

Document Name	Elections Script POC
Title	Aadhar Enabled Elections
Version	1.0.0
Author	Peketi Venkata Krishna Reddy
Company	MYSOURCE DIGITAL & INTERACTIVE MEDIA (OPC) PRIVATE LIMITED.

Introduction:

Identified the opportunity of work gap in ECI from current affairs and Prime Minister slogan. As a part of Dussehra-2026 contribution from the company show casing the solution in Elections Script POC.

Business Justification:

To validate the voter Impression with Aadhardb and based on the validity performing the refresh activity and displaying the light activity.

Refresh Activity:

For valid voter activate EVM refresh after preceding voter. No refresh for invalid voter until valid voter present.

Display Light Activity Color Code:

- Green for valid voter.
- Red for rigging voter.
- Blue for anonymous voter.

To Analyze Database:

- Present voters
- Absent voters
- Rigging (proxy) voters
- Anonymous(unidentified) voter

Cost Accounting:

Implementation cost: PCB device 5 days, DB Scripts with a scheduled job 5 days total 10-man days for Prototype.

Cloud Service Pay-As-You-Go: For 1 election in a day Including 3 hours buffer time
15 hours *28 states= \$522.25 approx.

Device cost: PCB device cost * number of polling stations

Assumptions & Dependencies

Assumptions:

Aadhar Live Data Tamper: This Script will perform join operation with Aadhardb Simple View (virtual table) with dynamic column. Can't perform DML operations on a SQLServer Simple View which is having aggregate function.

Data Size & Replications: This script dealing with views (virtual table) no additional data capacity required for Aadhardb. SQLServer database capacity is up to 2 billion objects which include Views, triggers, Stored Procedures it is feasible to accommodate ten lakhs fifty housed complex views (based on number of polling station).

Voter Impression Storage: This Script neither store the voter impression nor fetch the impression from Aadhardb.

Showstopper/Delay Schedule: It is a onetime activity before elections, preparing complex views, simple view and activating the stored procedure in cloud.

Impression not identified: This concept is for Aadhar enabled elections, functionality of this script is to identify the voter with Aadhar impression and display response in respective colour code. According to constitution a valid voter can vote.

Anonymous voter: Valid citizen, no data in the Aadhardb for the impression provided by the voter.

Dependencies:

- Required SQLServer
- Aadhar data center must provide data only in virtual table with a dynamic column (aggregate function) to prevent DML.
- A device with fingerprint scanner with capability of sending parameters Impression, EVM id, PSId and capable of receiving scalar value through APK.
- PCB Device SPOC working on behalf of Govt.
- ECI must link VoterId with Aadhar.

PEKETI VENKATA KRISHNA REDDY
Author

```

/*****/
--File: ElectionsScript.sql
--File Info: Electionsdb and Aadharadb integration POC, script to validate voter presence
--Author: P.V.Krishna Reddy
--Company: MYSOURCE DIGITAL & INTERACTIVE MEDIA (OPC) PRIVATE LIMITED
--Version:1.0.0
/*****/
```

```

/****Business Justification*****/
--To facilitate refresh button to existing EVM
--To validate voter identity & presence
--To prevent proxy
--To display red color light for unidentified voter
--To display red color light for identified proxy voter
/****Business Justification*****/
```

```

/*****Prerequisites for executing below script*****/
--CREATE Aadharadb
--CREATE Electionsdb
/*****/
```

```

USE Aadharadb
GO
Create table tblAadhar
(
AadharId numeric primary key,
Impression varchar(max)
)
GO
Insert into tblAadhar values(662223509284,'eG9mVjdYbW5zUHdiM1V4MXNja0dG')
Insert into tblAadhar values(216167293627,'TVLCMHpIRm03c0hoew96SXo3R2pw')
Insert into tblAadhar values(838427959970,'MXltX0trTTA0THVDZ0MwQ1pwU2to')
Insert into tblAadhar values(621336314249,'aEd4UHZvb1kzU1p40VBpcmZmeXNi')
Insert into tblAadhar values(166797505883,'RDZHN1hTZ3BEV18wdGFkKwJrSDVJ')
Insert into tblAadhar values(249328512948,'UHUyWGF1UmkwYWpjVVpPQjFpaWY=')
Insert into tblAadhar values(858030382541,'TExncDQ2clRrVFhRk4xd0ZyaTYy')
Insert into tblAadhar values(314955440800,'WHJqU3BMMzLHNm9BQjRmamdjOVpE')
Insert into tblAadhar values(207585156125,'TzN4R1hXcWVSe1NtaXBzWkF3NUxm')
Insert into tblAadhar values(262523317140,'bXdrNzRDbkw1TDVwNEREWmN1SGg=')
GO
create view sv_svElections2029
As select AadharId,Impression,null as Temp from tblAadhar
```

