

Tony Nahra

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SKILLS

Summary: 25 years experience developing software, managing systems, reporting, planning, evaluating and budgeting

Technologies: MS SQL, Epic systems, Amazon AWS, XML/XSL, HTML5, Web Services, Excel, Access, SharePoint

Programming Languages: Python, Pandas, C#, JavaScript, PHP, SQL, VBA, Office365 Add-ins

PROFESSIONAL EXPERIENCE

UI Health Care: CCA division

Jul. 2023 – Present

Application Developer

Application development and administration of various systems :

- Epic Unified Communication
- Voalte administration
- MS Teams and Sharepoint
- Message Media
- Securitas RTLS

Member of two governance groups: MS-Teams and Message Media

Patient Education Institute

Jul. 2001 – June 2023

Senior Analyst Programmer

Interactive Tutorial Engine/Player with LMS integration:

- Designed and developed a tutorial player with voice narration, questions, feedback, glossary, scoring features and multilingual capabilities to improve learning outcomes and increase user engagement
- Database Driven LMS with completion records, response analysis and usage reporting
- Worked with major healthcare institutions: NLM, Kaiser Permanente, Cleveland Clinic, HCA and others
- Managed projects across continents and in different languages
- Generated training material and plans

Abu Dhabi Investment Authority

Feb. 1994 – Jun. 2001

IT Education Consultant

Financial systems data analysis:

- Assisted financial analysts build models, data warehouse, OLAP and drill down
- Automated tasks and consolidated data from Reuters, Bloomberg and other sources
- Generated periodic reports, statistical regression, back-testing, and time-series seasonality analysis

CERTIFICATION

Epic Systems

EpicCare Inpatient Clinical Documentation

Oct 2024

Epic Systems

Data Courier Mover Badge

Nov 2024

EDUCATION

American University of Beirut

Beirut, Lebanon

Aug 1988

Bachelor of Engineering

Electrical Engineering

More details and sample projects at <https://tonynahra.github.io/cv>

Screenshots of sample projects

that I designed and developed

An RTLS DrillDown report to show the count of RTLS tags per category.

Table

Count

Asset

Serial_Number

Manufacturer

Business Statu

Primary Catego

Category 3

Department 1

Department 2

Department 3

Department 4

Department 5

Group 1

Model

Rating

Category 1

Category 2

Manufacturer (120)

Filter values

Select All Select None

☒ (1182)

☒ 2141 (8)

☒ Stryker (1)

☒ 3M (5)

☒ ALCO (236)

☒ ASC - SmartNav (1)

☒ Actuated Medical (1)

☒ Alco (10)

☒ Ambu (1)

☒ Anacom-MedTek (8)

Apply Cancel

Category 2	Totals
	3,496
Equipment	37
Feeding Pumps	169
Heat Therapy Pumps	5
Infusion Pump	5,140
Kangaroo ePump	1
Large Volume Pump	4
Medical Devices	1,142
PC Unit	1
Pacemakers	1
Patient Warmers	3
Phototherapy Lights	35
Surgical Traction Device	5
Video Laryngoscope (Main OR)	1
null	10,041
Totals	20,081

Voalte report to find monthly average Time_To_Read messages then use UNION to combine with other months

```
SELECT
  "04-24" AS [ "MM-YY" ],
  int( Max(
    24 * 60 * 60 * ( IowaText_Apr2024.Read - IowaText_Apr2024.Delivered )
    ) / 3600 / 24 ) AS Max_TTR_days
FROM
  IowaText_Apr2024
WHERE
  IowaText_Apr2024.Delivered > 0 AND IowaText_Apr2024.Read > 0 AND IowaText_Apr2024.[Distribution Type] = "One-to-One"
```

SELECT * from Avg_TTR_Jan_2024 Union SELECT * from Avg_TTR_Feb_2024 Union SELECT * from Avg_TTR_Mar_2024 UNION SELECT * from Avg_TTR_Apr_2024

