Text = "Message: Select file CSV FileB.";
            else if (!FileUpload1.HasFile && FileUpload2.HasFile)
                LblStatus.Text = "Message: Select file CSV FileA.";
            LblStatus.ForeColor = System.Drawing.Color.Red;
        }
    }
}
```

```csharp
using System;

using System.Data;

using System.IO;

using System.Text;

using Microsoft.VisualBasic.FileIO;

using System.Web.UI.WebControls;


namespace PianoFileMerge2

{

    public partial class StartMerge : System.Web.UI.Page

    {

        private enum Transform { FileA, FileB, Merge };
```

Source Code – Python File Merge.

```python
37    # PS Array length, outer dimensions can be modified to take parameterized value for number of users.
38    # fore example:  row = int(input("Input the number of rows in input file: ")).
39    # open file in read mode and extract row values.
40    with open(filelocation_a, mode ='r')as fileOne:
41
42        # reading the CSV file
43        csvFileOne = csv.reader(fileOne)
44
45        # Save to a 5 col array, begining with 2 cols in file A.
46        for lines in csvFileOne:
47            arr[i][0] = lines[0]
48            arr[i][1] = lines[1]
49
50            #Indexer for second file, used to update other 2 cols of array from file B.
51            j = 0
52            with open(filelocation_b, mode ='r')as fileTwo:
53                csvFileTwo = csv.reader(fileTwo)
54                for nestedlines in csvFileTwo:
55                    if arr[i][0] == nestedlines[0]:
56                        arr[i][2] = nestedlines[1]
57                        arr[i][3] = nestedlines[2]
58                        j += 1
59
60
61            # Displaying the contents of the combine array data ready for CSV file
62            print(i,arr[j][0],arr[j][1],arr[j][2],arr[j][3])
63
64
65            #write records to csv file. if file exists, exception thrown.
66            with open(filelocation_c, 'w') as csvfile:
67                filewriter = csv.writer(csvfile, delimiter=',',
68                            quotechar='|', quoting=csv.QUOTE_MINIMAL)
69                # filewriter.writerow(arr[j][0], arr[j][1],arr[j][2],arr[j][3])
70                #userdetails = [arr[j][0], arr[j][1],arr[j][2],arr[j][3]]
71                #','.join(userdetails)
72                #filewriter.writerow(userdetails)
73
74            #move to next record.
75            i += 1
76
77    file_b = str(input("\nnEnter name of Third target file to download including .csv extension\nor enter X to Ex
78
```

Using Sublime Text