GO

USE Electionsdb

GO

Create table tblVoterPresence

(

AadharId numeric primary Key,

IsPresent bit,

ElectionDate DATETIME2 NOT NULL CONSTRAINT DF_Orders_CreatedAt DEFAULT

SYSDATETIME(),

VoterId varchar(10)

)

GO

Insert into tblVoterPresence(AadharId, IsPresent, VoterId) values
(662223509284, null, 'YCV0164822')

Insert into tblVoterPresence(AadharId, IsPresent, VoterId) values
(216167293627, null, 'JDQ1753995')

Insert into tblVoterPresence(AadharId, IsPresent, VoterId) values
(838427959970, null, 'MSY0504811')

Insert into tblVoterPresence(AadharId, IsPresent, VoterId) values
(621336314249, null, 'ABC1234567')

Insert into tblVoterPresence(AadharId, IsPresent, VoterId) values
(166797505883, null, 'XGN3002623')

Insert into tblVoterPresence(AadharId, IsPresent, VoterId) values
(249328512948, null, 'SGZ3292661')

Insert into tblVoterPresence(AadharId, IsPresent, VoterId) values
(858030382541, null, 'ZST6539042')

Insert into tblVoterPresence(AadharId, IsPresent, VoterId) values
(314955440800, null, 'KRV8745630')

Insert into tblVoterPresence(AadharId, IsPresent, VoterId) values
(207585156125, null, 'SOP3807625')

Insert into tblVoterPresence(AadharId, IsPresent, VoterId) values
(262523317140, null, 'IRS5402710')

GO

Create table tblVoterList

(

VoterId varchar(10) primary key,

AadharId numeric

CONSTRAINT FK_tblVoterList_tblVoterPresence FOREIGN KEY (AadharId)

REFERENCES dbo.tblVoterPresence(AadharId),

PsId int

```

)
GO
Insert into tblVoterList values('YCV0164822',662223509284,1)
Insert into tblVoterList values('JDQ1753995',216167293627,2)
Insert into tblVoterList values('MSY0504811',838427959970,3)
Insert into tblVoterList values('ABC1234567',621336314249,1)
Insert into tblVoterList values('XGN3002623',166797505883,2)
Insert into tblVoterList values('SGZ3292661',249328512948,2)
Insert into tblVoterList values('ZST6539042',858030382541,3)
Insert into tblVoterList values('KRV8745630',314955440800,3)
Insert into tblVoterList values('SOP3807625',207585156125,2)
Insert into tblVoterList values('IRS5402710',262523317140,1)

```

GO

```

/***** cursor to create VIEWS with voters GROUPBY Polling station*****/
USE [Electionsdb]
-- Step 1: Declare local variables and the cursor
DECLARE @PSID INT;

DECLARE @SQL NVARCHAR(MAX);

DECLARE PSID_cursor CURSOR LOCAL FAST_FORWARD FOR
SELECT distinct PsId FROM tblVoterList;

-- Step 2: Open the cursor
OPEN PSID_cursor;

-- Step 3: Fetch the initial row into our variables
FETCH NEXT FROM PSID_cursor INTO @PSID;

-- Loop as long as the previous fetch was successful (@@FETCH_STATUS = 0)
WHILE @@FETCH_STATUS = 0
BEGIN
    -- Custom business logic per row
    IF NOT EXISTS (select 1 from sys.views where name like '%'+QUOTENAME('cv_' +
        CAST(@PSID AS VARCHAR(60)))+'%')
    BEGIN
        SET @SQL =N'CREATE VIEW '+QUOTENAME('cv_' + CAST(@PSID AS VARCHAR(60)))+ N'
        AS
        select vl.VoterId,vl.AadharId,vl.PsId,vp.IsPresent,vp.ElectionDate from
        tblVoterList vl join tblVoterPresence vp
        on vl.VoterId =vp.VoterId where vl.psId =' + CAST(@PSID AS VARCHAR(60))
        +N';'
    END;