A DrillDown RTLS report using the LastSeen field to analyze who has not been using their RTLS tag per Dept. / Building

```

28 def DateRange12Month(X):
29     if X > 180 and X < 365 :
30         return "X"
31     else:
32         return ""
33 def DateRangeInYear(X):
34     if X > 365 :
35         return "X"
36     else:
37         return ""
38
39 GRP=dataset.groupby(['Department']).agg(Cnt=('TagID',len),Last=('LastDate',np.max))
40 GRP["LastSeen"] = ( dt.datetime.now() - GRP['Last'] ).dt.days
41 GRP["Within_1_month"] = GRP['LastSeen'].apply(DateRange1Month)
42 GRP["Within_3_months"] = GRP['LastSeen'].apply(DateRange3Month)
43 GRP["Within_year"] = GRP['LastSeen'].apply(DateRange12Month)
44 GRP["more_than_year"] = GRP['LastSeen'].apply(DateRangeInYear)
45 GRP = GRP.drop(['Last'], axis=1)

```

Code used to
generate the
crosstab below

Code used to generate the crosstab below

StaffName	Department	Last_seen_within_1_month	Last_seen_within_3_months	Last_seen_within_year	Last_seen_more_than_year	Totals
		87	14	14	56	171
1JPW			1	1	4	6
2JCP					1	1
2JPE					3	3
2JPW			1	2	10	13
2RCP					1	1
3 RCW - Short Stav Unit					3	3

Count numbers
are clickable to
drill into TagIDs

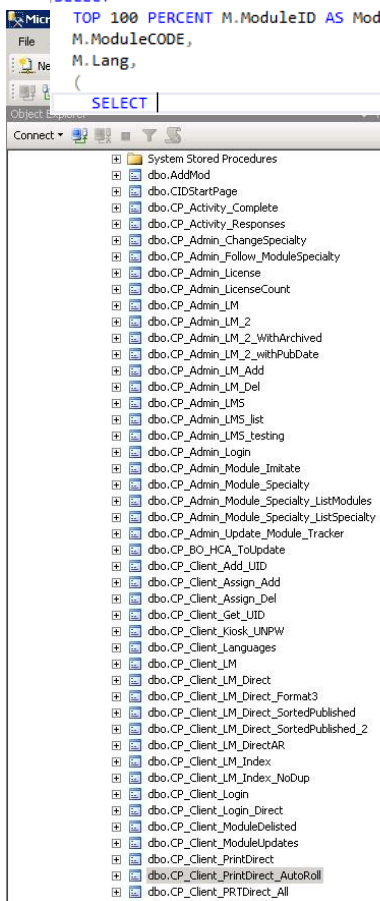
Table		Name		Unit					
Count		AT							
Building		AT		--D	-M-	-MD	1-D	1MD	null Totals
Building									
Ambulatory Clinics				57		68	449	135	709
Anesthesia				1		38	91	70	200
Capital Management						3			3
Cardiothoracic Surgery						2		1	3
Care Coordination Division						2	9	13	24
Carver College of Medicine (CCOM)						6	2	3	11
Center for Disabilities and Development				4		14	34	22	74
Central Sterilizing Services						6	149	48	203
Clinical Quality, Safety & Performance Improvement						8	2	16	26
Compassus						2			2
Compliance								2	2
Dermatology				2		5	3	5	15
Emergency Medicine				9		8	142	71	230
Engineering Services						40	5	8	53
Environmental Services				1		6	211	7	225
Family Medicine				1		39	8	45	93
Food & Nutrition Services				3		45	149	49	246
Guest Services				7			54	2	63
HCIS				21		96	53	71	241
Heart and Vascular Center (HVC)				6		31	113	44	194
Holden Comprehensive Cancer Center (HCCC)				21		61	89	98	269
Hospital Administration				3		18	7	6	34
Hospital Dentistry							1	6	7
Housewide Services				5		405	84	861	1,355
Inpatient Units				1			277	7	285
Institute for Clinical and Translational Science				1		3	7	13	24
Integrated Call Center (ICC)				18		3	28	3	52
Internal Medicine				7		129	21	83	240
Iowa Rehab Hospital						8			8
Iowa River Landing				5		12	374	97	488
Joint Office of Patient Financial Services				65		4	31	6	106
Marketing and Communication						6			

