USE [DataBaseName]

GO

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

--THIS QUERY FINDS PEOPLE WHO HAVE FAILED THE LAST 3 CONSECUTIVE ADMINISTRATIONS(DATES) OF A SPECIFIC EXAM NAME/TYPE

--IT IS A GAPS AND ISLANDS TYPE OF PROBLEM. THIS IS FINDING ISLANDS OF 3 OR MORE FAILED CONSECUTIVE TEST ADMINS FOR A PERSON.

CREATE VIEW [dbo].[vListRegistrationConsecutiveFails]

AS

--THIS IS A NUMBERED LIST OF ADMINISTRATION DATES FOR SPECIFIC EXAM NAME/TYPES AND ORDERED BY MOST RECENT TO OLDEST ADMINISTRATION DATE.

WITH consecutiveexamadmins

AS (

SELECT e.Name

,e.Examtype

,a.Administrationdate

,Row\_number() OVER (

PARTITION BY e.NAME

,e.Examtype ORDER BY a.Administrationdate DESC

) AS rownum

FROM registration.Administration a

JOIN registration.Exam e ON e.Examid = a.Examid

WHERE a.Administrationdate < Getdate()

)

--THIS IS A DATASET OF FAILED EXAMS SPECIFIED BY PERSON, ADMINISTRATION DATE, EXAM TYPE, AND EXAM NAME.

,diplomatefailedexams

AS (

SELECT DISTINCT r.Memberid

,u.Abimid

,r.Examresult

,e.Name

,e.Examtype

,a.Administrationdate

FROM registration.Registration r

JOIN registration.Administration a ON r.Administrationid = a.Administrationid

JOIN registration.Exam e ON e.Examid = a.Examid

JOIN identitydata.Userprofile u ON r.Memberid = u.Memberid

WHERE r.Examresult = 'Fail'

)

,diplomatecertfails

AS (

SELECT c1.Abimid

,c1.NAME

,c1.Examtype

,c1.Examresult

,c2.Rownum AS AdminRowNum

,c1.Administrationdate

--THE ROWNUMBER OF THE FAILED EXAMS ARE GENERATED AND THEY ARE SUBTRACTED FROM THE ROWNUMBER OF THE EXAM ADMIN

--IF THESE ROWNUMBERS KEEP THE SAME DIFFERENCE FROM EACH OTHER, IT MEANS THAT THE FAILED EXAM COUNT IS INCREASING ALONG WITH

--THE COUNT OF ALL ADMINS. THIS UNCHANGING NUMBER, IS AN ISLAND OF CONSECUTIVE FAILS.

,c2.Rownum - Row\_number() OVER (

PARTITION BY c1.Abimid

,c1.NAME

,c1.Examtype

,c1.Examresult ORDER BY c2.Rownum

) AS IslandGroupNum

--ALL EXAM ADMINISTRATIONS ARE JOINED TO FAILED ADMINISTRATIONS FOR EACH PERSON.

FROM diplomatefailedexams c1

JOIN consecutiveexamadmins c2 ON c1.NAME = c2.NAME

AND c1.Examtype = c2.Examtype

AND c1.Administrationdate = c2.Administrationdate

-- THIS LIMITS THIS TO THE MOST RECENT 3 EXAMS, BUT IT COULD BE CHANGED TO ANY NUMBER.

AND c2.rownum <= 3

)

--GROUP BY THE PERSON, EXAM, AND ISLAND, AND FILTER FOR ISLANDS WITH A COUNT OF 3 OR MORE.

SELECT Abimid

,NAME

,Examtype

,COUNT(ExamResult) AS CountFails

FROM diplomatecertfails

GROUP BY Abimid

,NAME

,Examtype

,IslandGroupNum

--3 OR MORE FAILURES IN A ROW. COULD BE CHANGE TO ANY NUMBER.

HAVING COUNT(ExamResult) >= 3

GO