```

```
-- Execute the dynamic SQL string
EXEC sp_executesql @SQL;

-- Fetch the next row for the next loop cycle
FETCH NEXT FROM PSID_cursor INTO @PSID;
END;

-- Step 4: Close the data stream
CLOSE PSID_cursor;

-- Step 5: Clean up memory allocations
DEALLOCATE PSID_cursor;
GO

/***** STORED PROC to update voter presence in POLLING STATION*****/
USE Electionsdb
GO
CREATE OR ALTER PROCEDURE [dbo].[SP_Elections2029]
@PSId int,
@Impression varchar(max)
AS
BEGIN
SET NOCOUNT ON;
DECLARE @SQL NVARCHAR(MAX);
DECLARE @RecordCount INT;
SET @SQL= N'UPDATE cv SET cv.IsPresent=1,ElectionDate=getdate() FROM '+
    QUOTENAME('cv_' + CAST(@PSId AS VARCHAR(60))) + N'
    AS cv join [Aadhardb].[dbo].sv_svElections2029 imp ON
    cv.AadharId = imp.AadharId WHERE imp.Impression=@Impression and cv.IsPresent
    IS NULL;SET @InnerCount = @@ROWCOUNT;';

EXEC sp_executesql
    @SQL,
    N'@Impression varchar(max),@PSId int,@InnerCount bit OUTPUT',
    @Impression= @Impression,
    @PSId=@PSId,
    @InnerCount = @RecordCount OUTPUT;;

Select @RecordCount;
END;
```

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/*Test*/
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```
--Reset
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```
update tblVoterPresence set IsPresent=NULL
```

```
--True Positive
```

```
exec [SP_Elections2029] 3, 'MXltX0trTTA0THVDZ0MwQ1pwU2to'-- output 1
```

```
exec [SP_Elections2029] 2, 'TzN4R1hXcWVSeLNtaXBzWkF3NUxm'-- output 1
```

```
exec [SP_Elections2029] 1, 'eG9mVjdYbW5zUHdiM1V4MXNja0dG'-- output 1
```

```
--False Positive
```

```
exec [SP_Elections2029] 1, 'MXltX0trTTA0THVDZ0MwQ1pwU2to'-- output 0
```

```
exec [SP_Elections2029] 3, 'TzN4R1hXcWVSeLNtaXBzWkF3NUxm'-- output 0
```

```
exec [SP_Elections2029] 2, 'eG9mVjdYbW5zUHdiM1V4MXNja0dG'-- output 0
```

```
/*Summary points*/
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```
--Description: This script contains sampled data, datatype and size may vary with  
Live Data base.
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```
--Prevented vulnerabilities by creating SimpleView and Complex View in order  
to avoid direct table updates.
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--In this context VIEW is a virtual table no need of physical replica or  
additional storage.
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--For Analysis:
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```
--NULL value for unattended voter.
```

```
--True value for voter presence.
```

```
--False value for proxy/unidentified voter.
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--SqlServer database capacity up to 2 billion objects which include Views,  
Stored procedures and triggers.
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--Cost accounting and budget included in Landing page https://  
www.mysoureblogger.com.
```

```
--ECI proactively link Aadhar with voterId in a pilot mode.
```

```
/*Summary points*/
```

```
--Note: In this script CURSOR required finetune ,don't hesitate to contact me  
if you are a Device SPOC working on behalf of GOVT.
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/* */
```