MS-SQL stored procedures that I developed for an online training system documenting completion

```
module_info.Name as Title,
module_info.Type as Type,
@CID as ClientID,
dbo.Specialties.SPname as DespSpecialty
FROM
dbo.Module_Info
INNER JOIN dbo.Module_Specialty ON dbo.Module_Info.ModuleID = dbo.Module_Spe
INNER JOIN dbo.Module_Type ON dbo.Module_Info.Type = Module_Type.Indx
INNER JOIN dbo.Specialties Spe ON dbo.Module_Info.Specialty = Spe.SP
INNER JOIN dbo.Module_Language ON dbo.Module_Info.Lang = dbo.Module_Language
INNER JOIN dbo.Specialties ON dbo.Module_Specialty.Specialty = dbo.Specialti
WHERE
(
    dbo.Module_Info.ModuleCODE = @FiltK
)
and (dbo.Module_Info.Status <> 3) else if @SpDest = -2
SELECT
    TOP 100 PERCENT M.ModuleID AS ModuleID,
    M.ModuleCODE,
    M.Lang,
    1 AS Licensed,
    Specialties_1.SPName AS Specialty,
    dbo.Module_Language.[Language],
    M.Name AS Module_Title,
    MT.M_Type AS asType,
    dbo.LicensedModules.ClientID,
    Specialties_1.SP AS DestSpecialty
FROM
    dbo.Module_Info M
    INNER JOIN dbo.Module_Language ON M.Lang = dbo.Module_Language.Indx
    INNER JOIN dbo.Module_Type MT ON M.Type = MT.Indx
    INNER JOIN dbo.Specialties Spe ON M.Specialty = Spe.SP
    INNER JOIN dbo.LicensedModules ON M.ModuleID = dbo.LicensedModules.ModuleID
    INNER JOIN dbo.Specialties Specialties_1 ON dbo.LicensedModules.Specialty = !
WHERE
(
    M.Type = ISNULL(@Type, M.Type)
)
AND M.Status <> 3
AND dbo.LicensedModules.ClientID = @CID
and M.Specialty = isnull(@FiltS, M.Specialty)
and M.[Lang] = isnull(@FiltL, M.[Lang])
and M.ModuleCode + M.Name + M.keywords like '%' + isnull(@FiltK, '') + '%'
ORDER BY
    M.Sorting,
    M.Name else
SELECT
```

```
TOP 100 PERCENT M.ModuleID AS ModuleID,
M.ModuleCODE,
M.Lang,
(
    SELECT
```

```
USE [XPOL_03-19-2015]
GO
/***** Object: StoredProcedure [dbo].[CP_Client_Add_UID]    Script Date: 02/15/2016 19:42:51 *****/
SET ANSI_NULLS OFF
GO
SET QUOTED_IDENTIFIER ON
GO
ALTER PROCEDURE [dbo].[CP_Client_Add_UID]
    @CID int,
    @RefID varchar(1000) ,
    @UserName varchar(50) ,
    @Password varchar(50),
    @Expiration int,
    @Email varchar(1000),
    @UID int output
AS
declare @Tmp int
select @Tmp=indx from Assign_Logins where UserName=@UserName and not( ( ClientID=@CID and UID=@UID ) )
if @Tmp is NULL
begin
    set @Tmp = NULL
    select @Tmp = ClientID from Assign_Logins where UserName = @UserName and Password = @Password
if @Tmp is NULL
begin
    insert User_Info ( ClientID , RefID ) values( @CID, @RefID )
    set @UID = @@Identity
    insert Assign_Logins ( ClientID , UID , UserName , Password , Expiration, email ) values( @CID, @@Ident
end
else
    set @UID = -1
end
else
    set @UID=-2
```



```
SQLQuery6.sql -...nistrator (65)
--
@SID int,
@ModuleID int,
@Logo tinyint,
@LogoT varchar(10),
@Cnt int,
@Title varchar(100) ,
@TitleTmp varchar(100),
@RunModule varchar(2000),
@Media CHAR(1),
@NM tinyint,
@YY smallint,
@ImitateID int ,
@InterfaceEnd smallint , @AutoUpdate tinyint , @ShortCode varchar(7) , @LastVer varchar(2) , @ModuleCode varchar(12 )

select @ModuleID=ModuleID from LicensedModules where Indx=@LMINDX

set @CID=@ClientID

insert user_info (ClientID) values ( @CID )
Select @UID=@@Identity

select @ModuleCode = Modulecode from Module_Info where ModuleID =@ModuleID

select @IDN = IDN, @NAME=NAME, @SaveMethod=SaveMethod , @Media=Media , @ImitateID = ImitateID from client_Info where clientid=@CID

select @AutoUpdate=Auto_Update from client_Info where clientid=@ImitateID

select @ModuleCode = Modulecode from Module_Info where ModuleID =@ModuleID

if @AutoUpdate = 1
begin
    set @ShortCode = substring( @ModuleCode , 1 , 7 )
    select @LastVer = LastVer from Module_UniqueCode where MUC=@ShortCode
    set @ModuleCode = @ShortCode + @LastVer
    select @ModuleID = moduleid from module_info where modulecode = @modulecode
end

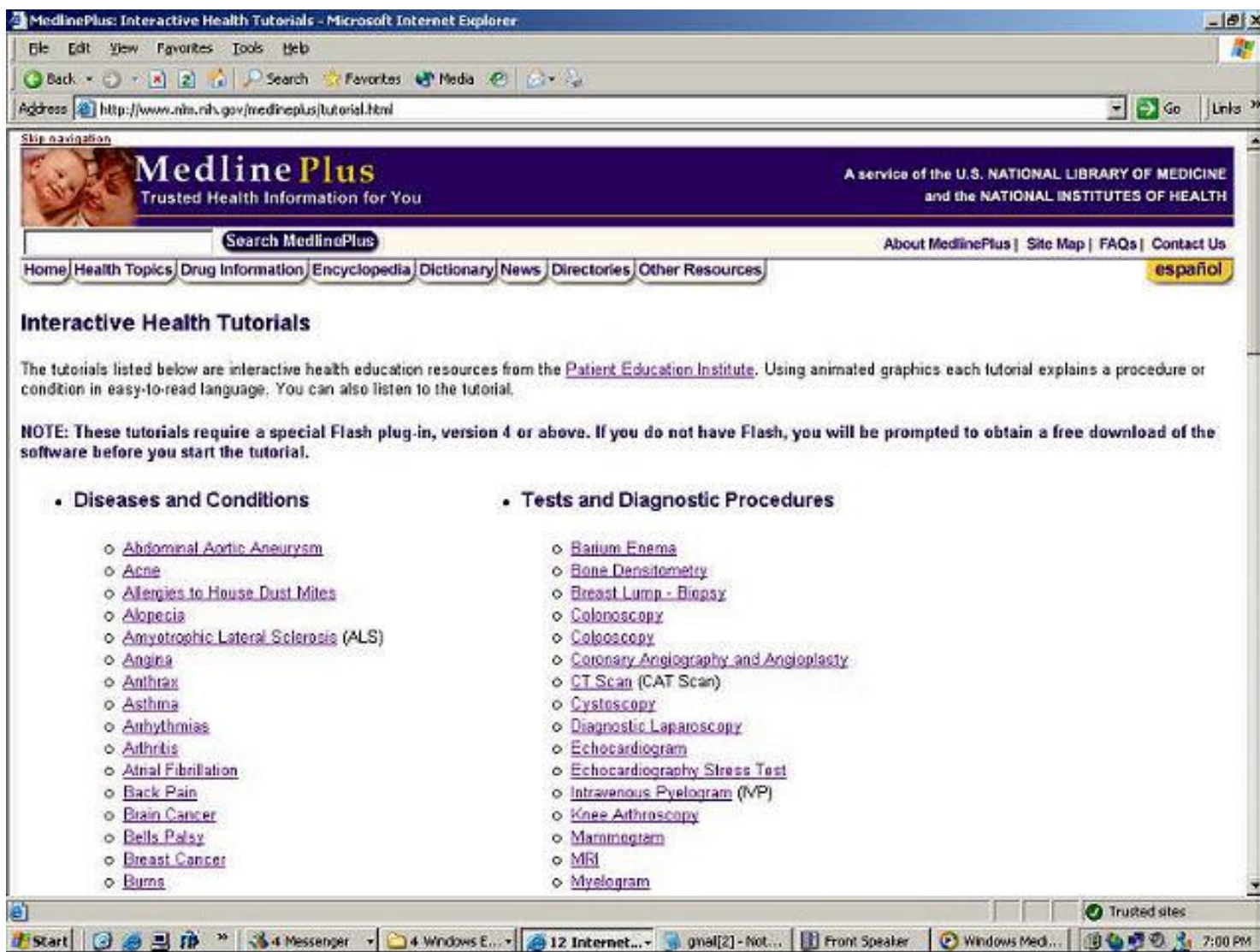
set @InterfaceEnd = NULL
select @InterfaceEnd=InterfaceEnd from Client_Logins where ClientID=@CID and priv=2
if @InterfaceEnd = NULL
    set @EndURL = 'X'
else
    select @EndURL=Page from op_Interface where Indx=@InterfaceEnd
```

mySql (that does not have PIVOT function) query for cross tabulation

```
2  SELECT
3      TOP 100 PERCENT Specialties.SPName AS Specialty,
4      SUM( CASE WHEN module_info.Lang = 1 THEN 1 ELSE 0 END ) AS English,
5      SUM( CASE WHEN module_info.Lang = 2 THEN 1 ELSE 0 END ) AS Spanish,
6      SUM( CASE WHEN module_info.Lang = 3 THEN 1 ELSE 0 END ) AS Arabic,
7      SUM( CASE WHEN module_info.Lang = 4 THEN 1 ELSE 0 END ) AS Vietnamese
8  FROM
9      LicensedModules
10     INNER JOIN Module_Info ON LicensedModules.ModuleID = Module_Info.ModuleID
11     INNER JOIN Specialties ON LicensedModules.Specialty = Specialties.SP
12     INNER JOIN Module_Language ON Module_Info.Lang = Module_Language.Indx
13 WHERE LicensedModules.ClientID = 91
14 GROUP BY
15     Specialties.SPName,
16     Specialties.Type,
17     Module_Info.Status
18 HAVING
19     Specialties.Type = 1 AND Module_Info.Status = 2
20 ORDER BY
21     Specialty
```

```
2  ALTER PROCEDURE [CP_Survey_Analysis]
3  @ClientID smallint,
4  @ModID varchar(10),
5  @d1 smalldatetime,
6  @d2 smalldatetime AS
7  SELECT
8      TOP 100 PERCENT Activity_Responses.QuestionNumber,
9      Activity_Responses.UserResponse,
10     COUNT(Activity_Responses.Indx) AS cnt,
11     Module_Questions.Text AS Question,
12     Module_Answers.Text AS Reply,
13     Log_Activity.ClientID
14 FROM
15     Activity_Responses
16     INNER JOIN Log_Activity ON Activity_Responses.ActivityIndex = Log_Activity.Indx
17     INNER JOIN Module_Info ON Log_Activity.ModuleID = Module_Info.ModuleID
18     INNER JOIN Module_Questions ON Activity_Responses.QuestionNumber = Module_Questions.Qcode
19     AND Module_Info.ModuleCODE = Module_Questions.ModuleCode
20     INNER JOIN Module_Answers ON Activity_Responses.QuestionNumber = Module_Answers.Qcode
21     AND Activity_Responses.UserResponse = Module_Answers.Answer
22     AND Module_Info.ModuleCODE = Module_Answers.ModuleCode
23 WHERE
24     Activity_Responses.DT BETWEEN @d1 AND @d2
25 GROUP BY
26     Activity_Responses.QuestionNumber,
27     Activity_Responses.UserResponse,
28     Module_Info.ModuleCODE,
29     Module_Questions.Text,
30     Module_Answers.Text,
31     Log_Activity.ClientID
32 HAVING
33     Log_Activity.ClientID = @ClientID
34     AND Module_Info.ModuleCODE = @ModID
35 ORDER BY
36     Activity_Responses.QuestionNumber,
37     Activity_Responses.UserResponse
```


Database export to XML for a MedlinePlus static website project



X-Plain Online

Account	Edit	Specialty	Modules	Offline	Promotions	Views	Tools
			Create Pin				
			Select Favorites List				
			Select Frequently Used				
			Module Updates				
			Account Modifications				
			Manage Offline Files				
			Email Reviewer				
			Generate Offline Files				

Path: root

- Addiction Medicine
- Advance Directives
- Alternative Medicine
- Anesthesia
- Angiography
- Audiology
- Cardiac Rehabilitation
- Cardiac Surgery
- Cardiology
- Cardiothoracic Surgery
- Cardiovascular Disease
- Chiropractic
- Colorectal Surgery
- Cranial Surgery
- Dentistry
- Dermatology
- Diabetes
- Diagnosis
- Discharge Instructions

```
1 <lesson>
2 <info>
3   <Title>Diabetes &#45; Eye Complications</Title>
4   <Author>Diabetes &#45; Eye Complications</Author>
5   <Published>08/30/2004</Published>
6   <PassScore>60</PassScore>
7   <Language>English</Language>
8   <ModuleID>db019105</ModuleID>
9   <folder>diabetes/db010105</folder>
10  <AutoAdvance>-</AutoAdvance>
11  <RevDate>11/29/2012</RevDate>
12 </info>
13 <s f="1_0" p="s" t="6" s="Introduction" />
14 <s f="1_1" p="o" t="9" />
15 <s f="1_2" p="o" t="9" />
16 <s f="1_3" p="o" t="9" />
17 <s f="2_1" p="s" t="2" s="How the Eye Works" />
18 <s f="2_2" p="o" t="6" />
19 <s f="2_3" p="o" t="5" />
20 <s f="2_4" p="o" t="7" />
21 <s f="2_5" p="o" t="5" />
22 <s f="2_6" p="o" t="2" />
23 <s f="2_7" p="o" t="7" />
24 <s f="2_8" p="o" t="10" />
25 <s f="2_9" p="o" t="5" />
26 <s f="2_10" p="o" t="4" />
27 <s f="2_11" p="o" t="3" />
28 <s f="2_12" p="o" t="4" />
29 <f f="2_12f1" p="f" t="2" />
30 <f f="2_12f2" p="f" t="7" />
31 </s>
32 <s f="3_1" p="s" t="1" s="Retinopathy" />
33 <s f="3_2" p="o" t="13" />
```

MessageMedia OPT_OUT report generator

Instructions

Generate a Message Media csv export
Drop the csv file in csv subfolder
Run the Python script below
The generated CSV file will be stored in 'Message Media/Reports' folder

Subject : Messagemedia OPT_OUT for 2025-01-12_to_2025-01-20

Hello

Here is the messagemedia OPT_OUT report.

```
In [1]: import pandas as pd
import os
import glob
import datetime as dt
import re

SRC_FILE = sorted( filter( os.path.isfile, glob.glob('csv/*.csv')))[0]
print(SRC_FILE)
rep = pd.read_csv( SRC_FILE , chunksize=10000,
                  low_memory=False ,
                  index_col=False ,
                  header=0 ,
                  usecols=[
                      'source_address',
                      'destination_address',
                      'action',
                      'timestamp_localtime',
                      'content',
                      'timestamp',
                      'account_name'
                  ] ,
                  dtype="string"
                )

df = pd.concat(
    (x.query("action in ['OPT_OUT','OPT_IN'] ") for x in rep),
    ignore_index=True
)
FN = df['timestamp'].str[0:10].str.strip().min() + '_'
FN += df['timestamp'].str[0:10].str.strip().max()

RepPath = "file:///S:/Comm%20&%20Coll%20Apps%20(CCA)/Message%20Media/Reports/"
RepPath += FN + ".csv"
print( RepPath )

df['source_address'] = df['source_address'].str[1:]
df = df.query(" `account_name` == 'UIHealthCare (Main)' " )

dfDupe = df[df.duplicated(subset=['source_address'], keep=False)]
dfDupe = dfDupe.sort_values(
    'timestamp',
```

```

        ascending=False).drop_duplicates(['source_address'] ,
        keep='first'
    )

dfDupe = dfDupe.reset_index(drop=True)
dfDupe = dfDupe.drop( dfDupe.query(" `action`=='OPT_OUT' ").index)

print('')
print('Duplicates')
print('OPT_IN -----')

if dfDupe.empty:
    print('No duplicates')
else:
    #print(dfDupe.to_markdown())
    dfDupe.to_csv( 'output/' + FN + ".csv" , mode='a')

df = df.sort_values(
    ['timestamp','source_address'],
    ascending=[False, True]
).drop_duplicates(['source_address'])

a_index = df.set_index('source_address').index
b_index = dfDupe.set_index('source_address').index

mask = ~a_index.isin(b_index)
df = df.loc[mask]
df = df.sort_values('timestamp', ascending=True )
df = df.reset_index(drop=True)
df = df.drop(['destination_address'], axis=1)
df = df.drop(['timestamp'], axis=1)

print('')
print('Result -----')
df.to_csv( 'output/' + FN + ".csv" , index=False )
df.to_csv(
    "S:/Comm & Coll Apps (CCA)/Message Media/Reports/" + FN + ".csv" ,
    index=False
)
#print(df.to_markdown())

csv\2025-02-10_02-08-16_detail_all.csv
file:///S:/Comm%20&%20Coll%20Apps%20(CCA)/Message%20Media/Reports/2025-02-02_2025-02-08.csv

```

Duplicates

OPT_IN -----

Result -----

In []: