



ADVANCE DATABASE ASSIGNMENT

PROJECT REPORT
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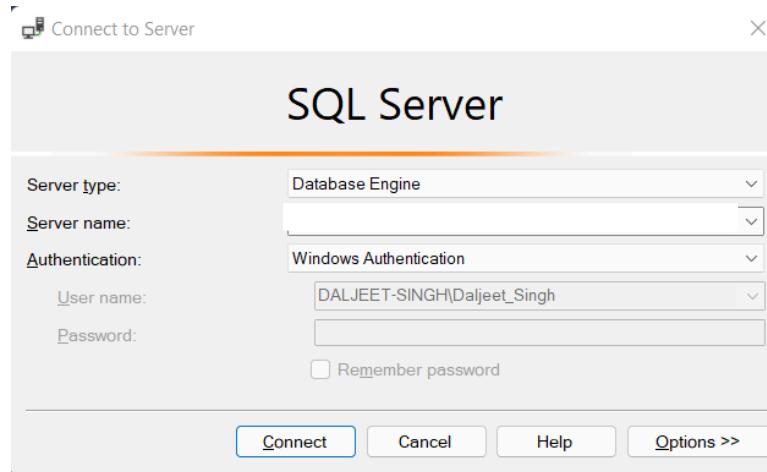
Introduction to the Project:

Young life is a study by the UK surveyors on poverty and inequality of the live of the children of four different countries Ethiopia, India, Peru and Vietnam since 2001. These countries were selected because they reflect a range of cultural, geographical and social contexts and experience a variety of issues facing the developing world, high debt burden, emergence from conflict, and vulnerability to environmental conditions such as drought and flood.

In this project, surveyors took 5 rounds for each country and in each round, they surveyed the children of different ages. It is sponsored by the Department for International Development and conducted by the Young Lives team based at the University of Oxford.

In this report, I am working on three tasks, Task 1, Task 2, Task 3. Task 1 and task 2 are on the basis of young life project in which after analysing the data, I have created some reports on it in SQL, MS excel and Power BI. These reports explain the conditions within the surveyed for countries Ethiopia, India, Peru and Vietnam. For task 3, I am working on the Criminology in Greater Manchester in 2017 to 2018.

Connecting database engine on MS SQL server:



Steps for creating database and importing data in the respective databases:

1. First, I have created three Database in new query editor for three tasks.

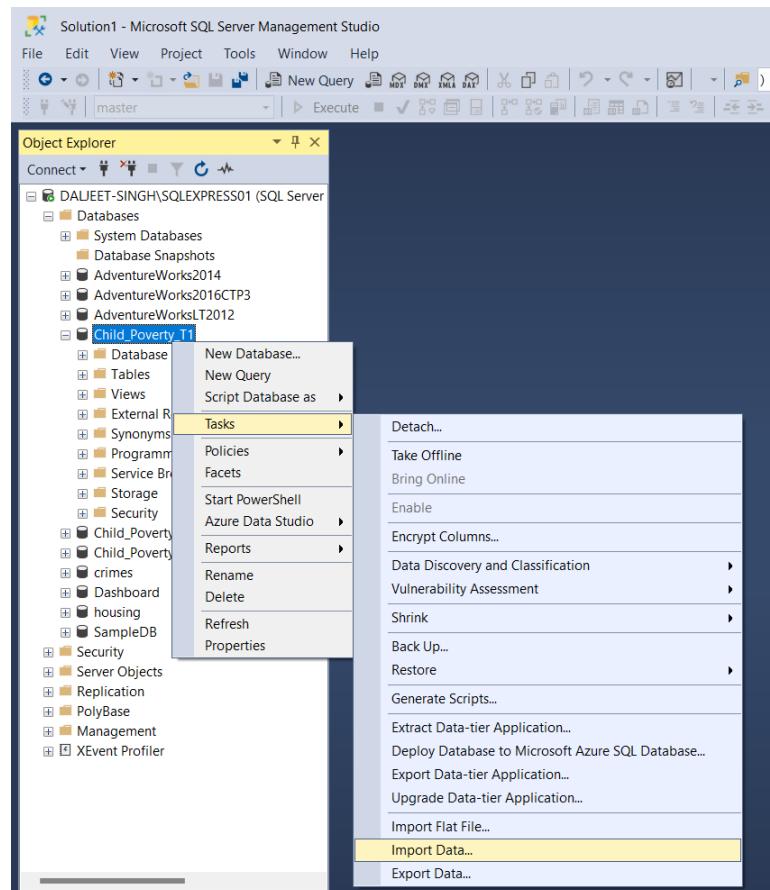
```
/* Create a New Database */
Create Database Child_Poverty_T1

/* Create a New Database for Task 2*/
Create database Child_Poverty_T2

/* Create a New Database for Task 3*/
Create database Child_Poverty_T3
```

2. Import data from CSV files into Task 1, Task 2 and Task 3 Database

- After connecting to the database engine. Expand database.
- Right click on database
- Go to task
- Click on import data and follows the further steps.



3. Created schema for according to the databases.

```
/* Create schema for Task 1*/
Create Schema Chd
```

```
/* Creating a Schema for Task 2*/
Create Schema ChT2
```

```
/* Creating a Schema for Task 3*/
Create Schema T3
```

4. After creating schema, I have created tables for task in the similar way as per the requirement of data

CREATE TABLES

TASK 1(Create tables for each country similarly)

```
CREATE TABLE [Chd].[ethiopia_constructed$](
    [childid] [nvarchar](255) NULL,
    [vc] [float] NULL,
    [round] [float] NULL,
    [inround] [float] NULL,
    [panel] [float] NULL,
    [deceased] [float] NULL,
    [dint] [datetime] NULL,
    [commid] [nvarchar](255) NULL,
    [clustid] [float] NULL,
    [region] [float] NULL,
    [totypesite] [float] NULL,
    [childloc] [float] NULL,
    [chsex] [float] NULL,
    [chlanguag] [float] NULL,
    [chethnic] [float] NULL,
    [chldrel] [float] NULL,
    [agemon] [float] NULL,
    [marrcohab] [float] NULL,
    [marrcohab_age] [float] NULL,
    [birth] [float] NULL,
    [chweight] [float] NULL,
    .....
    .....
    [shfam1] [float] NULL,
    [shfam2] [float] NULL,
    [shfam3] [float] NULL,
    [shfam4] [float] NULL,
    [shfam5] [float] NULL,
    [shfam10] [float] NULL,
    [shfam11] [float] NULL,
    [shfam12] [float] NULL,
    [shfam13] [float] NULL,
    [shfam14] [float] NULL,
    [shfam18] [float] NULL,
    [shother] [float] NULL,
    [ID_PK] [nchar](255) NOT NULL,
PRIMARY KEY CLUSTERED
(
    [ID_PK] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF,
ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON
[PRIMARY]
) ON [PRIMARY]
GO
```

CREATE TABLE-WAVE 1(Create table of wave 2 in similar way)

TASK 2

```
/* Creating a Table with schema */

CREATE TABLE [ChT2].[vietnam_Task2]
[UNIQUEID] [varchar](50) not NULL
[SCHOOLID] [varchar](50) NULL,
[CLASSID] [varchar](50) NULL,
[STUDENTID] [varchar](50) NULL,
[YLCHILDID] [varchar](50) NULL,
[PROVINCE] [varchar](50) NULL,
[DISTRICTCODE] [varchar](50) NULL
[LOCALITY] [varchar](50) NULL,
[GENDER] [varchar](50) NULL,
[AGE] [varchar](50) NULL,
[ETHNICITY] [varchar](50) NULL,
[ABSENT_DAYS] [varchar](50) NULL
[MOM_READ] [varchar](50) NULL,
[MOM_EDUC] [varchar](50) NULL,
[DAD_READ] [varchar](50) NULL,
[DAD_EDUC] [varchar](50) NULL,
[STDYLCHD] [varchar](50) NULL,
[STDCMPLT] [varchar](50) NULL,
[STDDINT] [varchar](50) NULL,
[STDLIV] [varchar](50) NULL,
[STDLNGHM] [varchar](50) NULL,
.....
.....
[ SCHFAC02 ] [ varchar ](50) NULL,
[ SCHFAC03 ] [ varchar ](50) NULL,
[ SCHFAC04 ] [ varchar ](50) NULL,
[ SCHFAC05 ] [ varchar ](50) NULL,
[ SCHFAC06 ] [ varchar ](50) NULL,
[ SCHFAC07 ] [ varchar ](50) NULL,
[ SCHFAC08 ] [ varchar ](50) NULL,
[ SCHFAC09 ] [ varchar ](50) NULL,
[ SCHFAC10 ] [ varchar ](50) NULL,
[ SCHFAC11 ] [ varchar ](50) NULL,
[ SCHFAC12 ] [ varchar ](50) NULL,
[ SCHFAC13 ] [ varchar ](50) NULL,
[ SCHFAC14 ] [ varchar ](50) NULL,
[ WEIGHT ] [ varchar ](50) NULL,
PRIMARY KEY CLUSTERED
(
    [UNIQUEID] ASC
)WITH ( PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF,
ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF ) ON [PRIMARY]
) ON [PRIMARY]
GO
```

CREATE TABLE

TASK 3

1.

```
CREATE TABLE T3.[2017 - Outcomes](
    [Crime_ID] [nvarchar](100) NOT NULL,
    [Month] [datetime2](7) NOT NULL,
    [Reported_by] [nvarchar](50) NOT NULL,
    [Falls_within] [nvarchar](50) NOT NULL,
    [Longitude] [float] NOT NULL,
    [Latitude] [float] NOT NULL,
    [Location] [nvarchar](50) NOT NULL,
    [LSOA_code] [nvarchar](50) NOT NULL,
    [LSOA_name] [nvarchar](50) NOT NULL,
    [Outcome_type] [nvarchar](100) NOT NULL
) ON [PRIMARY]
GO
```

2.

```
CREATE TABLE [T3].[2017 - Street](
    [Crime_ID] [nvarchar](100) NULL,
    [Month] [datetime2](7) NOT NULL,
    [Reported_by] [nvarchar](50) NOT NULL,
    [Falls_within] [nvarchar](50) NOT NULL,
    [Longitude] [float] NOT NULL,
    [Latitude] [float] NOT NULL,
    [Location] [nvarchar](50) NOT NULL,
    [LSOA_code] [nvarchar](50) NOT NULL,
    [LSOA_name] [nvarchar](50) NOT NULL,
    [Outcome_type] [nvarchar](1) NULL
) ON [PRIMARY]
GO
```

3.

```
CREATE TABLE [T3].[2018 - Outcomes](
    [Crime_ID] [nvarchar](100) NOT NULL,
    [Month] [datetime2](7) NOT NULL,
    [Reported_by] [nvarchar](50) NOT NULL,
    [Falls_within] [nvarchar](50) NOT NULL,
    [Longitude] [float] NOT NULL,
    [Latitude] [float] NOT NULL,
    [Location] [nvarchar](50) NOT NULL,
    [LSOA_code] [nvarchar](50) NOT NULL,
    [LSOA_name] [nvarchar](50) NOT NULL,
    [Outcome_type] [nvarchar](100) NOT NULL
) ON [PRIMARY]
GO
```

4.

```
CREATE TABLE [T3].[2018- Street](
    [Crime_ID] [nvarchar](100) NULL,
    [Month] [datetime2](7) NOT NULL,
    [Reported_by] [nvarchar](50) NOT NULL,
    [Falls_within] [nvarchar](50) NOT NULL,
    [Longitude] [float] NOT NULL,
    [Latitude] [float] NOT NULL,
    [Location] [nvarchar](50) NOT NULL,
    [LSOA_code] [nvarchar](50) NOT NULL,
    [LSOA_name] [nvarchar](50) NOT NULL,
    [Outcome_type] [nvarchar](1) NULL
) ON [PRIMARY]
GO
```

5.

```
CREATE TABLE [T3].[2017-2018_Stop-and-Search](
    [Type] [nvarchar](255) NULL,
    [Date] [datetime] NULL,
    [Part of a policing operation] [bit] NOT NULL,
    [Policing operation] [nvarchar](255) NULL,
    [Latitude] [float] NULL,
    [Longitude] [float] NULL,
    [Gender] [nvarchar](255) NULL,
    [Age range] [nvarchar](255) NULL,
    [Self-defined ethnicity] [nvarchar](255) NULL,
    [Officer-defined ethnicity] [nvarchar](255) NULL,
    [Legislation] [nvarchar](255) NULL,
    [Object of search] [nvarchar](255) NULL,
    [Outcome] [nvarchar](255) NULL,
    [Outcome linked to object of search] [nvarchar](255) NULL,
    [Removal of more than just outer clothing] [bit] NOT NULL
) ON [PRIMARY]
GO
```

6.

```
CREATE TABLE [T3].[LSOA_POPULATION](
    [Area Codes] [nvarchar](255) NULL,
    [LA (2019 boundaries)] [nvarchar](255) NULL,
    [LSOA] [nvarchar](255) NULL,
    [All Ages] [float] NULL,
    [F5] [float] NULL,
    [F6] [float] NULL,
    [F7] [float] NULL,
    [F8] [float] NULL,
    .....
    [F93] [float] NULL,
    [F94] [float] NULL,
    [90+] [float] NULL
) ON [PRIMARY]
GO
```

5. When the data have been successfully imported into their respective databases then we need to drop the tables of Database owner tables of each country from the created databases.

```
/*Drop table after moving data into schema*/
Drop table dbo.ethiopia_constructed$  
  
/*Drop table after moving data into schema*/
Drop table dbo.india_constructed$  
  
/*Drop table after moving data into schema*/
Drop table dbo.peru_constructed$  
  
/*Drop table after moving data into schema*/
drop table dbo.vietnam_constructed$  
  
/* Drop table of dbo table*/
drop table dbo.[wave 1]  
  
/* Drop table of dbo table*/
drop table dbo.[wave 2]  
  
/* Drop table of dbo table*/
drop table dbo.[2017 - Outcomes]
drop table dbo.[2017 - Street]
drop table dbo.[2018 - Outcomes]
drop table dbo.[2018- Street]
drop table dbo.[2017-2018_Stop-and-Search]
```

These following queries are same for all the countries in task 1

6. Added new identity column for further reference of primary key. Alter command is used to make some changes in the specific column.

```
/* Add new Column as Serial No.*/
alter table chd.ethiopia_constructed$ add SrNo int identity(1,1)
```

7. Added a new column as ID_PK to make as a primary key in specific tables of Ethiopia country similarly, same command has been added into other tables of Task 1.

```
/* Add new Column as ID_PK*/
Alter Table chd.ethiopia_constructed$ add ID_PK nchar(255)
```

8. Make the unique combination with the help of present data in the tables and Inserting into ID_PK column.

```
/* Using Concatination for Primary Key */
update chd.ethiopia_constructed$ set ID_PK = Concat(childid,':',SrNo)
```

9. Apply constraint on the ID_PK column

```
/* Add constraint in column ID_PK */
Alter table chd.ethiopia_constructed$ Alter column ID_PK nchar(255) not null;
```

10. Add primary key constraint on ID_PK column.

```
/* Add Primary key in column ID_PK */
Alter table chd.ethiopia_constructed$ add primary key(ID_PK)
```

Data copies from CSV files to the schema tables using 'INSERT' command for each task.

```
/* insert data into the table into schemas Chd*/
Insert into chd.ethiopia_N Select * from dbo.ethiopia_N
/* insert data into the table into schemas Chd*/
Insert into [Chd].[India_N] Select * from dbo.india_N
/* insert data into the table into schemas Chd*/
Insert into [Chd].[peru_N] Select * from dbo.peru_N
/* insert data into the table into schemas Chd*/
Insert into [Chd].vietnam_N Select * from dbo.vietnam_N

/*Inserting a value from another dbo owner table into ChT2.vietnam_Task2 table*/
insert into ChT2.vietnam_Task2 select * from dbo.[wave 1]

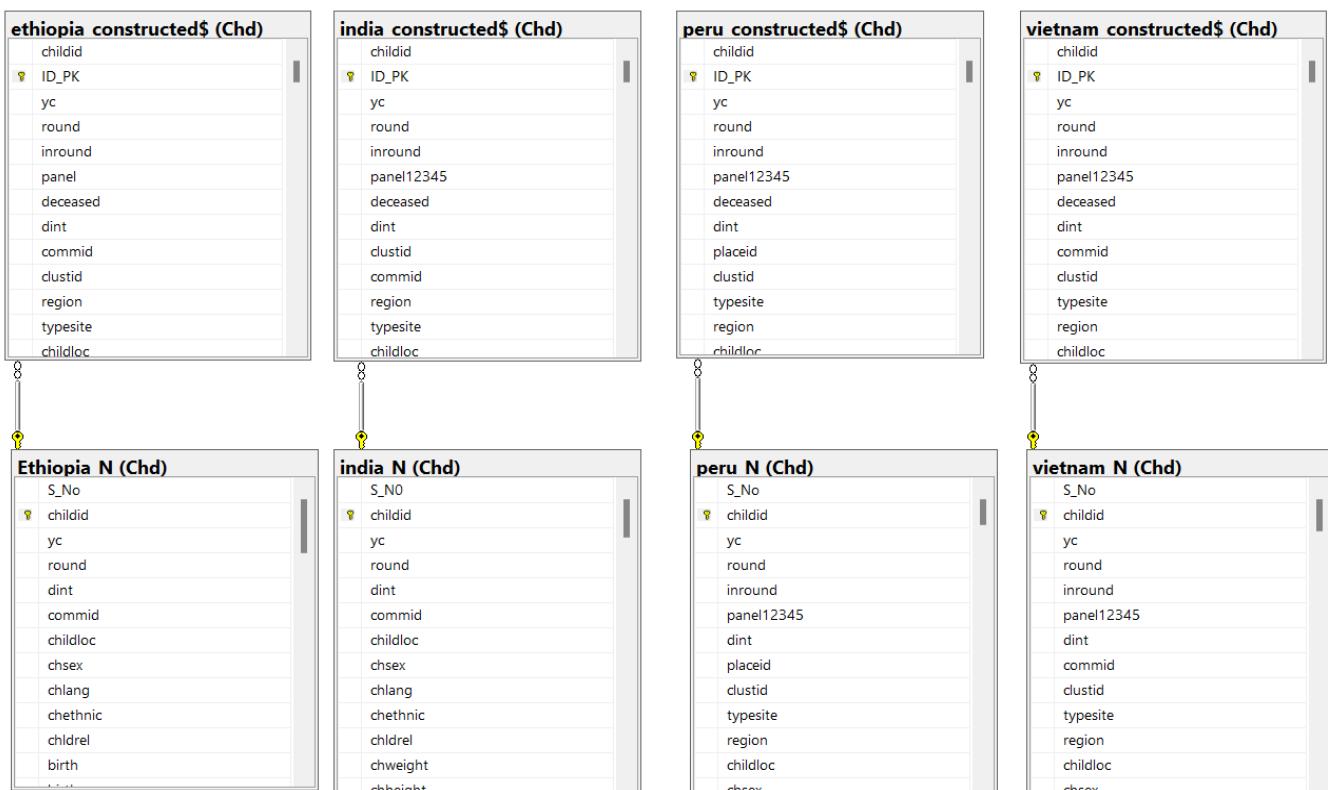
/*Inserting a value from another dbo owner table into ChT2.vietnam_Task2 table*/
insert into ChT2.vietnam_T2_W2 select * from dbo.[wave 2]

/* Inserting a value from another dbo owner tables into T3 schema tables*/
insert into T3.[2017 - Outcomes] select * from dbo.[2017 - Outcomes]
insert into T3.[2017 - Street] select * from dbo.[2017 - Street]
insert into T3.[2018 - Outcomes] select * from dbo.[2018 - Outcomes]
insert into T3.[2018- Street] select * from dbo.[2018- Street]
insert into T3.[2017-2018_Stop-and-Search] select * from dbo.[2017-2018_Stop-and-Search]
insert into T3.[LSOA_POPULATION] select * from dbo.[Sheet1$]
```

TASK 1 (INTRODUCTION):

Task 1 includes four countries Ethiopia, India, Peru, Vietnam. In this task, I have created reports on child poverty which includes all the four countries. Here, the reports are on the basis of children who are taking drugs, on the basis of their health parameters. Some reports include child's health parameter, their location, religion, languages. So basically, this task builds a report to understand the child poverty in the lower income countries. It also improves the understanding of causes and different consequences of childhood poverty and explain how this affect children's well-being. In this report I have used different visualizations like charts, tables etc. These following reports are same in each country so here I have shown the comparison of poverty between these countries on each report.

DATA DIAGRAM



Reports on the basis of Parent Table:

Variable declaration

Ethiopia (CONSTRUCTED):

```
/* Report to analyse the child poverty on the basis of Regions,
Weight, Height and BMI in Ethiopia in different Years*/
Declare @StartDate Datetime ='2002-11-23 00:00:00',
        @EndDate Datetime ='2017-11-23 00:00:00'

Select
    childid as ID,
    region as Regions,
    ROUND(chweight, 2) as Child_Weight,
    ROUND(chheight, 2) as Child_Height,
    ROUND(agemon/12, 2) as Age_In_Year,
    ROUND(bmi, 2) as BMI from Chd.ethiopia_constructed$
where dint>=@StartDate and dint <=@EndDate
order by Regions
```

	ID	Regions	Child_Weight	Child_Height	Age_In_Year	BMI
1	ET071002	NULL	60	177.3	22	19.09
2	ET051047	1	40.1	154	12.67	16.91
3	ET051037	1	62	162	22.5	23.62
4	ET010055	1	20.1	115.8	7.83	14.99
5	ET010055	1	30.5	138.7	11.83	15.85
6	ET010055	1	39.5	149	14.75	17.79
7	ET021032	1	41	135	22.08	22.5
8	ET040050	1	33.3	152.2	12.58	14.38
9	ET030078	1	28.9	137.2	12.08	15.35
10	ET030078	1	37	156	15	15.2
11	ET050003	1	29.3	143.4	11.83	14.25
12	ET140077	1	51.9	158.3	14.58	20.71
13	ET170001	1	16.85	108.2	5	14.4
14	ET170001	1	22	125	8.83	14.08
15	ET170001	1	31.2	143.5	11.83	15.15

India (CONSTRUCTED):

```
/* Report to analyse the child poverty on the basis of Regions,
Weight, Height and BMI in india in different Years*/
Declare @StartDate Datetime ='2007-11-23 00:00:00',
        @EndDate Datetime ='2017-11-23 00:00:00'

Select
    childid as ID,
    region as Regions,
    round(chweight, 2) as Child_Weight,
    round(chheight, 2) as Child_Height,
    round(agemon/12, 1) as Age_IN_Year,
    round(bmi, 2) as BMI from Chd.india_constructed$
where dint>=@StartDate and dint <=@EndDate
order by Regions desc
```

	ID	Regions	Child_Weight	Child_Height	Age_IN_Year	BMI
1	IN010053	77	45.5	144.8	12.3	21.7
2	IN010053	77	54.7	157.2	15.4	22.14
3	IN041041	77	54.4	167.6	22.2	19.37
4	IN050091	77	48.2	158.3	15.4	19.23
5	IN060010	77	23.8	131.2	7.9	13.83
6	IN060081	77	29.3	141	12.2	14.74
7	IN061026	77	46.1	150.9	14.7	20.25
8	IN071045	77	49.3	155.2	22.6	20.47
9	IN100075	77	18.6	118.3	8	13.29
10	IN100065	77	22.5	117.5	7.7	16.3
11	IN100013	77	34.1	133.1	8.4	19.25
12	IN110009	77	20.7	125.4	8.7	13.16
13	IN110060	77	19.2	119	7.8	13.56
14	IN120093	77	23	129.2	8.3	13.78
15	IN130019	77	18.6	113.1	8.5	14.54

Peru (CONSTRUCTED):

```

/* Report to analyse the child poverty on the basis of Regions,
Weight, Height and BMI in peru in different Years*/
|Declare @StartDate Datetime ='2007-11-23 00:00:000',
          @EndDate Datetime ='2017-11-23 00:00:000'
|Select
    chidid as ID,
    region as Regions,
    round(chweight, 2) as Child_Weight,
    round(chheight, 2) as Child_Height,
    round(agemon/12, 1) as Age_IN_Year,
    round(bmi, 2) as BMI from Chd.peru_constructed$
where dint>=@StartDate and dint <=@EndDate
order by Regions

```

	ID	Regions	Child_Weight	Child_Height	Age_IN_Year	BMI
1	PE011001	31	22.2	112.3	7.8	17.6
2	PE011001	31	34.1	133.2	11.8	19.22
3	PE011001	31	46.2	143.8	14.8	22.34
4	PE011002	31	19.5	116	7.9	14.49
5	PE011002	31	31.5	139.2	11.8	16.26
6	PE011002	31	39.2	149.1	14.9	17.63
7	PE011003	31	34	125.5	8.1	21.59
8	PE011003	31	51.6	142	12.1	25.59
9	PE011003	31	65.5	160.5	15.2	25.43
10	PE011004	31	32.8	134.5	8.3	18.13
11	PE011004	31	56.9	163.6	12.3	21.26
12	PE011004	31	70.1	179.9	15.3	21.66
13	PE011005	31	20.1	115.1	8.3	15.17
14	PE011005	31	28.8	133.4	12.3	16.18
15	PE011005	31	42.6	156.8	15.3	17.33

Vietnam (CONSTRUCTED):

```
/* Report to analyse the child poverty on the basis of Regions,
Weight, Height and BMI in Ethiopia in different Years*/
Declare @StartDate Datetime ='2002-11-23 00:00:00',
        @EndDate Datetime ='2017-11-23 00:00:00'
Select
    chidid as ID,
    region as Regions,
    round(chweight, 2) as Child_Weight,
    round(chheight, 2) as Child_Height,
    round(agemon/12, 1) as Age_IN_Year,
    round(bmi, 2) as BMI from Chd.vietnam_constructed$
where dint >= @StartDate and dint <= @EndDate
order by Regions
```

	ID	Regions	Child_Weight	Child_Height	Age_IN_Year	BMI
1	VN090001	51	13.6	94.5	5.1	15.23
2	VN090001	51	17.3	109	7.8	14.56
3	VN090001	51	29	132	12	16.64
4	VN090002	51	12.1	94	4.7	13.69
5	VN090002	51	15.5	110.1	7.4	12.79
6	VN090002	51	29.2	137.8	11.6	15.38
7	VN090002	51	37	150.1	14.6	16.42
8	VN090003	51	16.2	101.5	5.3	15.72
9	VN090003	51	20.9	118.8	8	14.81
10	VN090003	51	37.3	145	12.2	17.74
11	VN090003	51	48.7	160.2	15.2	18.98
12	VN090004	51	16.4	107.6	5.3	14.17
13	VN090004	51	20.7	123.9	8.1	13.48
14	VN090004	51	32	146	12.3	15.01
15	VN090004	51	45.4	160.3	15.3	17.67

These report gives information for all the four countries on the basis of child's weight, height, their age in year and BMI. In this script I have applied declare the variable naming 'start date and end date' to filter out the date to see the different results. According to children's height, weight and age they have low BMI and these results are different according to the regions.

While observe the report on the basis of the age, it also their nutritional factor. Which does not include into the normal nutritional value.

Views:

Ethiopia (CONSTRUCTED):

```
/*Total Number of children Died As Per Gender Ratio*/
Create View DeceasedChild_1
As Select chsex as Gender, sum(deceased) as Deceased from chd.ethiopia_constructed$
where deceased =1
group by chsex

/* Create View of above Query*/
Select * from DeceasedChild_1
```

	ChSex	Deceased
1	1	156
2	2	168

```
/*Total Number of children Died As Per Interview Round By Young Life Community Ratio*/
Create View DeceasedChild_2
As Select round as Round,sum(deceased)as Deceased from chd.ethiopia_constructed$
where deceased =1
group by Round

/* Create View of above Query*/
Select * from DeceasedChild_2
```

	Round	Deceased
1	2	67
2	3	76
3	4	86
4	5	95

India (CONSTRUCTED):

```
/*Total Number of children Died As Per Gender Ratio*/
Create View DeceasedChild_3
As Select chsex as ChSex,sum(deceased) as Deceased from chd.india_constructed$
where deceased =1
group by chsex

/* Create View of above Query*/
Select * from DeceasedChild_3
```

	ChSex	Deceased
1	1	93
2	2	95

```
/*Total Number of children Died As Per Interview Round By Young Life Community Ratio*/
Create View DeceasedChild_4
As Select round as Round,sum(deceased)as Deceased from chd.india_constructed$
where deceased =1
group by Round

/* Create View of above Query*/
Select * from DeceasedChild_4
```

	Round	Deceased
1	2	33
2	3	40
3	4	54
4	5	61

Peru (CONSTRUCTED):

```
/*Total Number of children Died As Per Gender Ratio*/
Create View DeceasedChild_5
As Select chsex as ChSex,sum(deceased) as Deceased from chd.peru_constructed$
where deceased =1
group by chsex

/* Create View of above Query*/
Select * from DeceasedChild_5
```

	ChSex	Deceased
1	1	40
2	2	64

```
/*Total Number of children Died As Per Interview Round By Young Life Community Ratio*/
Create View DeceasedChild_6
As Select round as Round,sum(deceased)as Deceased from chd.peru_constructed$
where deceased =1
group by Round

/* Create View of above Query*/
Select * from DeceasedChild_6
```

	Round	Deceased
1	2	20
2	3	25
3	4	28
4	5	31

Vietnam (CONSTRUCTED):

```
/*Total Number of children Died As Per Gender Ratio*/
Create View DeceasedChild_7
As Select chsex as ChSex,sum(deceased) as Deceased from chd.vietnam_constructed$
where deceased =1
group by chsex

/* Create View of above Query*/
Select * from DeceasedChild_7
```

	ChSex	Deceased
1	1	45
2	2	16

```
/*Total Number of children Died As Per Interview Round By Young Life Community Ratio*/
Create View DeceasedChild_8
As Select round as Round,sum(deceased)as Deceased from chd.vietnam_constructed$
where deceased =1
group by Round

/* Create View of above Query*/
Select * from DeceasedChild_8
```

	Round	Deceased
1	2	13
2	3	13
3	4	16
4	5	19

I have created two views for each country to check the result of deceased child naming accordingly. With this view, we can the report of the deceased child.

First view is based on gender (1 is male and 2 is female) who has died. After analysis the data, we can easily notice that female children are more deceased as compared to male among Ethiopia, India and Peru except Vietnam. The reason behind deceasing is their poor nutritional value, living style, stress level, not having enough daily necessity.

Second view is based on the survey on 5 interview rounds. These 5 rounds are conducted in different years 1st round was conducted in 2002, a unique identification (*childid*) was assigned to each Young Lives child. This ID was retained in the next rounds to track the child. 2nd round in 2006, 3rd round in 2009, 4th round in 2013 and 5th round in 2016. The given data shows the deceased children are increased during each round for each country.

Procedures: Here I have created procedures to check the data for each round so that it reduces the repetitive tasks. With their execution we can check the result for each round for each country.

Ethiopia (CONSTRUCTED):

```
/* Create And Alter Procedure for Repeataive Task */
Create PROCEDURE SelectChildRec @Round nvarchar(30)
AS
Begin Try
    SELECT childid as ID, yc as Young_Cohort, round As Round,
           inround as Inround, dint as Interview_Date,
           childid as ChildID, clustid as ClustID,region As Regions,
           childloc as Locations, chsex As Gender, chlang as Languages
      FROM chd.ethiopia_constructed$ WHERE round = @Round and dint is not null
End Try
Begin Catch
    SELECT ERROR_MESSAGE() AS [Error Message]
        ,ERROR_LINE() AS ErrorLine
        ,ERROR_NUMBER() AS [Error Number]
        ,ERROR_SEVERITY() AS [Error Severity]
        ,ERROR_STATE() AS [Error State]
        ,ERROR_PROCEDURE() AS [Error Procedure]
End Catch
Go
-----/* Execute Procedure for Repeataive Task for Round */
Exec SelectChildRec @Round = 1
Exec SelectChildRec @Round = 2
Exec SelectChildRec @Round = 3
Exec SelectChildRec @Round = 4
Exec SelectChildRec @Round = 5
```

	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	ET010001	1	1	1	2002-10-27 00:00:00.000	ET010001	1	14	1	1	2
2	ET010002	1	1	1	2002-10-26 00:00:00.000	ET010002	1	14	1	1	2
3	ET010003	1	1	1	2002-10-25 00:00:00.000	ET010003	1	14	1	1	NULL
4	ET010004	1	1	1	2002-10-24 00:00:00.000	ET010004	1	14	1	1	2
	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	ET010001	1	2	1	2007-01-08 00:00:00.000	ET010001	1	14	1	1	2
2	ET010002	1	2	1	2007-01-06 00:00:00.000	ET010002	1	14	1	1	2
3	ET010004	1	2	1	2007-01-05 00:00:00.000	ET010004	1	14	1	1	2
4	ET010005	1	2	1	2007-01-08 00:00:00.000	ET010005	1	14	1	2	2
	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	ET010001	1	3	1	2009-12-13 00:00:00.000	ET010001	1	14	1	1	2
2	ET010002	1	3	1	2009-12-12 00:00:00.000	ET010002	1	14	1	1	2
3	ET010004	1	3	1	2009-12-30 00:00:00.000	ET010004	1	14	1	1	2
4	ET010005	1	3	1	2009-12-14 00:00:00.000	ET010005	1	14	1	2	2
	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
48	ET010056	1	4	1	2014-03-06 00:00:00.000	ET010056	90	4	1	1	11
49	ET010057	1	4	1	2014-01-27 00:00:00.000	ET010057	1	14	1	2	2
50	ET010059	1	4	1	2014-01-14 00:00:00.000	ET010059	1	14	1	2	2
	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	ET010001	1	5	1	2017-01-02 00:00:00.000	ET010001	1	14	1	1	2
2	ET010002	1	5	1	2016-12-04 00:00:00.000	ET010002	1	14	1	1	2
3	ET010004	1	5	1	2016-12-21 00:00:00.000	ET010004	1	14	1	1	2
4	ET010005	1	5	1	2016-12-29 00:00:00.000	ET010005	1	14	1	2	2

India (CONSTRUCTED):

```

/* Create Procedure for Repeative Task */
Create PROCEDURE SelectChildRecIND @Round nvarchar(30)
AS
Begin Try
    SELECT childid as ID, yc as Young_Cohort, round As Round,
           inround as Inround, dint as Interview_Date,
           childid as ChildID, clustid as ClustID,region As Regions,
           childloc as Locations, chsex As Gender, chlang as Languages
      FROM chd.india_constructed$ WHERE round = @Round and dint is not null
End Try
Begin Catch
    SELECT ERROR_MESSAGE() AS [Error Message]
        ,ERROR_LINE() AS ErrorLine
        ,ERROR_NUMBER() AS [Error Number]
        ,ERROR_SEVERITY() AS [Error Severity]
        ,ERROR_STATE() AS [Error State]
        ,ERROR_PROCEDURE() AS [Error Procedure]
End Catch
Go
-----*/
/* Execute Procedure for Repeative Task for Round */
Exec SelectChildRecIND @Round = 1
Exec SelectChildRecIND @Round = 2
Exec SelectChildRecIND @Round = 3
Exec SelectChildRecIND @Round = 4
Exec SelectChildRecIND @Round = 5

```

ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	IN010001	1	1	2002-11-02 00:00:00.000	IN010001	1	21	1	1	21
2	IN010002	1	1	2002-10-30 00:00:00.000	IN010002	1	21	1	1	21
3	IN010003	1	1	2002-10-31 00:00:00.000	IN010003	1	21	1	1	21
4	IN010004	1	1	2002-11-02 00:00:00.000	IN010004	1	21	1	2	21
ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regi...	Locations	Gender	Languages
1	IN010001	1	2	2007-03-06 00:00:00.000	IN010001	1	21	1	1	21
2	IN010002	1	2	2007-03-09 00:00:00.000	IN010002	1	21	1	1	21
3	IN010003	1	2	2007-03-03 00:00:00.000	IN010003	1	21	1	1	21
ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	IN010001	1	3	2009-10-04 00:00:00.000	IN010001	1	21	1	1	21
2	IN010002	1	3	2009-10-14 00:00:00.000	IN010002	1	21	1	1	21
3	IN010003	1	3	2009-10-09 00:00:00.000	IN010003	1	21	1	1	21
4	IN010004	1	3	2009-10-31 00:00:00.000	IN010004	90	21	1	2	21
ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	IN010001	1	4	2013-10-09 00:00:00.000	IN010001	1	21	1	1	21
2	IN010002	1	4	2013-10-08 00:00:00.000	IN010002	1	21	1	1	21
3	IN010003	1	4	2013-10-12 00:00:00.000	IN010003	1	21	1	1	21
4	IN010004	1	4	2013-11-19 00:00:00.000	IN010004	99	21	1	2	21
ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	IN010001	1	5	2016-10-02 00:00:00.000	IN010001	1	21	1	1	21
2	IN010002	1	5	2016-09-27 00:00:00.000	IN010002	1	21	1	1	21
3	IN010003	1	5	2016-10-20 00:00:00.000	IN010003	1	21	1	1	21
4	IN010004	1	5	2016-10-25 00:00:00.000	IN010004	90	21	1	2	21

Peru (CONSTRUCTED):

```

/* Create Procedure for Repeataive Task */
Create PROCEDURE Select ChildRecPER Round nvarchar(30)
AS
Begin Try
    SELECT childid as ID, yc as Young_Cohort, round As Round,
           inround as Inround, dint as Interview_Date,
           childid as ChildID, clustid as ClustID,region As Regions,
           childloc as Locations, chsex As Gender, chlang as Languages
      FROM chd.peru_constructed$ WHERE round = @Round and dint is not null
End Try
Begin Catch
    SELECT ERROR_MESSAGE() AS [Error Message]
        ,ERROR_LINE() AS ErrorLine
        ,ERROR_NUMBER() AS [Error Number]
        ,ERROR_SEVERITY() AS [Error Severity]
        ,ERROR_STATE() AS [Error State]
        ,ERROR_PROCEDURE() AS [Error Procedure]
End Catch
Go
-----
/* Execute Procedure for Repeataive Task for Round */
Exec SelectChildRecPER @Round = 1
Exec SelectChildRecPER @Round = 2
Exec SelectChildRecPER @Round = 3
Exec SelectChildRecPER @Round = 4
Exec SelectChildRecPER @Round = 5

```

	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	PE011001	1	1	1	2002-09-02 00:00:00.000	PE011001	1	31	1	2	31
2	PE011002	1	1	1	2002-09-02 00:00:00.000	PE011002	1	31	1	2	31
3	PE011003	1	1	1	2002-09-02 00:00:00.000	PE011003	1	31	1	1	31
4	PE011004	1	1	1	2002-09-02 00:00:00.000	PE011004	1	31	1	1	31

	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	PE011001	1	2	1	2007-03-26 00:00:00.000	PE011001	1	31	1	2	31
2	PE011002	1	2	1	2007-03-24 00:00:00.000	PE011002	1	31	1	2	31
3	PE011003	1	2	1	2007-03-24 00:00:00.000	PE011003	1	31	1	1	31

	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	PE011001	1	3	1	2009-08-10 00:00:00.000	PE011001	1	31	1	2	31
2	PE011002	1	3	1	2009-08-19 00:00:00.000	PE011002	1	31	1	2	31
3	PE011003	1	3	1	2009-08-20 00:00:00.000	PE011003	1	31	1	1	31

	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	PE011001	1	4	1	2013-08-08 00:00:00.000	PE011001	1	31	1	2	31
2	PE011002	1	4	1	2013-08-17 00:00:00.000	PE011002	1	31	1	2	31
3	PE011003	1	4	1	2013-08-14 00:00:00.000	PE011003	1	31	1	1	31
4	PE011004	1	4	1	2013-08-07 00:00:00.000	PE011004	1	31	1	1	31

	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	PE011001	1	5	1	2016-08-11 00:00:00.000	PE011001	1	31	1	2	31
2	PE011002	1	5	1	2016-08-15 00:00:00.000	PE011002	1	31	1	2	31
3	PE011003	1	5	1	2016-08-19 00:00:00.000	PE011003	1	31	1	1	31
4	PE011004	1	5	1	2016-08-16 00:00:00.000	PE011004	1	31	1	1	31

Vietnam (CONSTRUCTED):

```

/* Create Procedure for Repeative Task */
Create PROCEDURE SelectChildRecN @Round nvarchar(30)
AS
Begin Try
    SELECT childid as ID, yc as Young_Cohort, round As Round,
           inround as Inround, dint as Interview_Date,
           childid as ChildID, clustid as ClustID,region As Regions,
           childloc as Locations, chsex As Gender, chlang as Languages
      FROM chd.vietnam_constructed$ WHERE round = @Round and dint is not null
End Try
Begin Catch
    SELECT ERROR_MESSAGE() AS [Error Message]
        ,ERROR_LINE() AS ErrorLine
        ,ERROR_NUMBER() AS [Error Number]
        ,ERROR_SEVERITY() AS [Error Severity]
        ,ERROR_STATE() AS [Error State]
        ,ERROR_PROCEDURE() AS [Error Procedure]
End Catch
Go
-----*/
/* Execute Procedure for Repeative Task for Round */
Exec SelectChildRecN @Round = 1
Exec SelectChildRecN @Round = 2
Exec SelectChildRecN @Round = 3
Exec SelectChildRecN @Round = 4
Exec SelectChildRecN @Round = 5

```

	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	VN010001	1	1	1	2002-09-21 00:00:00.000	VN010001	1	53	1	1	41
2	VN010002	1	1	1	2002-09-21 00:00:00.000	VN010002	1	53	1	1	41
3	VN010003	1	1	1	2002-09-20 00:00:00.000	VN010003	1	53	1	2	41
4	VN010004	1	1	1	2002-09-20 00:00:00.000	VN010004	1	53	1	2	41

	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	VN010001	1	2	1	2006-12-23 00:00:00.000	VN010001	1	53	1	1	41
2	VN010002	1	2	1	2006-12-23 00:00:00.000	VN010002	1	53	1	1	41
3	VN010003	1	2	1	2006-12-21 00:00:00.000	VN010003	1	53	1	2	41

	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	VN010001	1	3	1	2009-10-24 00:00:00.000	VN010001	1	53	1	1	41
2	VN010002	1	3	1	2009-10-25 00:00:00.000	VN010002	1	53	1	1	41
3	VN010003	1	3	1	2009-10-20 00:00:00.000	VN010003	1	53	1	2	41

	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	VN010001	1	4	1	2013-11-27 00:00:00.000	VN010001	1	53	1	1	41
2	VN010002	1	4	1	2013-11-26 00:00:00.000	VN010002	1	53	1	1	41
3	VN010003	1	4	1	2013-11-26 00:00:00.000	VN010003	1	53	1	2	41

	ID	Young_Cohort	Round	Inround	Interview_Date	ChildID	ClustID	Regions	Locations	Gender	Languages
1	VN010001	1	5	1	2016-11-03 00:00:00.000	VN010001	1	53	1	1	41
2	VN010002	1	5	1	2016-11-15 00:00:00.000	VN010002	1	53	1	1	41
3	VN010003	1	5	1	2016-11-02 00:00:00.000	VN010003	1	53	1	2	41
4	VN010004	1	5	1	2016-11-11 00:00:00.000	VN010004	1	53	1	2	41

Error Handling (applied in each query of each Task)

Report on work, play and study parameters

Ethiopia (CONSTRUCTED):

```
/* Work, Play and Study Parameter Report of Child in Ethiopia */
Begin Try
Select yc as Young_Cohort,hwork as Hours_Work, hschool as Hours_School,
hstudy as Hours_Study,hplay as Hours_Play From chd.ethiopia_constructed$
where yc<>0 and hwork<>0
Order BY
( Case
    when hwork is null then 'No Record'
    when hschool is null then 'No Record'
    when hstudy is null then 'No Record'
    when hplay is null then 'No Record'
    else 'Children are not spending time on it'
End)
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	Young_Cohort	Hours_Work	Hours_School	Hours_Study	Hours_Play
1	1	4	8	1	1
2	1	2	8	1	3
3	1	1	9	1	3
4	1	2	6	2	3
5	1	8	0	0	3
6	1	10	0	0	6
7	1	8	0	0	6
8	1	5	5	2	2
9	1	1	5	2	3
10	1	9	0	0	4
11	1	5	6	1	2
12	1	10	0	0	3
13	1	2	5	2	1
14	1	1	0	0	7
15	1	11	0	0	4

India (CONSTRUCTED):

```
/* Work, Play and Study Parameter Report of Child in india */
Begin Try
Select yc as Young_Cohort,hwork as Hours_Work, hschool as Hours_School,
hstudy as Hours_Study,hplay as Hours_Play From chd.india_constructed$
where yc<>0 and hwork<>0
Order BY
(Case
    when hwork is null then 'No Record'
    when hschool is null then 'No Record'
    when hstudy is null then 'No Record'
    when hplay is null then 'No Record'
    else 'Children are not spending time on it'
End)
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	Young_Cohort	Hours_Work	Hours_School	Hours_Study	Hours_Play
1	1	8	0	0	6
2	1	10	0	0	2
3	1	8	0	0	4
4	1	9	0	0	3
5	1	8	0	0	6
6	1	8	0	0	7
7	1	8	0	0	2
8	1	1	6	1	6
9	1	10	0	0	2
10	1	8	0	0	2
11	1	7	0	0	3
12	1	8	0	2	2
13	1	9	0	0	3
14	1	8	0	0	5
15	1	8	0	0	3

Peru (CONSTRUCTED):

```
/* Work, Play and Study Parameter Report of Child in peru */
BEGIN TRY
Select yc as Young_Cohort,hwork as Hours_Work, hschool as Hours_School,
hstudy as Hours_Study,hplay as Hours_Play From chd.peru_constructed$
where yc<>0 and hwork<>0
Order BY
(Case
    when hwork is null then 'No Record'
    when hschool is null then 'No Record'
    when hstudy is null then 'No Record'
    when hplay is null then 'No Record'
    else 'Children are not spending time on it'
End)
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	Young_Cohort	Hours_Work	Hours_School	Hours_Study	Hours_Play
1	1	6	5	2	3
2	1	5	6	1	2
3	1	1	6	2	4
4	1	3	6	2	2
5	1	2	6	2	4
6	1	3	5	1	1
7	1	7	0	0	6
8	1	2	6	2	4
9	1	3	7	1	2
10	1	2	8	1	3
11	1	2	6	1	4
12	1	1	10	4	1
13	1	1	8	3	2
14	1	1	6	1	4
15	1	4	6	1	3

Vietnam (CONSTRUCTED):

```
/* Work, Play and Study Parameter Report of Child in Ethiopia */
BEGIN TRY
Select yc as Young_Cohort,hwork as Hours_Work, hschool as Hours_School,
hstudy as Hours_Study,hplay as Hours_Play From chd.vietnam_constructed$
where yc<>0 and hwork<>0
Order BY
(Case
    when hwork is null then 'No Record'
    when hschool is null then 'No Record'
    when hstudy is null then 'No Record'
    when hplay is null then 'No Record'
    else 'Children are not spending time on it'
End)
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	Young_Cohort	Hours_Work	Hours_School	Hours_Study	Hours_Play
1	1	8	0	0	5
2	1	3	5	0	9
3	1	12	0	0	2
4	1	2	3	2	7
5	1	13	0	0	3
6	1	8	0	0	2
7	1	8	0	0	5.5
8	1	4	0	0	9
9	1	2	5	2	4
10	1	7	0	0	4
11	1	8	0	0	7
12	1	12	0	0	3
13	1	8	0	0	6
14	1	6	0	0	5
15	1	10	0	0	2

Looking at these reports on each country, children were spending time on labour and playing rather than focusing on schooling and study. This is due to the poverty and lack of general awareness.

Reports on the basis of Child Table:

Report 1 on Ethiopia

```
/* Measure less than Zero CHILD: ANTHROPOMETRIC */
BEGIN TRY
Select childid as ID ,zwfa as Z_Score_Weight,zhfa as Z_Score_Height,
zbfa as Z_Score_BMI,zwfl as Weight_length_Per_Height
from [Chd].[Ethiopia_N] where zwfa<0 and zhfa<0 and zbfa<0 and zwfl<0
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	ID	Z_Score_Weight	Z_Score_Height	Z_Score_BMI	Weight_length_Per_Height
1	ET010003	-4.22	-3.04	-3.71	-3.91
2	ET010013	-1.59	-1.76	-0.76	-0.96
3	ET010019	-0.84	-0.99	-0.38	-0.5
4	ET010034	-2.48	-1.98	-1.78	-1.68
5	ET010039	-2.72	-3.47	-0.87	-1.04
6	ET010078	-2.29	-3.38	-0.3	-0.79
7	ET020006	-4.53	-6.38	-0.96	-1.32
8	ET020010	-1.67	-2.43	-0.28	-0.6
9	ET020057	-2.2	-2.39	-0.94	-1.16
10	ET020069	-1.79	-1.41	-1.34	-1.45
11	ET040007	-2.19	-2.63	-0.83	-0.83
12	ET040063	-1.93	-2.76	-0.35	-0.62
13	ET040069	-1.18	-1.29	-0.57	-0.48
14	ET050005	-4.11	-3.36	-3.15	-2.84
15	ET050013	-2.02	-1.41	-1.7	-1.9
16	ET050015	-2.52	-3.82	-0.18	-0.47

Report 1 on India

```
/* Measure less than Zero CHILD: ANTHROPOMETRIC */
BEGIN TRY
Select childid as ID ,zwfa as Z_Score_Weight,zhfa as Z_Score_Height,
zbfa as Z_Score_BMI,zwfl as Weight_length_Per_Height
from [Chd].[India_N]
where zwfa<0 and zhfa<0 and zbfa<0 and zwfl<0
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	ID	Z_Score_Weight	Z_Score_Height	Z_Score_BMI	Weight_length_Per_Height
1	IN010001	-3.21	-4.77	-0.23	-1
2	IN010002	-2.04	-2.9	-0.37	-0.87
3	IN010003	-2.56	-1.75	-2.17	-2.33
4	IN010004	-1.38	-0.81	-1.27	-1.3
5	IN010005	-0.65	-0.06	-0.89	-0.86
6	IN010006	-2.72	-2.42	-1.81	-2.22
7	IN010009	-2.1	-1.8	-1.4	-1.7
8	IN010010	-2.02	-1.52	-1.56	-1.81
9	IN010012	-0.18	-0.27	-0.06	-0.06
10	IN010013	-1.36	-1.62	-0.57	-0.66
11	IN010015	-1.43	-0.75	-1.41	-1.47
12	IN010017	-1.15	-0.31	-1.39	-1.4
13	IN010019	-2.29	-1.44	-2.07	-2.26
14	IN010020	-1.24	-0.14	-1.63	-1.61
15	IN010021	-1.73	-1.56	-1.12	-1.23
16	IN010023	-0.4	-0.13	-0.45	-0.42

Report 1 on Peru

```
/* Measure less than Zero CHILD: ANTHROPOMETRIC */
BEGIN TRY
Select childid as ID, zwfa as Z_Score_Weight,zhfa as Z_Score_Height,
zbfa as Z_Score_BMI,zwfl as Weight_length_Per_Height
from [Chd].[Peru_N] where zwfa<0 and zhfa<0 and zbfa<0 and zwfl<0
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	ID	Z_Score_Weight	Z_Score_Height	Z_Score_BMI	Weight_length_Per_Height
1	PE011002	-1.9	-1.12	-1.75	-1.85
2	PE011005	-2.14	-2.46	-0.91	-1.36
3	PE011006	-0.83	-1.19	-0.21	-0.08
4	PE011010	-0.13	-0.14	-0.04	-0.05
5	PE011011	-3.13	-3.72	-1.12	-1.21
6	PE011012	-0.61	-0.53	-0.45	-0.54
7	PE011014	-1.84	-2.21	-0.72	-0.74
8	PE011015	-1.82	-1.35	-1.44	-1.59
9	PE011019	-2.04	-1.67	-1.47	-1.64
10	PE011021	-0.59	-0.98	-0.03	-0.22
11	PE011025	-2.26	-2.52	-1.04	-1.42
12	PE011027	-1.45	-2.13	-0.27	-0.19
13	PE011036	-0.68	-0.13	-0.8	-0.75
14	PE011038	-1.5	-1.66	-0.69	-1.01
15	PE011041	-0.95	-0.03	-1.31	-1.27

Report 1 on Vietnam

```
/* Measure less than Zero CHILD: ANTHROPOMETRIC */
BEGIN TRY
Select childid as ID, round(zwfa, 2) as Z_Score_Weight, round(zhfa , 2) as Z_Score_Height,
round(zbfa , 2) as Z_Score_BMI, round(zwfl , 2) as Weight_length_Per_Height
from [Chd].[vietnam_N] where zwfa<0 and zhfa<0 and zbfa<0 and zwfl<0
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	ID	Z_Score_Weight	Z_Score_Height	Z_Score_BMI	Weight_length_Per_Height
1	VN010001	-1.97	-1.09	-1.84	-1.8
2	VN010003	-0.99	-1.43	-0.2	-0.47
3	VN010004	-1.14	-1.36	-0.48	-0.67
4	VN010006	-0.94	-1.01	-0.48	-0.64
5	VN010007	-1	-1.41	-0.23	-0.49
6	VN010009	-2.14	-2.26	-1.08	-1.5
7	VN010010	-2.2	-1.22	-2.09	-2.23
8	VN010011	-1.11	-1.4	-0.39	-0.53
9	VN010012	-1.22	-1	-0.89	-1.04
10	VN010014	-4.75	-6.22	-1.35	-2.23
11	VN010015	-1.12	-0.45	-1.17	-1.18
12	VN010016	-3.09	-3.03	-1.64	-2.08
13	VN010017	-1.28	-2.11	-0.04	-0.34
14	VN010018	-1.33	-1.02	-1.02	-1.08
15	VN010019	-0.77	-1.12	-0.15	-0.29

This report shows the ANTHROPOMETRIC measure that is the non-invasive quantitative measures of the body which shows the nutritional status in the children. Here z-score is the method to find their nutritional status as the normal range for z-score is -1 to 0. However, in these reports it is clearly seen the z-score is going below to -1 for each country, which shows the children's malnutrition. But maximum poverty can be seen in Vietnam after comparison.

Although, other three countries are lies in poverty but as comparative to Vietnam, their ratio of poverty is less.

Report 2 on Ethiopia

```

/* Young Cohort Child Report Who are underweight, short in height and thinness */
Begin Try
Select childid as ID , yc as Young_Cohort, underweight as Underweight,
stunting As Short_Height_Age, thinness as Thinness from [Chd].[Ethiopia_N]
where underweight is not null and underweight<>0
and stunting is not null and stunting<>0
and thinness is not null and thinness<>0
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

	ID	Young_Cohort	Underweight	Short_Height_Age	Thinness
1	ET010003	1	2	2	2
2	ET010054	1	2	2	1
3	ET050005	1	2	2	2
4	ET050029	1	2	2	1
5	ET050069	1	2	2	1
6	ET100002	1	2	2	1
7	ET120003	1	2	1	2
8	ET120022	1	2	1	2
9	ET130038	1	2	2	2
10	ET130061	1	2	1	2
11	ET150012	1	2	2	2
12	ET170014	1	2	2	2
13	ET180078	1	2	2	1
14	ET190075	1	2	2	2
15	ET190078	1	2	1	2

Report 2 on India:

```

/* Young Cohort Child Report Who are underweight, short in height and thinness */
BEGIN TRY
Select childid as ID ,yc as Young_Cohort, underweight as Underweight,
stunting As Short_Height_Age, thinness as Thinness from [Chd].[India_N]
where underweight is not null and underweight<>0
and stunting is not null and stunting<>0
and thinness is not null and thinness<>0
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

	ID	Young_Cohort	Underweight	Short_Height_Age	Thinness
1	IN010044	1	2	1	1
2	IN010045	1	1	1	1
3	IN010078	1	2	2	1
4	IN011038	0	2	1	1
5	IN020001	1	1	1	1
6	IN020012	1	2	1	1
7	IN020019	1	2	2	1
8	IN020020	1	2	2	1
9	IN020030	1	2	1	1
10	IN020062	1	1	1	1
11	IN020069	1	2	2	1
12	IN020083	1	2	1	1
13	IN020088	1	2	1	1
14	IN020093	1	2	1	2
15	IN020099	1	2	2	1

Report 2 on Peru:

```

/* Young Cohort Child Report Who are underweight, short in height and thinness */
|BEGIN TRY
|Select childid as ID, yc as Young_Cohort, underweight as Underweight,
stunting As Short_Height_Age, thinness as Thinness from [Chd].[Peru_N]
where underweight is not null and underweight<>0
and stunting is not null and stunting<>0
and thinness is not null and thinness<>0
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

ID	Young_Cohort	Underweight	Short_Height_Age	Thinness
1	PE031014	1	2	1
2	PE031046	1	2	1
3	PE068008	0	1	1
4	PE091066	1	2	1
5	PE101008	1	2	1
6	PE151099	1	2	1
7	PE161082	1	2	1
8	PE171074	1	2	1
9	PE171087	1	2	1
10	PE181084	1	2	1
11	PE201073	1	2	1

Report 2 on Vietnam:

```

/* Young Cohort Child Report Who are underweight, short in height and thinness */
|BEGIN TRY
|Select chd.vietnam_constructed$.childid as Child_ID,
chd.vietnam_constructed$.underweight as UnderWeight,
chd.vietnam_constructed$.stunting as Short_Height_Age,
chd.vietnam_constructed$.thinness as Thinness
from Chd.vietnam_constructed$
RIGHT JOIN Chd.vietnam_N
ON chd.vietnam_constructed$.childid = Chd.vietnam_N.childid
where chd.vietnam_constructed$.underweight is not null and
chd.vietnam_constructed$.stunting is not null and
chd.vietnam_constructed$.thinness is not null and
chd.vietnam_constructed$.underweight <> 0 and
chd.vietnam_constructed$.stunting <> 0 and
chd.vietnam_constructed$.thinness <> 0
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

Child_ID	UnderWeight	Short_Height_Age	Thinness
1	VN010014	2	1
2	VN010016	2	1
3	VN010032	2	1
4	VN010032	2	1
5	VN010070	2	1
6	VN010109	2	1
7	VN010118	2	1
8	VN010118	2	1
9	VN011001	2	1
10	VN011002	1	1
11	VN011003	2	1
12	VN011025	2	1
13	VN011026	2	1
14	VN011042	2	1
15	VN011050	2	1

This report shows the children's poverty of different child ID as per underweight, short height, age and thinness. Each report says we got 2 children for each child Id who are underweight. As their height according to age is less and its value is fluctuating in ach country. For India and Peru, only one child is coming out in thinness. However, in Ethiopia and Vietnam, there are more than child are being there in thinness. These problems affect their BMI's and reaching to poverty. Overall, children in each country needs to improve their lives.

Report 3 on Ethiopia:

```

/* Report Child who consume drugs */
Begin Try
Select
[Chd].[Ethiopia_N].childid as ID ,[Chd].[Ethiopia_N].chsmoke as Child_Smoke,
round(chd.Ethiopia_constructed$.agemon/12,1) as AGE,
[Chd].[Ethiopia_N].chalcohol as Child_Alchohol
from [Chd].[Ethiopia_N]
right join [Chd].[Ethiopia_constructed$]
on
chd.Ethiopia_N.childid = Chd.Ethiopia_constructed$.childid
where [Chd].[Ethiopia_N].chsmoke is not null
and [Chd].[Ethiopia_N].chalcohol is not null and [Chd].[Ethiopia_N].chalcohol <>0
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

	ID	Child_Smoke	AGE	Child_Alchohol
1	ET011004	5	7.5	1
2	ET011004	5	11.8	1
3	ET011004	5	14.8	1
4	ET011004	5	18.7	1
5	ET011004	5	21.8	1
6	ET011018	4	7.8	1
7	ET011018	4	12	1
8	ET011018	4	15	1
9	ET011018	4	19.1	1
10	ET011018	4	22.1	1
11	ET011022	5	8.4	1
12	ET011022	5	12.7	1
13	ET011022	5	15.7	1
14	ET011022	5	19.8	1
15	ET011022	5	22.7	1

Report 3 on India:

```
/* Report Child who consume drugs */
]BEGIN TRY
]Select
chd.india_N.childid as ID ,chsmoke as Child_Smoke,
round(chd.india_constructed$.agemon/12,1) as AGE,
chalcohol as Child_Alchohol
from [Chd].[india_N]
right join [Chd].[india_constructed$]
on
chd.india_N.childid = Chd.india_constructed$.childid
where chsmoke is not null and chalcohol is not null and chalcohol <>0
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	ID	Child_Smoke	AGE	Child_Alchohol
1	IN021037	5	18.5	1
2	IN091009	1	22.2	1
3	IN081048	5	22.4	1
4	IN081048	5	15.3	1
5	IN081004	5	18.8	1
6	IN071035	5	18.7	1
7	IN061050	5	14.3	1
8	IN061045	5	21.8	1
9	IN051047	2	22.4	1
10	IN051034	5	15.2	1
11	IN051014	5	22.4	1
12	IN051013	1	22.5	1
13	IN031047	5	14.9	1
14	IN031043	5	14.8	1
15	IN031032	5	22.3	1

Report 3 on Peru:

```
/* Report Child who consume drugs */
]BEGIN TRY
]Select Chd.peru_constructed$.childid AS Child_ID,
round(Chd.peru_constructed$.agemon/12,1) as AGE,
Chd.peru_constructed$.chsmoke As Child_Smoke,
Chd.peru_constructed$.chalcohol as Child_Alchohol
from Chd.peru_constructed$
RIGHT JOIN Chd.peru_N
ON Chd.peru_constructed$.childid = Chd.peru_N.childid
where chsmoke is not null and chalcohol is not null and chalcohol <>0
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	Child_ID	AGE	Child_Smoke	Child_Alchohol
1	PE028016	19.3	5	1
2	PE061080	15.3	2	1
3	PE061019	15.1	3	1
4	PE058002	21.9	5	1
5	PE051005	14.6	4	1
6	PE048001	14.8	5	1
7	PE041067	14.6	4	1
8	PE041021	14.5	2	1
9	PE038023	22.4	4	1
10	PE028018	22.3	3	1
11	PE028018	19.2	2	1
12	PE028017	22.2	5	1
13	PE028003	22	3	1
14	PE021082	14.8	5	1

Report 3 on Vietnam:

```
/* Report Child who consume drugs */
|BEGIN TRY
|Select Chd.vietnam_N.childid, round(Chd.vietnam_constructed$.agemon/12,1) as AGE,
|    Chd.vietnam_constructed$.chsmoke As Child_Smoke,
|    Chd.vietnam_constructed$.chalcohol as Child_Alcohol
|from Chd.vietnam_constructed$
|LEFT JOIN Chd.vietnam_N
|ON Chd.vietnam_N.childid = Chd.vietnam_constructed$.childid
|    where chsmoke is not null and chalcohol is not null and chalcohol <>0
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	childid	AGE	Child_Smoke	Child_Alcohol
1	VN010071	15.7	5	1
2	VN010092	15.6	5	1
3	VN011008	19.4	5	1
4	VN011009	19.2	1	1
5	VN011018	19	1	1
6	VN011018	22	1	1
7	VN011043	NULL	1	1
8	VN011047	22.6	1	1
9	VN011052	22.8	3	1
10	VN011069	19.2	1	1
11	VN011069	22.3	1	1
12	VN020008	15.4	5	1
13	VN020070	15.7	5	1
14	VN021004	19.7	5	1
15	VN021012	22.1	4	1

This above report illustrates the children who smoke and contain alcohol. It is very strange that in Ethiopia, the children are smoking from a small age as we can see for child ID ET011004 is only of 7 years old and he/she addicted to smoking and alcohol. In the other countries the children being in the small age are smokers. The ratio of the child who smoke to alcohol is 5:1. Which can conclude that maximum children are smokers. But in Vietnam, there are less adults as compare to the three countries. In addition, in each country, one child has been observed being alcoholic.

Report 4 on Ethiopia:

```

/* Health Parameter Report of Child in Ethiopia */
Begin Try
Select Ethnicity= (
CASE
    WHEN chethnic = 99 THEN 'NK'
    WHEN chethnic = 11 THEN 'Agew'
    WHEN chethnic = 12 THEN 'Amhara'
    WHEN chethnic = 13 THEN 'Gurage'
    WHEN chethnic = 14 THEN 'Hadiva'
    WHEN chethnic = 15 THEN 'Kambata'
    WHEN chethnic = 16 THEN 'Oromo'
    WHEN chethnic = 17 THEN 'Sidama'
    WHEN chethnic = 18 THEN 'Tigrian'
    WHEN chethnic = 19 THEN 'Wolavta'
    ELSE 'Other'
END) ,chdisability, chrephealth1,chrephealth2,chrephealth3,chrephealth4
from [Chd].[Ethiopia_N]
where chrephealth1 is not null and
chrephealth2 is not null and chrephealth3 is not null and
chrephealth4 is not null and chdisability = 1
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

	Ethnicity	chdisability	chrephealth1	chrephealth2	chrephealth3	chrephealth4
1	Tigrian	1	4	1	1	2
2	Amhara	1	5	1	1	1
3	Amhara	1	3	1	0	1
4	Amhara	1	2	1	0	2
5	Amhara	1	3	0	1	1
6	Amhara	1	4	1	1	4
7	Amhara	1	2	1	1	2
8	Sidama	1	3	0	1	2
9	Oromo	1	1	1	0	1
10	Oromo	1	3	1	0	2
11	Oromo	1	4	1	1	1
12	Sidama	1	5	1	1	1
13	Oromo	1	3	1	1	1
14	Oromo	1	4	1	1	2
15	Other	1	4	1	1	2
16	Oromo	1	3	1	1	4
17	Oromo	1	5	1	1	2

Report 4 on India:

```

/* Health Parameter Report of Child in India */
|BEGIN TRY
|Select Ethnicity= (
CASE
    WHEN chethnic = 99 THEN 'NK'
    WHEN chethnic = 101 THEN 'Other, Muslim'
    WHEN chethnic = 102 THEN 'Other, Buddhist'
    WHEN chethnic = 100 THEN 'Other, Hindu'
    WHEN chethnic = 104 THEN 'Other, Christian'
    WHEN chethnic = 14 THEN 'None'
    WHEN chethnic = 21 THEN 'SC'
    WHEN chethnic = 22 THEN 'ST'
    WHEN chethnic = 23 THEN 'BC'
    ELSE 'Other'
END) ,chdisability, chrephealth1,chrephealth2,chrephealth3,chrephealth4
from chd.india_constructed$
where chrephealth1 is not null and
chrephealth2 is not null and chrephealth3 is not null and
chrephealth4 is not null and chdisability = 1
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

	Ethnicity	chdisability	chrephealth1	chrephealth2	chrephealth3	chrephealth4
1	BC	1	3	1	0	1
2	SC	1	3	1	0	2
3	SC	1	0	0	0	4
4	BC	1	2	1	1	3
5	SC	1	3	1	1	1
6	Other, Hindu	1	1	0	1	3
7	BC	1	3	0	1	1
8	SC	1	3	0	1	1

Report 4 on Peru:

```

/* Health Parameter Report of Child in Peru */
BEGIN TRY
Select Ethnicity= (
CASE
    WHEN chd.peru_constructed$.chethnic = 32.0 THEN 'Mestizo'
    WHEN chd.peru_constructed$.chethnic = 33.0 THEN 'Native of the Amazon'
    WHEN chd.peru_constructed$.chethnic = 34.0 THEN 'Negro'
    WHEN chd.peru_constructed$.chethnic = 35.0 THEN 'Asiatic'
    ELSE 'White'
END) ,chd.peru_constructed$.chdisability,
chd.peru_constructed$.chrephealth1, chd.peru_constructed$.chrephealth2,
chd.peru_constructed$.chrephealth3, chrephealth4
from Chd.peru_constructed$
RIGHT JOIN Chd.peru_N
ON Chd.peru_constructed$.childid = Chd.peru_N.childid
where chrephealth1 is not null and
chrephealth2 is not null and chrephealth3 is not null and
chrephealth4 is not null and chdisability = 1
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

	Ethnicity	chdisability	chrephealth1	chrephealth2	chrephealth3	chrephealth4
1	Mestizo	1	2	0	0	4
2	Mestizo	1	2	1	0	1
3	Mestizo	1	2	1	0	4
4	Mestizo	1	1	0	0	3
5	Mestizo	1	3	1	1	2
6	Mestizo	1	4	1	1	2
7	Mestizo	1	3	1	1	1
8	White	1	2	1	0	2
9	Mestizo	1	1	1	0	2
10	Mestizo	1	2	1	0	1
11	Mestizo	1	4	1	1	3
12	Mestizo	1	0	0	0	3
13	Mestizo	1	4	0	1	1
14	White	1	3	1	0	1
15	Mestizo	1	4	1	0	1

Here, this shows the children health parameters and disability according to their ethnicity. Here we got 1 disable child in each ethnicity. But in different health parameters it is more than 1. Looking at the result maximum children are in health parameter1 that is they have knowledge of reproductive health as compare to other health parameters

Report 4 on Vietnam

```
/* Health Parameter Report of Child in vietnam */
BEGIN TRY
Select Ethnicity= (
CASE
    WHEN chd.vietnam_constructed$.chethnic = 99.0 THEN 'NK'
    WHEN chd.vietnam_constructed$.chethnic = 41.0 THEN 'Kinh'
    WHEN chd.vietnam_constructed$.chethnic = 43.0 THEN 'Cham'
    WHEN chd.vietnam_constructed$.chethnic = 44.0 THEN 'Ede'
    WHEN chd.vietnam_constructed$.chethnic = 45.0 THEN 'Bana'
    WHEN chd.vietnam_constructed$.chethnic = 46.0 THEN 'Nung'
    WHEN chd.vietnam_constructed$.chethnic = 47.0 THEN 'Tay'
    WHEN chd.vietnam_constructed$.chethnic = 48.0 THEN 'Dao'
    WHEN chd.vietnam_constructed$.chethnic = 42.0 THEN 'Hmong'
    ELSE 'Other'
END) ,
round(avg(chd.vietnam_constructed$.chrephealth1),2) as Healht1,
round(avg(chd.vietnam_constructed$.chrephealth2),2)as Healht2,
round(avg(chd.vietnam_constructed$.chrephealth3),2)as Healht3,
round(avg(chd.vietnam_constructed$.chrephealth4),2) as Healht4
from chd.vietnam_constructed$
RIGHT JOIN Chd.vietnam_N
ON chd.vietnam_constructed$.childid = chd.vietnam_constructed$.childid
where chrephealth1 is not null and
chrephealth2 is not null and chrephealth3 is not null and
chrephealth4 is not null
group by chd.vietnam_constructed$.chethnic
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	Ethnicity	Healht1	Healht2	Healht3	Healht4
1	Other	1.66	0.41	0.38	3.59
2	Kinh	2.69	0.75	0.63	3.1
3	Hmong	1.33	0.36	0.26	3.51
4	Cham	1.5	0.5	0.5	3
5	Bana	2	0.67	0.67	3.33
6	Nung	3	0.83	0.75	2.83
7	Tay	2.3	0.6	0.6	3.4
8	Dao	2.46	0.68	0.46	3.32

Report 5 on Ethiopia:

```
/* Report Child Location, Group , Language and religion */
|Begin Try
|Select Gender = (
  case
    when chsex = 1 then ('Male')
    else ('Female')
  end
),
childloc as Child_Location, chlang as Child_Language,
chethnic as Child_Ethnic , chldrel as Child_Religion
from [Chd].[Ethiopia_N]
where chlang is not null and chethnic is not null
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	Gender	Child_Location	Child_Language	Child_Ethnic	Child_Religion
1	Male	1	2	12	7
2	Male	1	2	12	7
3	Male	1	2	12	7
4	Female	1	2	13	7
5	Female	1	2	12	7
6	Female	1	2	12	7
7	Female	1	2	12	7
8	Male	1	2	18	7
9	Female	1	2	16	6
10	Female	1	2	12	2
11	Male	1	2	13	7
12	Female	1	2	13	7
13	Male	1	2	18	7
14	Male	1	2	13	2
15	Female	1	2	12	7

Report 5 on India:

```
/* Report Child Location, Group , Language and religion */
BEGIN TRY
Select Gender = (
  case
    when chsex = 1 then ('Male')
    else ('Female')
  end
),
childloc as Child_Location, chlang as Child_Language,
chethnic as Child_Ethnic , chldrel as Child_Religion
from [Chd].[India_N]
where chlang is not null and chethnic is not null
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	Gender	Child_Location	Child_Language	Child_Ethnic	Child_Religion
1	Male	1	21	100	4
2	Male	1	21	100	4
3	Male	1	21	100	4
4	Female	1	21	100	4
5	Female	1	26	23	4
6	Male	1	21	100	4
7	Female	1	21	23	4
8	Female	1	21	100	4
9	Female	1	23	23	2
10	Female	1	23	23	2
11	Female	1	23	101	2
12	Female	1	21	100	4
13	Female	1	21	23	4
14	Female	1	21	100	4
15	Female	1	21	23	4

Report 5 on Peru:

```

/* Report Child Location, Group , Language and religion */
BEGIN TRY
Select Gender = (
case
    when chsex = 1 then ('Male')
    else ('Female')
end
),childloc as Child_Location, chlang as Child_Language,
chethnic as Child_Ethnic , chldrel as Child_Religion
from [Chd].[peru_N]
where chlang is not null and chethnic is not null
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

	Gender	Child_Location	Child_Language	Child_Ethnic	Child_Religion
1	Female	1	31	32	5
2	Female	1	31	32	5
3	Male	1	31	32	5
4	Male	1	31	32	5
5	Male	1	31	32	5
6	Female	1	31	32	5
7	Female	1	31	32	5
8	Male	1	31	32	5
9	Male	1	31	32	5
10	Male	1	31	32	5
11	Female	1	31	32	5
12	Female	1	31	32	5
13	Female	1	31	31	5
14	Male	1	31	32	5
15	Male	1	31	31	5
16	Male	1	31	32	5
17	Male	1	31	32	5
18	Female	1	31	32	14

Report 5 on Vietnam:

```
/* Report Child Location, Group , Language and religion */
BEGIN TRY
Select Gender = (
case
    when chsex = 1 then ('Male')
    else ('Female')
end
),childloc as Child_Location, chlang as Child_Language,
chethnic as Child_Ethnic , chdrel as Child_Religion
from [Chd].[vietnam_N]
where chlang is not null and chethnic is not null
END TRY
BEGIN CATCH
PRINT 'RESULT NOT FOUND'
END CATCH
```

	Gender	Child_Location	Child_Language	Child_Ethnic	Child_Religion
1	Male	1	41	41	14
2	Male	1	41	41	14
3	Female	1	41	41	14
4	Female	1	41	41	14
5	Female	1	41	41	14
6	Male	1	41	41	14
7	Female	1	41	41	3
8	Female	1	41	41	14
9	Male	1	41	41	14
10	Female	1	41	41	3
11	Male	1	41	41	14
12	Female	1	41	41	14
13	Female	1	41	41	14
14	Male	1	41	41	14
15	Male	1	41	41	14
16	Female	1	41	41	14
17	Male	1	41	41	14

Looking at this report, as per the gender, every child currently lives in household in their respective countries. It is so obvious that for each country, there native language is different which is grouped by the specific numbers. In Ethiopia and India, their ethnicity varies child to child. However, In Peru and Vietnam, maximum children belong to the same ethnic group as in Peru averagely, 80% children are Mestizo and In Vietnam, children are seeming like to be Vietnamese. While observing their religion, Peru is the only country in which children belongs to catholic religion but in other countries it is being observed that they different religions.

Report 6 on Ethiopia:

```

/* Daily necessity Parameter Report of Child in Ethiopia */
Begin Try
Select chd.ethiopia_constructed$.round as Round,
ROUND(chd.ethiopia_constructed$.wi_new, 2) as WealthIN,
ROUND(chd.ethiopia_constructed$.hq_new, 2) as Housing_Q,
chd.ethiopia_constructed$.sv_new as ServiceIN,
ROUND(chd.ethiopia_constructed$.cd_new, 2) as Consumer_durables,
chd.ethiopia_constructed$.elecq_new as Electricity,
chd.ethiopia_constructed$.toiletq_new as Sanitation,
chd.ethiopia_constructed$.cookingq_new as Cooking
from [Chd].Ethiopia_N
right join chd.ethiopia_constructed$
on
[Chd].Ethiopia_N.childid = chd.ethiopia_constructed$.childid

where chd.ethiopia_constructed$.wi_new is not null and
chd.ethiopia_constructed$.sv_new = 1
ORDER BY chd.ethiopia_constructed$.round
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

Round	WealthIN	Housing_Q	ServiceIN	Consumer_durables	Electricity	Sanitation	Cooking
1	0.6	0.29	1	0.5	1	1	1
1	0.59	0.27	1	0.5	1	1	1
1	0.64	0.53	1	0.4	1	1	1
1	0.67	0.52	1	0.5	1	1	1
1	0.42	0.27	1	0	1	1	1
1	0.44	0.31	1	0	1	1	1
1	0.53	0.3	1	0.3	1	1	1
1	0.56	0.29	1	0.4	1	1	1
1	0.61	0.52	1	0.3	1	1	1
1	0.69	0.57	1	0.5	1	1	1
1	0.53	0.29	1	0.3	1	1	1
1	0.56	0.28	1	0.4	1	1	1
1	0.55	0.36	1	0.3	1	1	1
1	0.55	0.26	1	0.4	1	1	1
1	0.52	0.36	1	0.2	1	1	1

Report 6 on India:

```
/* Daily necessity Parameter Report of Child in India*/
]BEGIN TRY
]Select round as Round,
       ROUND(wi,2) as WealthIN ,
       ROUND(hq, 2) as Housing_Q, sv as ServiceIN,
       ROUND(cd, 2) as Consumer_durables,
       elecq as Electricity, toiletq as Sanitation,
       cookingq as Cooking
from [Chd].[India_N]
where wi is not null and sv = 1
]END TRY
]BEGIN CATCH
PRINT'RESULT NOT FOUND'
]END CATCH
```

	Round	WealthIN	Housing_Q	ServiceIN	Consumer_durables	Electricity	Sanitation	Cooking
1	1	0.75	0.81	1	0.44	1	1	1
2	1	0.71	0.81	1	0.33	1	1	1
3	1	0.71	0.79	1	0.33	1	1	1
4	1	0.79	0.82	1	0.56	1	1	1
5	1	0.75	0.82	1	0.44	1	1	1
6	1	0.91	0.83	1	0.89	1	1	1
7	1	0.71	0.79	1	0.33	1	1	1
8	1	0.73	0.86	1	0.33	1	1	1
9	1	0.64	0.81	1	0.11	1	1	1
10	1	0.69	0.86	1	0.22	1	1	1
11	1	0.72	0.83	1	0.33	1	1	1
12	1	0.72	0.83	1	0.33	1	1	1
13	1	0.63	0.79	1	0.11	1	1	1
14	1	0.71	0.92	1	0.22	1	1	1
15	1	0.65	0.61	1	0.33	1	1	1

Report 6 on Peru:

```
/* Daily necessity Parameter Report of Child in Peru*/
BEGIN TRY
Select round as Round,
       ROUND(wi,2) as WealthIN ,
       ROUND(hq, 2) as Housing_Q, sv as ServiceIN,
       ROUND(cd, 2) as Consumer_durables,
       elecq as Electricity, toiletq as Sanitation,
       cookingq as Cooking
from [Chd].[peru_N]
where wi is not null and sv = 1
]END TRY
]BEGIN CATCH
PRINT'RESULT NOT FOUND'
]END CATCH
```

	Round	WealthIN	Housing_Q	ServiceIN	Consumer_durables	Electricity	Sanitation	Cooking
1	1	0.65	0.54	1	0.42	1	1	1
2	1	0.62	0.26	1	0.58	1	1	1
3	1	0.74	0.54	1	0.67	1	1	1
4	1	0.7	0.52	1	0.58	1	1	1
5	1	0.87	0.76	1	0.83	1	1	1
6	1	0.53	0.27	1	0.33	1	1	1
7	1	0.7	0.52	1	0.58	1	1	1
8	1	0.75	0.76	1	0.5	1	1	1
9	1	0.78	0.76	1	0.58	1	1	1
10	1	0.79	0.78	1	0.58	1	1	1
11	1	0.55	0.31	1	0.33	1	1	1
12	1	0.78	0.77	1	0.58	1	1	1
13	1	0.54	0.3	1	0.33	1	1	1
14	1	0.73	0.52	1	0.67	1	1	1
15	1	0.57	0.28	1	0.42	1	1	1

Report 6 on Vietnam:

```

/* Daily necessity Parameter Report of Child in vietnam*/
BEGIN TRY
Select round as Round,
      ROUND(wi_new,2) as WealthIN ,
      ROUND(hq_new, 2) as Housing_Q, sv_new as ServiceIN,
      ROUND(cd_new, 2) as Consumer_durables,
      elecq_new as Electricity, toiletq_new as Sanitation,
      cookingq_new as Cooking
from [Chd].[vietnam_N]
where wi_new is not null and sv_new= 1
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

	Round	WealthIN	Housing_Q	ServiceIN	Consumer_durables	Electricity	Sanitation	Cooking
1	1	0.96	1	1	0.89	1	1	1
2	1	0.79	0.82	1	0.56	1	1	1
3	1	0.85	1	1	0.56	1	1	1
4	1	0.9	0.82	1	0.89	1	1	1
5	1	0.82	0.79	1	0.67	1	1	1
6	1	0.86	0.8	1	0.78	1	1	1
7	1	0.74	0.78	1	0.44	1	1	1
8	1	0.74	0.78	1	0.44	1	1	1
9	1	0.79	0.92	1	0.44	1	1	1
10	1	0.78	0.79	1	0.56	1	1	1
11	1	0.78	0.79	1	0.56	1	1	1
12	1	0.75	0.79	1	0.44	1	1	1
13	1	0.68	0.81	1	0.22	1	1	1
14	1	0.71	0.92	1	0.22	1	1	1
15	1	0.91	0.83	1	0.89	1	1	1

These reports show the poverty of child on the basis of daily need such as wealth, housing, electricity, sanitation, cooking etc as per the 5 rounds in all four countries. If we compare all the countries on the basis of rounds, children have access to service, electricity, sanitization and adequate fuel for cooking but looking at their wealth condition which is not sufficient for their lives.

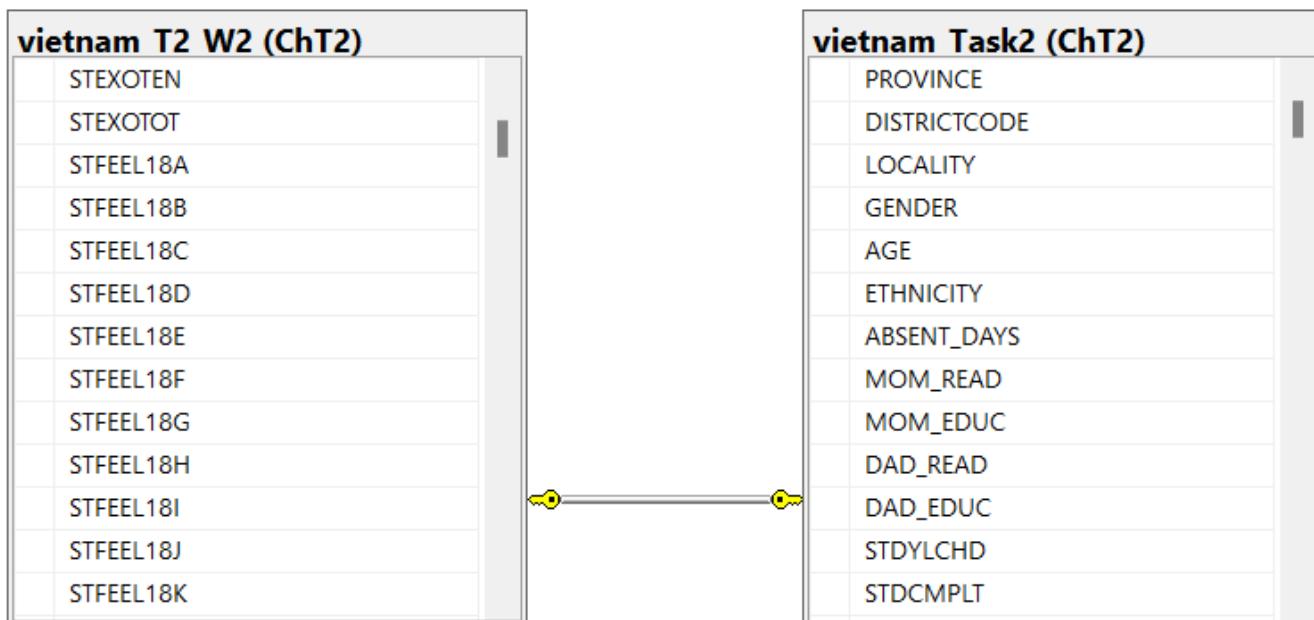
TASK 2(INTRODUCTION):

Task 2 in the project is the survey in Vietnam of children from low-income families. It is school surveyed which was introduced by young live project in 2010. In this task I have prepare the reports on the basis of dataset of school survey in Vietnam in 2016-2017. It covers the range of topics such as household composition, livelihood and assets, household expenditure, child health and access to essential services, and education. I have also created a report on MS excel that is followed by SQL reports. For this task, I have made the reports for Wave1 and Wave 2.

While wave 1 is based on students' learner level that is accessed by the two cognitive test- Maths and English and their enrolment the class.

Wave 2 is surveyed at the end of the school year, where students' learner level is re-measured. Along with this, teachers and principal completed a set of question relating to management of school.

DATABASE DIAGRAM

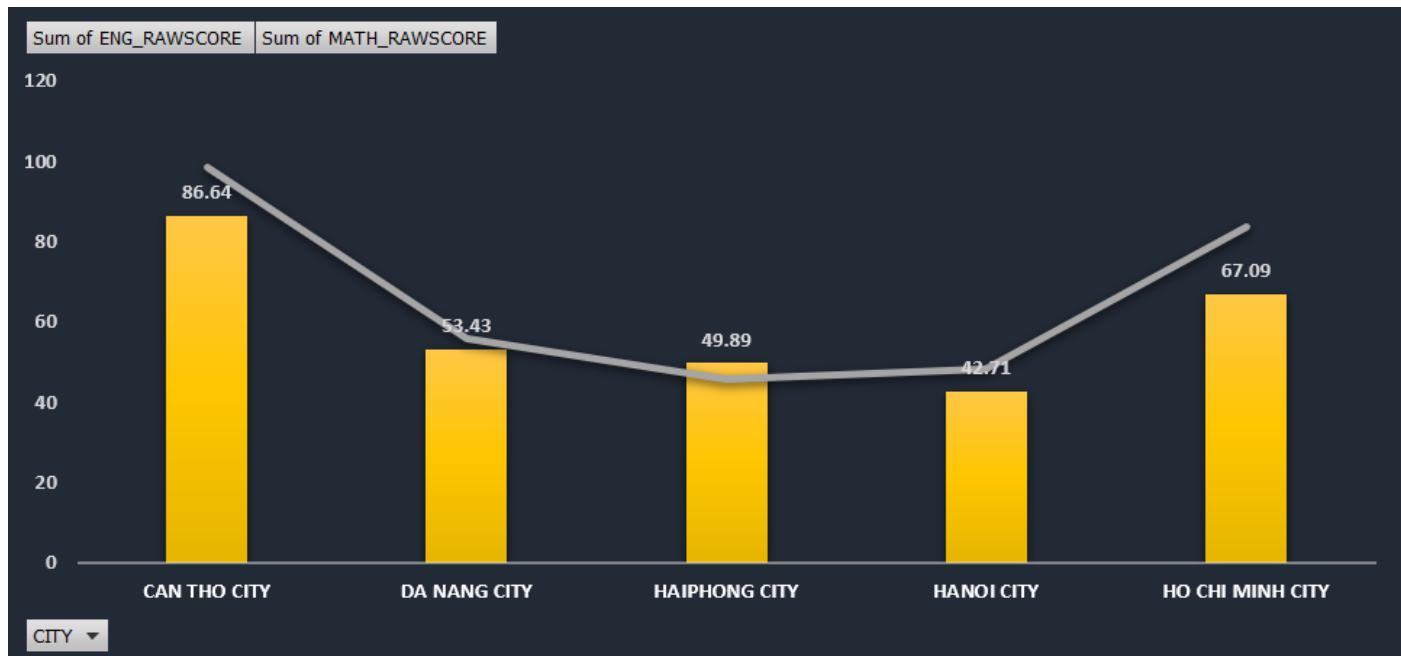


Error Handling (applied in each query)

WAVE 1 Reports:

```
/* Analysis report of Student on the basis of subjects marks */
|BEGIN TRY
|Select
CITY =(
case
    when PROVINCE = 1 then Upper('Hanoi City')
    when PROVINCE = 2 then Upper('Ho Chi Minh City')
    when PROVINCE = 3 then Upper('Haiphong City')
    when PROVINCE = 4 then Upper('Da Nang City')
    Else Upper('Can Tho City')
End
),DISTRICTCODE,
    round(Avg(cast(ENG_RAWSCORE as float)),2) as ENG_RAWSCORE,
    round(AVG(cast(MATH_RAWSCORE as float)),2) as MATH_RAWSCORE
from ChT2.vietnam_Task2
where PROVINCE is not null and ENG_TEST ='yes'
    Group by PROVINCE,DISTRICTCODE
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
```

	CITY	DISTRICTCODE	ENG_RAWSCORE	MATH_RAWSCORE
1	DA NANG CITY	7	18.33	16.53
2	CAN THO CITY	3	23.85	22.25
3	HO CHI MINH CITY	13	25.72	21.98
4	DA NANG CITY	9	18.91	19.54
5	HO CHI MINH CITY	14	27.19	20.09
6	HANOI CITY	5	23.68	21.46
7	CAN THO CITY	4	23.72	20.56
8	CAN THO CITY	1	25.27	22.34
9	HANOI CITY	6	24.6	21.25
10	HO CHI MINH CITY	12	30.78	25.02
11	DA NANG CITY	8	18.56	17.36
12	HAIPHONG CITY	10	23.08	25.57
13	HAIPHONG CITY	11	22.81	24.32
14	CAN THO CITY	2	25.7	21.49



The above report on the basis of student marks as per their province and district code. It shows average marks of students in English and Maths according to the city. It can be analysed from their score in the subjects that the students have more interest in English than Maths.

In the graph, lines shows the raw scores of English while Bars shows the raw score of Maths.

```

/* ANALYSIS REPORT OF CLASS ROSTER ON THE BASIS OF ENROLMENT */
BEGIN TRY
select distinct Province =
case
    when PROVINCE = 1 then Upper('Hanoi City')
    when PROVINCE = 2 then Upper('Ho Chi Minh City')
    when PROVINCE = 3 then Upper('Haiphong City')
    when PROVINCE = 4 then Upper('Da Nang City')
    Else Upper('Can Tho City')
End)

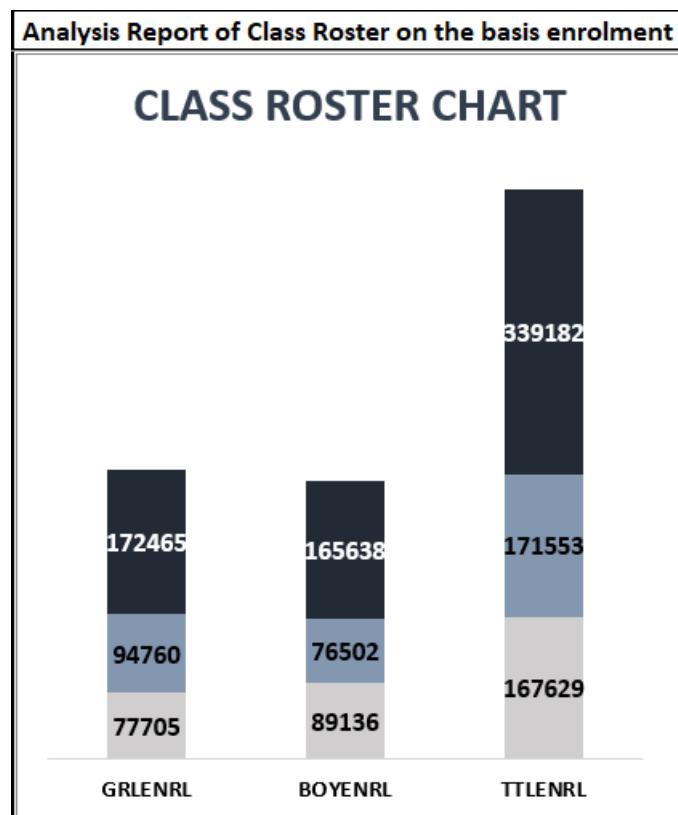
,
sum(cast(GRLENRL as int))as Girls_Enrolment,
sum(cast(BOYENRL as int)) as Boys_Enrolment,
sum(cast(TTLENRL as int)) as Total_Enrolment
from ChT2.vietnam_Task2
where STUDENTID is not null
group by Province
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

	Province	Girls_Enrolment	Boys_Enrolment	Total_Enrolment
1	CAN THO CITY	52023	45413	97436
2	DA NANG CITY	28645	35280	64924
3	HAIPHONG CITY	22758	29326	52484
4	HANOI CITY	38814	33071	71885
5	HO CHI MINH CITY	35506	29257	64805

The enrolment of the students in the different provinces of Vietnam can be analysed in the above report. The higher number of students are in the city 'CAN THO' in which maximum number of students are girls. However, the lower number of students are in 'HAIPHONG' with less girl students.

This stacked column also provide information of enrolment of students according to gender and total as well.

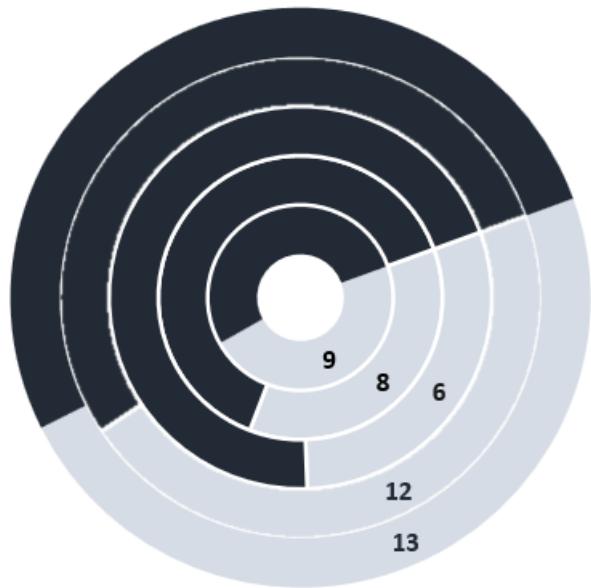


```

/* SCHOOL SAMPLE BY PROVINCE */
BEGIN TRY
Select
    PROVINCE = CASE
        WHEN PROVINCE = 1 THEN 'Ben Tre'
        WHEN PROVINCE = 2 THEN 'Da Nang'
        WHEN PROVINCE = 3 THEN 'Hung Yen'
        WHEN PROVINCE = 4 THEN 'Lao Cai'
        ELSE 'Phu Yen'
    END
    ,COUNT (DISTINCT DISTRICTCODE) AS DISTRICT,
    GOV_SCHOOL = CASE
        WHEN PROVINCE = 1 THEN 9
        WHEN PROVINCE = 2 THEN 8
        WHEN PROVINCE = 3 THEN 6
        WHEN PROVINCE = 4 THEN 12
        ELSE 13
    END,
    PRIVATE_SCHOOL = CASE
        WHEN PROVINCE = 1 THEN 0
        WHEN PROVINCE = 2 THEN 1
        WHEN PROVINCE = 3 THEN 3
        WHEN PROVINCE = 4 THEN 0
        ELSE 0
    END,
    COUNT (DISTINCT SCHOOLID) AS TOTAL
FROM cht2.vietnam_Task2
GROUP BY PROVINCE
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

/* No of Schools Participate , by province */



	PROVINCE	DISTRICT	GOV_SCHOOL	PRIVATE_SCHOOL	TOTAL
1	Ben Tre	2	9	0	9
2	Da Nang	3	8	1	9
3	Hung Yen	2	6	3	9
4	Lao Cai	3	12	0	12
5	Phu Yen	4	13	0	13

This report explains the number of private and government schools in each district of each province. There are more government school in each district than private schools. Maximum numbers of government school can be seen in 'Phu Yen' and there is only 1 private school in 'Da Nang' and 3 in 'Hung Yen'. So may affect the studies of students mostly of the higher-class student as they have to go so far for their studies that decrease their interest in those subjects

It is shown in the designed doughnut chart that total number of schools participated in the young lives interview round. This is the combination of values of government and private school.

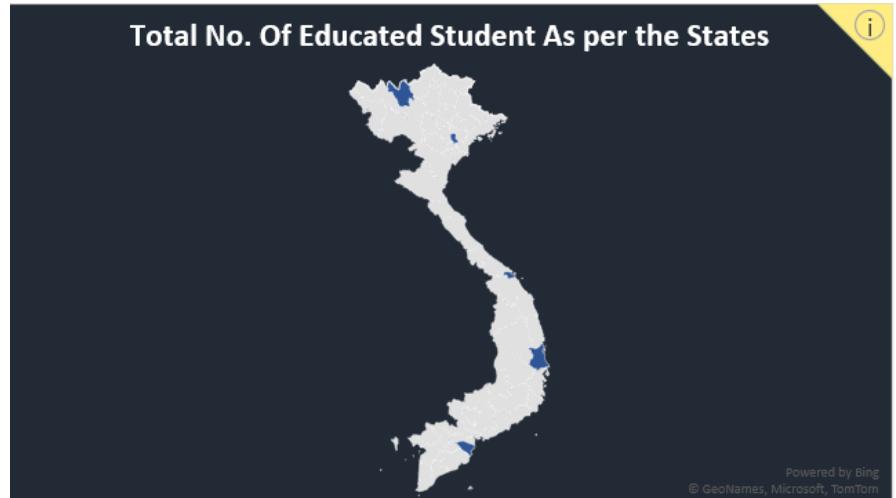
```

/* REPORT TO ANALYSE THE CURRENT ROLE OF PERSON IN SCHOOL ACCORDING TO ETHNICITY*/
BEGIN TRY
SELECT DISTINCT
ETHNIC_GROUP = (
CASE
    WHEN ETHNICITY = 1 THEN 'KINH'
    WHEN ETHNICITY = 2 THEN 'HMONG'
    WHEN ETHNICITY = 3 THEN 'CHAM-HROI'
    WHEN ETHNICITY = 4 THEN 'EDE'
    WHEN ETHNICITY = 5 THEN 'NUNG'
    WHEN ETHNICITY = 6 THEN 'TAY'
    WHEN ETHNICITY = 7 THEN 'DAO'
    WHEN ETHNICITY = 8 THEN 'GIAY'
    WHEN ETHNICITY = 9 THEN 'CHINESE'
    WHEN ETHNICITY = 10 THEN 'BA NA'
    WHEN ETHNICITY = 11 THEN 'OTHER'
END), PROVINCE, (HTCURRLE) AS C_ROLE

FROM cht2.vietnam_Task2
WHERE ETHNICITY <>0
END TRY
BEGIN CATCH
PRINT 'RESULT NOT FOUND'
END CATCH

```

	ETHNIC_GROUP	PROVINCE	C_ROLE
1	DAO	4	1
2	HMONG	4	2
3	BA NA	4	2
4	CHAM-HROI	2	2
5	KINH	4	1
6	KINH	2	2
7	BA NA	2	2
8	KINH	2	1
9	GIAY	4	2
10	CHAM-HROI	3	2
11	BA NA	1	1
12	CHINESE	4	1
13	KINH	3	2
14	TAY	4	2
15	EDE	3	1
16	KINH	1	2
17	BA NA	4	1
18	KINH	5	2



According to the Ethnicity, I have analysed the current role of the person in the school that comes out in the category 1 and 2 which is Principal/Director and Vice-Principal respectively in the respective states. The state 'LAO CAI' (value label 4) has more designated person with almost each ethnic group.

The information also shown in the map. The dark blue highlighted areas are affected areas.

```

/* SELECTED INDICATORS OF STUDENTS' HOUSEHOLD EDUCATION BY PROVINCE */
BEGIN TRY
SELECT DISTINCT PROVINCE = CASE
    WHEN PROVINCE = 1 THEN 'Ben Tre'
    WHEN PROVINCE = 2 THEN 'Da Nang'
    WHEN PROVINCE = 3 THEN 'Hung Yen'
    WHEN PROVINCE = 4 THEN 'Lao Cai'
    ELSE 'Phu Yen'
END,
(CAST(MOM_READ AS INT)) AS MOM_READ ,(CAST(DAD_READ AS INT)) AS DAD_READ,
(CAST(MOM_EDUC AS INT)) AS MOM_EDUC,(CAST(DAD_EDUC AS INT)) AS DAD_EDUC
FROM cht2.vietnam_Task2
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

	PROVINCE	MOM_READ	DAD_READ	MOM_EDUC	DAD_EDUC
1	Lao Cai	0	0	1	1
2	Lao Cai	1	0	0	0
3	Ben Tre	1	1	5	6
4	Phu Yen	1	1	3	1
5	Phu Yen	1	1	5	6
6	Da Nang	1	1	0	4
7	Lao Cai	1	1	4	3
8	Da Nang	1	1	4	6
9	Ben Tre	1	2	1	88
10	Lao Cai	0	1	1	5
11	Ben Tre	1	1	1	4
12	Ben Tre	0	0	1	6
13	Da Nang	0	1	4	0
14	Ben Tre	0	1	6	4
15	Phu Yen	1	1	0	0
16	Lao Cai	0	1	1	2
17	Hung Yen	1	1	3	4
18	Phu Yen	1	1	1	4
19	Da Nang	1	1	4	3
20	Ben Tre	0	1	2	2

The data insights show the fluctuations in parents education level and familiar to the native language. Hung Yen is the state where maximum percentage is found of reading and writing Vietnamese by Mom and Dad that is about 91% and 87% respectively. However, maximum educated people can be found in 'Lao Cai' and 'Ben Tre' although Mom are less educated than Dad. As averagely mom's and dad's education level are almost same in each state. Looking at this report, maximum moms' and dads' education is of upper secondary level.

WAVE 2 Reports:

```

/*REPORT ON THE BASIS OF STUDENT'S SCORES*/
BEGIN TRY
SELECT DISTINCT SCHOOLID,
    SUM(CAST(ENG_RAWSCORE AS INT)) AS ENG_RAWSCORE ,
    SUM(CAST(MATH_RAWSCORE AS INT)) AS MATH_RAWSCORE
FROM ChT2.vietnam_T2_W2
GROUP BY SCHOOLID
ORDER BY SCHOOLID ASC
END TRY
BEGIN CATCH
PRINT 'RESULT NOT FOUND'
END CATCH

```

	SCHOOLID	ENG_RAWSCORE	MATH_RAWSCORE
1	1203	1730	1829
2	1234	2722	2855
3	1302	3854	3937
4	1311	6190	6335
5	1313	4579	4826
6	1319	3619	3849
7	1320	5041	5515
8	1321	3000	2947
9	1336	1728	1798
10	1337	2161	2649
11	1338	4539	4726
12	1340	4500	4814
13	1345	2864	2859
14	2316	4498	4458



This report illustrates the information of students English and Maths raw scores on the basis of schoolID. There are total 40 tests conducted in each school so this report shows the raw score of all 40 tests. The maximum raw score of English in total is obtained in SchoolID 1311 so the average score in each test is 154 and minimum score in schoolID 3327 that gives the average score in each test is just 5.

On the other hand, I have found the Maths raw score in the similar way. So, the result shows maximum and minimum score in Maths come out in the same schoolID respectively with almost same average. So, it can be concluded that the school with ID 1311 has maximum number of student who are interested in studies.

The tree map above is related to the report and shows the insights according to the total raw scores according to the schoolID.

```

/*REPORT ON ENGLISH TEACHER*/
BEGIN TRY
SELECT RELIGION = (
CASE
    WHEN ENG_TCRELGN = 0 THEN 'No religion'
    WHEN ENG_TCRELGN = 1 THEN 'Buddhist'
    WHEN ENG_TCRELGN = 2 THEN 'Christian (Catholic)'
    WHEN ENG_TCRELGN = 3 THEN 'Christian (Protestant)'
    WHEN ENG_TCRELGN = 4 THEN 'Cao Dai'
    ELSE 'Other'
END), AVG(CAST(ENG_TCHID AS INT)) AS TEACHER_ID,COUNT(ENG_TCGNDR) AS GENDER
FROM ChT2.vietnam_T2_W2
GROUP BY ENG_TCRELGN
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

	RELIGION	TEACHER_ID	GENDER
1	Christian (Protestant)	23	81
2	Christian (Catholic)	13	87
3	No religion	0	356
4	Buddhist	8	1291
5	No religion	10	6925

This report shows the total number of teachers who taught English subject according to the regions and highest figure belongs to no region. However, the lowest belongs to Christian(protestant) community. Also, it can be seen that 23 teacher ID are of Christian Community.

```

/*REPORT ON MATHS TEACHER*/
BEGIN TRY
SELECT RELIGION = (
CASE
    WHEN MATH_TCRELGN = 0 THEN 'No religion'
    WHEN MATH_TCRELGN = 1 THEN 'Buddhist'
    WHEN MATH_TCRELGN = 2 THEN 'Christian (Catholic)'
    WHEN MATH_TCRELGN = 3 THEN 'Christian (Protestant)'
    WHEN MATH_TCRELGN = 4 THEN 'Cao Dai'
    ELSE 'Other'
END), AVG(CAST(MATH_TCHID AS INT)) AS TEACHER_ID,
COUNT(MATH_TCGNDR) AS GENDER
FROM ChT2.vietnam_T2_W2
GROUP BY MATH_TCRELGN
END TRY
BEGIN CATCH
PRINT 'RESULT NOT FOUND'
END CATCH

```

	RELIGION	TEACHER_ID	GENDER
1	Christian (Protestant)	2	79
2	No religion	6	79
3	Buddhist	9	550
4	No religion	9	8032

In the similar way, I have designed the report on the basis of Maths teacher. Here the maximum number of teachers with no religion can be seen. Though, Buddhist and No religion community has highest number of teacher ID.

```

/*REPORT ON BASIS OF ENGLISH TEACHER BACKGROUND*/
]BEGIN TRY
]SELECT DISTINCT UNIQUEID, ENG_TCHID AS ENG_TEACHER_ID,
SUM(CAST(ENG_TCHSUBJ AS INT)) AS TEACHER_SUB,
SUM(CAST(ENG_TCSTDENG AS INT)) AS ENG_STUDY,
SUM(CAST(ENG_TCYRTCSCH AS INT)) AS TEACHER_EXP,
SUM(CAST(ENG_TCBOBSHT AS INT)) AS OBSERVATION,
SUM(CAST(ENG_TCRSNABS AS INT)) AS LEAVE_REASON

FROM ChT2.vietnam_T2_W2
GROUP BY UNIQUEID, ENG_TCHID
HAVING ENG_TCHID <> 0 AND ENG_TCHID IS NOT NULL
ORDER BY UNIQUEID, ENG_TCHID ASC
]END TRY
BEGIN CATCH
PRINT 'RESULT NOT FOUND'
END CATCH

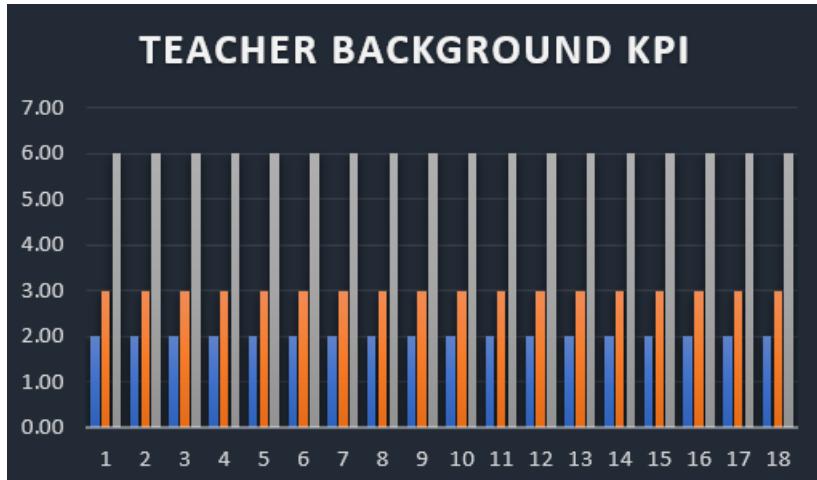
```

	UNIQUEID	ENG_TEACHER_ID	TEACHER_SUB	ENG_STUDY	TEACHER_EXP	OBSERVATION	LEAVE_REASON
1	VN1203101	41	2	3	1	3	2
2	VN1203102	41	2	3	1	3	2
3	VN1203103	41	2	3	1	3	2
4	VN1203104	41	2	3	1	3	2
5	VN1203105	41	2	3	1	3	2
6	VN1203106	41	2	3	1	3	2
7	VN1203107	41	2	3	1	3	2
8	VN1203108	41	2	3	1	3	2
9	VN1203109	41	2	3	1	3	2
10	VN1203110	41	2	3	1	3	2
11	VN1203111	41	2	3	1	3	2
12	VN1203112	41	2	3	1	3	2
13	VN1203113	41	2	3	1	3	2
14	VN1203114	41	2	3	1	3	2

/*REPORT ON BASIS OF ENGLISH TEACHER BACKGROUND*/

UNIQUEID	ENG_TEACHER_ID	TEACHER_SUB	ENG_STUDY	TEACHER_EXP	LEAVE_REASON
VN3326211	1	2.00	3.00	6	2.00
VN3326212	1	2.00	3.00	6	2.00
VN3326209	1	2.00	3.00	6	2.00
VN3326210	1	2.00	3.00	6	2.00
VN3326215	1	2.00	3.00	6	2.00
VN3326216	1	2.00	3.00	6	2.00
VN3326213	1	2.00	3.00	6	2.00
VN3326214	1	2.00	3.00	6	2.00
VN3326203	1	2.00	3.00	6	2.00
VN3326204	1	2.00	3.00	6	2.00
VN3326201	1	2.00	3.00	6	2.00
VN3326202	1	2.00	3.00	6	2.00
VN3326207	1	2.00	3.00	6	2.00
VN3326208	1	2.00	3.00	6	2.00
VN3326205	1	2.00	3.00	6	2.00
VN3326206	1	2.00	3.00	6	2.00
VN3326217	1	2.00	3.00	6	2.00
VN3326228	1	2.00	3.00	6	2.00
Total/Avg	18	2.00	3.00	6.00	2.00

Scroll down



These above raw table and its 'Dynamic' bar graph depicted the English teachers' background status. By using the scroll down, we can check the other values according to their uniqueID.

```

/*REPORT ON BASIS OF MATHS TEACHER BACKGROUND */
BEGIN TRY
SELECT DISTINCT UNIQUEID, MATH_TCHID AS MATH_TEACHER_ID,
SUM(CAST(MATH_TCNSUBJ AS INT)) AS TEACHER_SUB,
SUM(CAST(MATH_TCSTDENG AS INT)) AS MATH_STUDY,
SUM(CAST(MATH_TCYRTCSCH AS INT)) AS TEACHER_EXP,
SUM(CAST(MATH_TCOSBSHT AS INT)) AS OBSERVATION,
SUM(CAST(MATH_TCRSNABS AS INT)) AS LEAVE_REASON

FROM ChT2.vietnam_T2_W2
GROUP BY UNIQUEID, MATH_TCHID
HAVING MATH_TCHID <> 0 AND MATH_TCHID IS NOT NULL
ORDER BY UNIQUEID, MATH_TCHID ASC
END TRY
BEGIN CATCH
PRINT 'RESULT NOT FOUND'
END CATCH
    
```

	UNIQUEID	MATH_TEACHER_ID	TEACHER_SUB	MATH_STUDY	TEACHER_EXP	OBSERVATION	LEAVE_REASON
1	VN1203101	1	1	4	3	1	6
2	VN1203102	1	1	4	3	1	6
3	VN1203103	1	1	4	3	1	6
4	VN1203104	1	1	4	3	1	6
5	VN1203105	1	1	4	3	1	6
6	VN1203106	1	1	4	3	1	6
7	VN1203107	1	1	4	3	1	6
8	VN1203108	1	1	4	3	1	6
9	VN1203109	1	1	4	3	1	6
10	VN1203110	1	1	4	3	1	6
11	VN1203111	1	1	4	3	1	6
12	VN1203112	1	1	4	3	1	6
13	VN1203113	1	1	4	3	1	6
14	VN1203114	1	1	4	3	1	6

/*REPORT ON BASIS OF MATHS TEACHER BACKGROUND*/



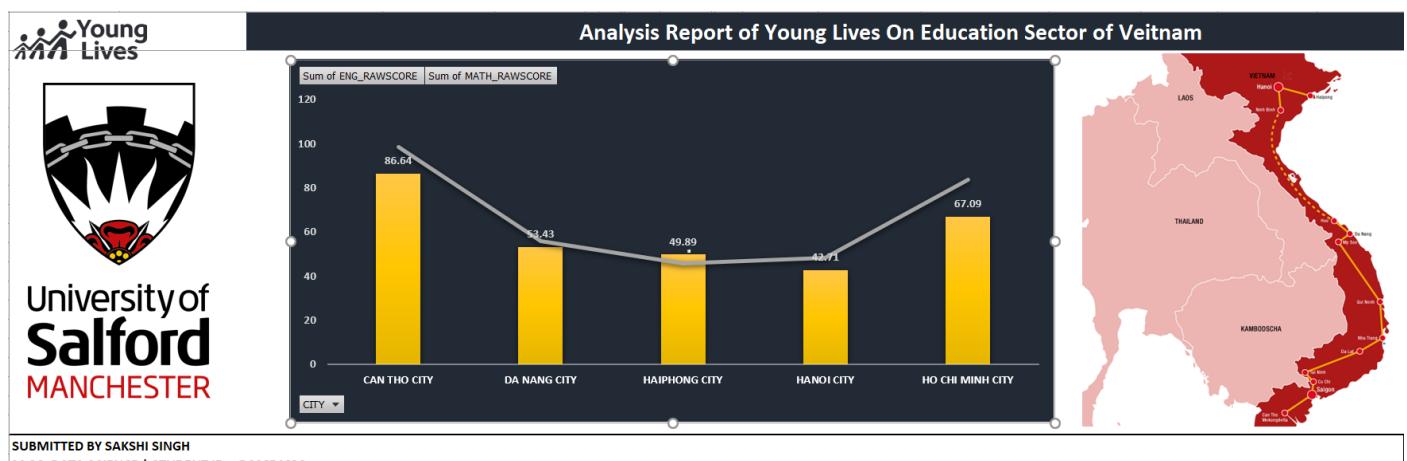
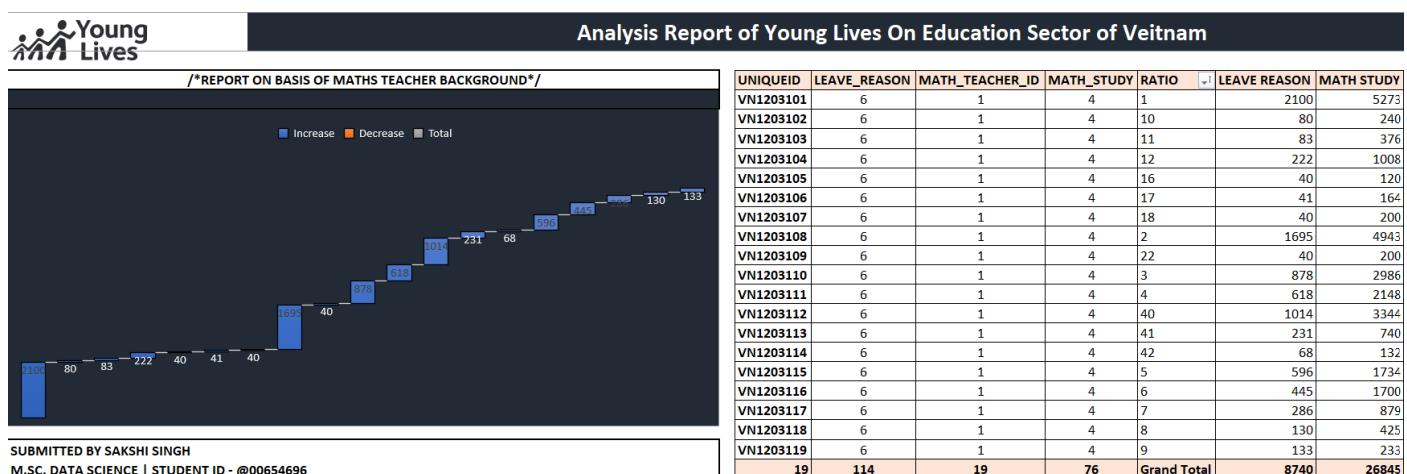
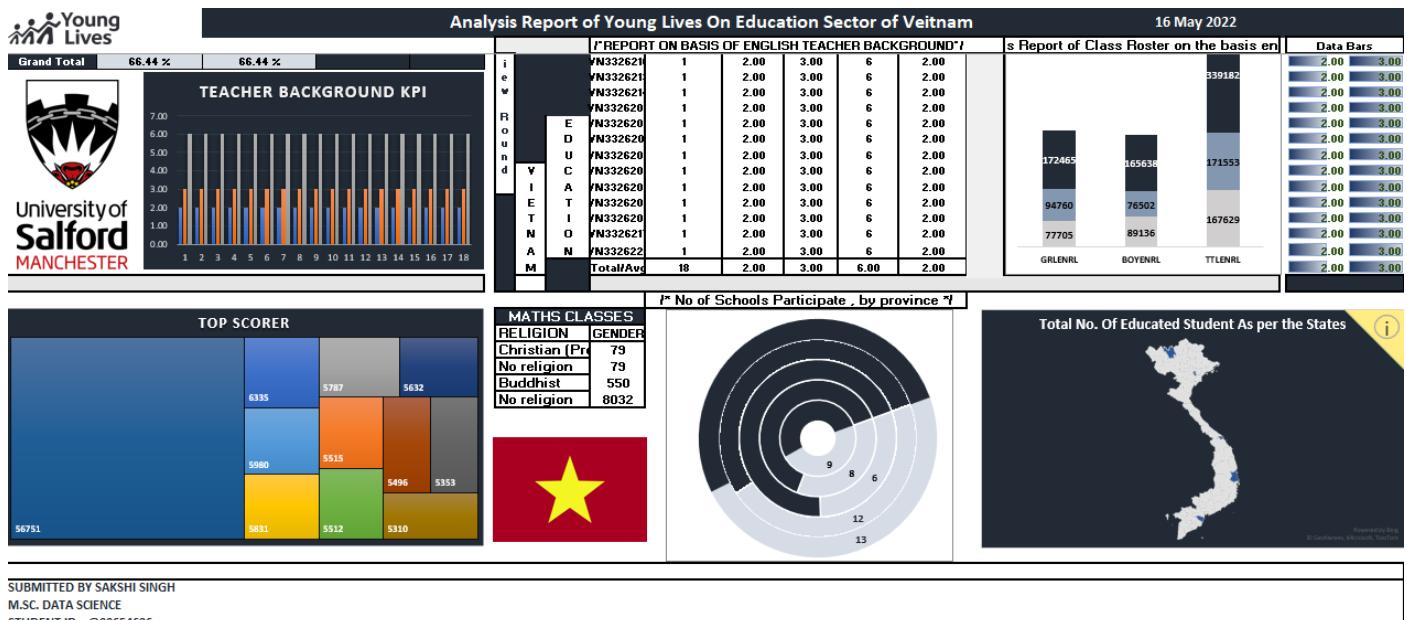
This waterfall chart is based on the Maths Teacher Background Status

On comparing these two above scripts, based on the English and Maths teacher background. Each teacher has their unique ID, so it can be easily identified their background status.

Majority of English teacher has 4–5-year experience while Maths teachers has 6-10-years in teaching English and maths respectively. English teacher has been observed monthly whereas Maths teacher once in a year. Furthermore, the reason behind for leave is illness of English teacher but maths teachers have other reason to take leave.

Both the reports give the clear status of each teacher. Even though, we can also check their background on the basis of their province and their ethnic group and their native language as well.

Complete Dashboards



TASK 3(INTRODUCTION):

Task 3 is based on the crimes happened in Greater Manchester in different parameters. I have created the Dashboard on POWER BI for each SQL report of task 3.

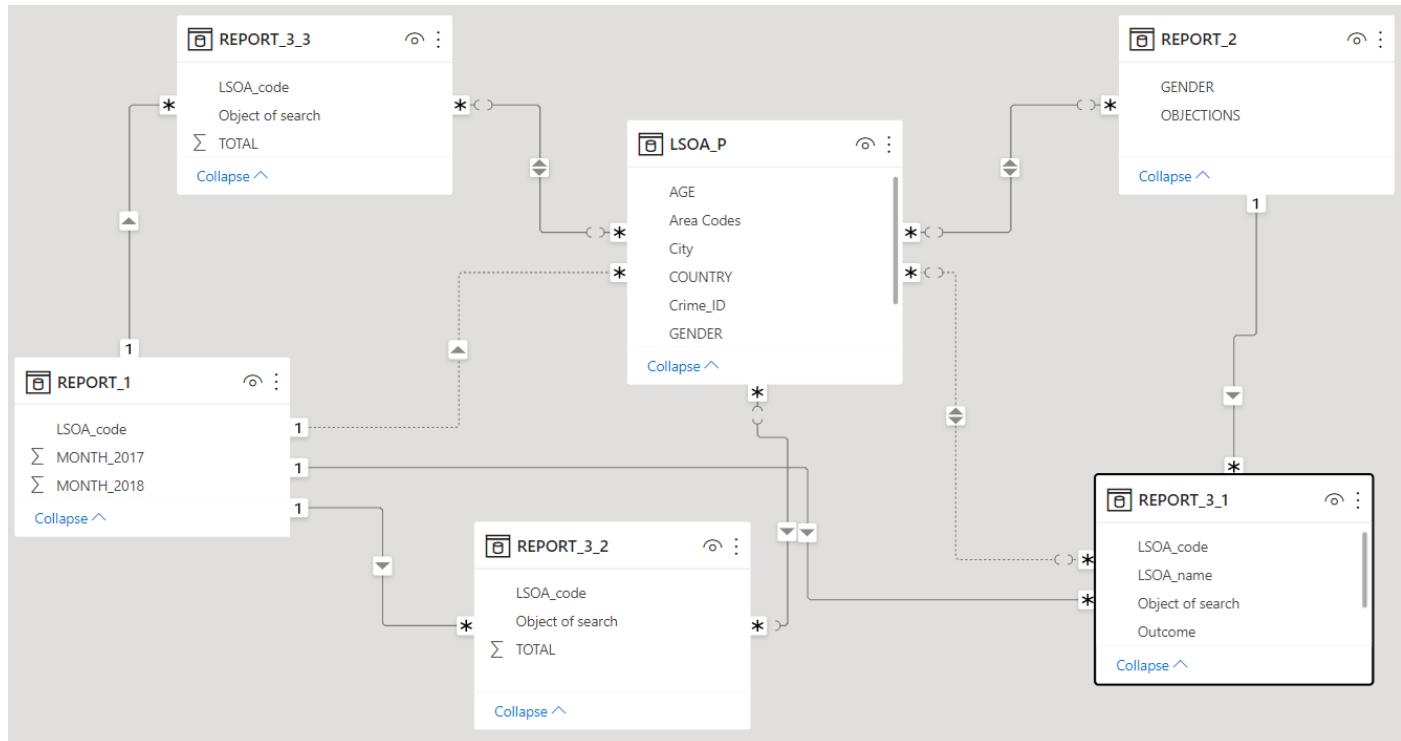
Steps to import the data in SQL server management studio

- I have clubbed the data using get data or Power Query in Excel for all the CSV files with same format.

- Transform the data with the same name
- Load the data and save into the file name.

- Save as csv format to import into SQL server.

DATA MODELLING

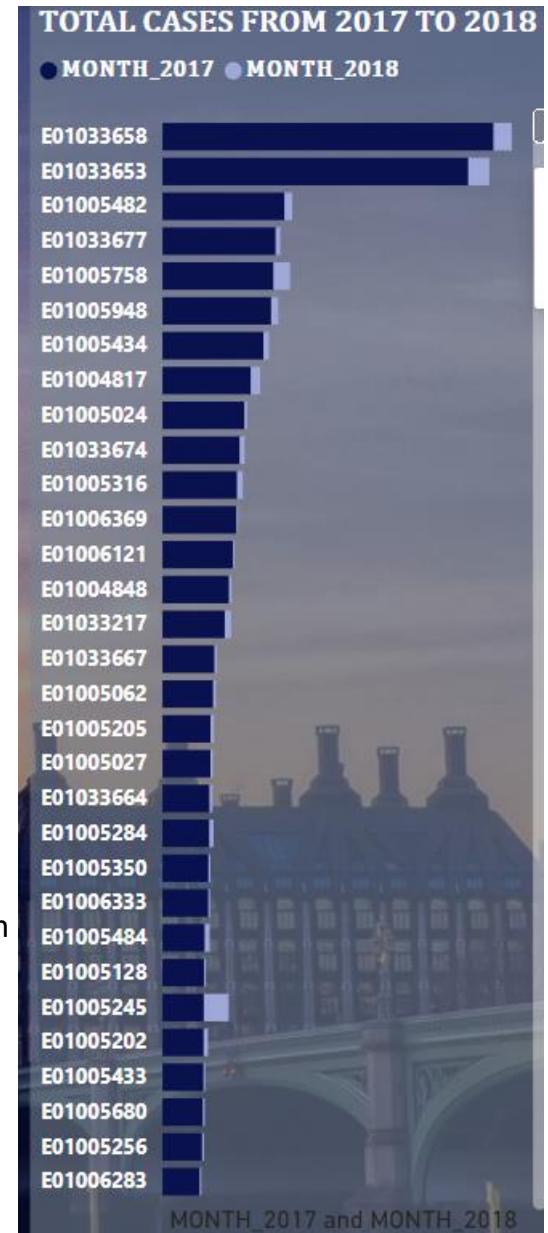


Error Handling (applied in each query)

Reports of Task 3:

```
/* TOTAL NUMBER OF CASES REGISTER AS PER THE LSOA CODE OF MANCHESTER FROM YEAR 2017 TO 2018*/
BEGIN TRY
SELECT T3.[2017 - Outcomes].Location, T3.[2017 - Outcomes].LSOA_code,
COUNT(FORMAT (T3.[2017 - Outcomes].Month, 'Y')) AS MONTH_2017,
COUNT(FORMAT (T3.[2018 - Outcomes].Month, 'Y')) AS MONTH_2018
FROM T3.[2017 - Outcomes]
FULL JOIN T3.[2018 - Outcomes]
ON T3.[2017 - Outcomes].Crime_ID = T3.[2018 - Outcomes].Crime_ID
WHERE T3.[2017 - Outcomes].LSOA_code IS NOT NULL
GROUP BY T3.[2017 - Outcomes].Location, T3.[2017 - Outcomes].LSOA_code
HAVING COUNT(FORMAT (T3.[2018 - Outcomes].Month, 'Y'))>0
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH
/* THOSE CASES ARE NOT INCLUDED IN THE ABOVE QUERY WHICH DO NOT EXIST IN YEAR 2018*/
```

	Location	LSOA_code	MONTH_2017	MONTH_2018
1	On or near BACK EDEN STREET	E01004766	11	1
2	On or near DERBYSHIRE ROW	E01004766	6	2
3	On or near DRYBURGH AVENUE	E01004766	17	4
4	On or near BACK HOLLY STREET	E01004767	2	1
5	On or near BELMONT ROAD	E01004768	10	2
6	On or near HOLDEN AVENUE	E01004771	6	2
7	On or near SAND BANKS	E01004771	40	14
8	On or near WESTCLIFFE ROAD	E01004771	2	2
9	On or near ATHLONE AVENUE	E01004772	15	1
10	On or near FORFAR STREET	E01004772	10	4
11	On or near BLACKBURN ROAD	E01004773	27	2
12	On or near RAMSAY STREET	E01004773	5	2
13	On or near BACK BELMONT ROAD EAST	E01004774	18	1
14	On or near BROAD O' TH' LANE	E01004774	4	3
15	On or near DRYSDALE VIEW	E01004774	2	1



The report is based on the registered crime of Greater Manchester according to LSOA code and months of crimes in two different years.

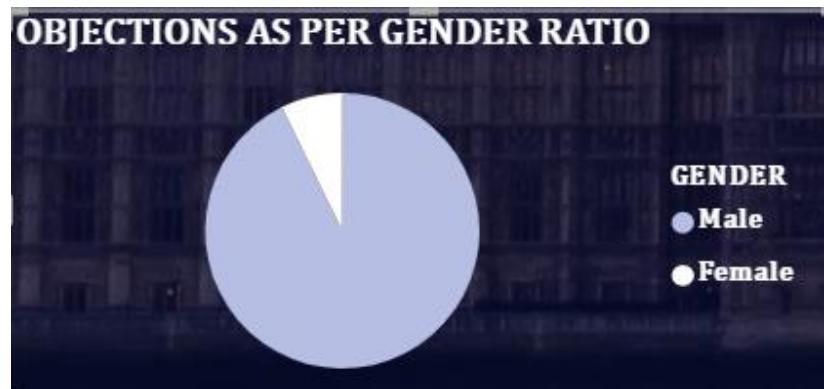
The excessive crimes had happened in the year 2017 and by the year, it decreased by huge difference as per same location. In the bar graph, it can be observed that maximum cases were found in LSOA code E01033658.

```

/* CRIME REPORT ON THE BASIS OF GENDER */
BEGIN TRY
SELECT GENDER, [Officer-defined ethnicity] AS ETHNICITY,
COUNT([Object of search]) AS 'OBJECTIONS'
from t3.[2017-2018_Stop-and-Search]
WHERE GENDER IS NOT NULL
GROUP BY GENDER, [Officer-defined ethnicity]
END TRY
BEGIN CATCH
PRINT 'RESULT NOT FOUND'
END CATCH

```

	GENDER	ETHNICITY	OBJECTIONS
1	Male	Other	86
2	Female	Asian	15
3	Female	NULL	14
4	Male	Asian	748
5	Male	Black	797
6	Male	NULL	103
7	Female	White	325
8	Female	Other	4
9	Male	White	3126
10	Female	Black	29



This report described the crimes as per gender and Ethnicity that shows both male and female are involved in the crimes. The Pie charts clearly shows the ratio of crime as per the gender.

```

/* REPORT ON THE BASIS LSOA CODE WHICH HAS BEEN REPORTED BY MANCHESTER POLICE IN YEAR 2018*/
BEGIN TRY
SELECT T3.[2017 - Outcomes].LSOA_code,
T3.[2017 - Outcomes].LSOA_name, Reported_by,
[Object of search], Outcome
FROM T3.[2017-2018_Stop-and-Search]
FULL JOIN T3.[2017 - Outcomes]
ON T3.[2017 - Outcomes].Latitude = T3.[2017-2018_Stop-and-Search].Latitude
WHERE TYPE IS NOT NULL

END TRY
BEGIN CATCH
PRINT 'RESULT NOT FOUND'
END CATCH

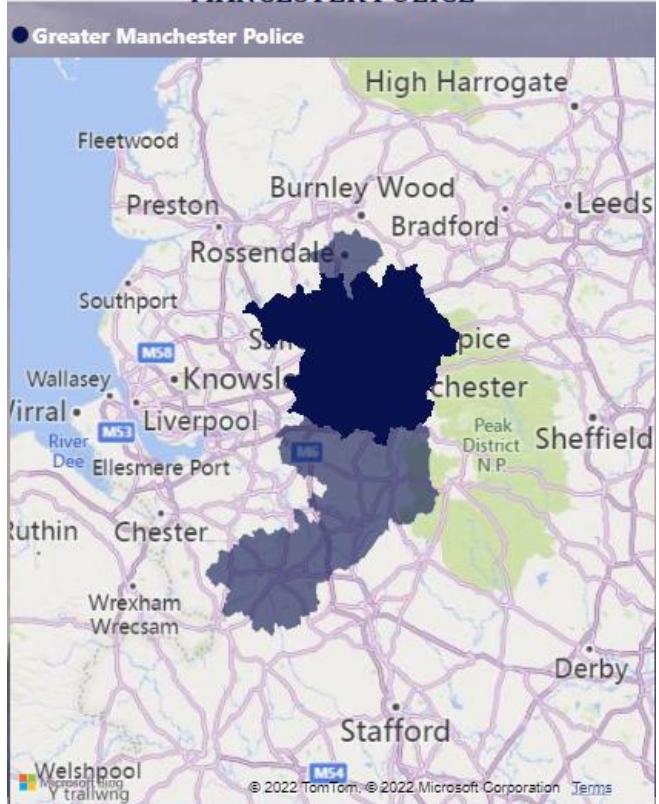
```

	LSOA_code	LSOA_name	Reported_by	Object of search	Outcome
1	E01032909	Salford 022I	Greater Manchester Police	Article for use in theft	A no further action disposal
2	E01005340	Oldham 010D	Greater Manchester Police	Offensive weapons	A no further action disposal
3	E01005291	Manchester 050E	Greater Manchester Police	Offensive weapons	A no further action disposal
4	E01005935	Tameside 006C	Greater Manchester Police	Article for use in theft	A no further action disposal
5	E01005935	Tameside 006C	Greater Manchester Police	Article for use in theft	A no further action disposal
6	E01005935	Tameside 006C	Greater Manchester Police	Article for use in theft	A no further action disposal
7	E01005935	Tameside 006C	Greater Manchester Police	Article for use in theft	A no further action disposal
8	E01005948	Tameside 013A	Greater Manchester Police	Firearms	Nothing found - no further action
9	E01005948	Tameside 013A	Greater Manchester Police	Anything to threaten or harm anyone	Nothing found - no further action
10	E01005948	Tameside 013A	Greater Manchester Police	Stolen goods	Arrest
11	E01005948	Tameside 013A	Greater Manchester Police	Controlled drugs	Khat or Cannabis warning
12	E01005948	Tameside 013A	Greater Manchester Police	Article for use in theft	A no further action disposal
13	E01005948	Tameside 013A	Greater Manchester Police	Offensive weapons	A no further action disposal
14	E01005948	Tameside 013A	Greater Manchester Police	Anything to threaten or harm anyone	A no further action disposal
15	E01005948	Tameside 013A	Greater Manchester Police	Anything to threaten or harm anyone	A no further action disposal

This report shows the crimes reported by Greater Manchester Police of LSOAs code with their names. There the officers found the object of the crime which is different in each area such as carrying offensive weapons, article for use in theft, controlled drugs, stolen goods etc. According to their area, the different outcomes was done by the Manchester Police.

The map beside shows the highlighted crime areas which is captured by Manchester Police.

ACCORDING TO AREA CASES REGISTERED MANCHESTER POLICE



```

/* REPORT ON THE BASIS LSOA CODE WHICH HAS BEEN REPORTED BY MANCHESTER POLICE IN YEAR 2017*/
BEGIN TRY
SELECT T3.[2017 - Street].LSOA_code, Reported_by, [Object of search],
COUNT(Outcome) AS Outcomes
FROM T3.[2017-2018_Stop-and-Search]
INNER JOIN T3.[2017 - Street]
ON T3.[2017 - Street].Latitude = T3.[2017-2018_Stop-and-Search].Latitude
WHERE TYPE IS NOT NULL
GROUP BY T3.[2017 - Street].LSOA_code, Reported_by, [Object of search]

END TRY
BEGIN CATCH
PRINT 'RESULT NOT FOUND'
END CATCH

```

	LSOA_code	Reported_by	Object of search	Outcomes
1	E01005609	Greater Manchester Police	Article for use in theft	45
2	E01005831	Greater Manchester Police	Controlled drugs	20
3	E01005605	Greater Manchester Police	Offensive weapons	18
4	E01005036	Greater Manchester Police	Anything to threaten or harm anyone	60
5	E01004828	Greater Manchester Police	Controlled drugs	17
6	E01006292	Greater Manchester Police	Firearms	3
7	E01004979	Greater Manchester Police	Article for use in theft	275
8	E01005917	Greater Manchester Police	Anything to threaten or harm anyone	8
9	E01006154	Greater Manchester Police	Offensive weapons	1
10	E01005954	Greater Manchester Police	Article for use in theft	11
11	E01006369	Greater Manchester Police	Anything to threaten or harm anyone	198
12	E01005142	Greater Manchester Police	Controlled drugs	394
13	E01005460	Greater Manchester Police	Controlled drugs	11
14	E01006176	Greater Manchester Police	Article for use in theft	4
15	E01006014	Greater Manchester Police	Controlled drugs	7



This shows the total outcomes of the crime happened according to the LSOA code and reported by Greater Manchester Police. The objects searched by the police is same in each area code however, there outcomes are different this is according to the areas. The bar graph shows the maximum searched objects reported by police in 2017

```

/* REPORT ON THE BASIS LSOA CODE WHICH HAS BEEN REPORTED BY MANCHESTER POLICE IN YEAR 2018*/
BEGIN TRY
SELECT T3.[2018- Street].LSOA_code, Reported_by,
[Object of search], Outcome
FROM T3.[2017-2018_Stop-and-Search]
INNER JOIN T3.[2018- Street]
ON T3.[2018- Street].Latitude = T3.[2017-2018_Stop-and-Search].Latitude
WHERE TYPE IS NOT NULL
END TRY
BEGIN CATCH
PRINT'RESULT NOT FOUND'
END CATCH

```

	LSOA_code	Reported_by	Object of search	Outcome
1	E01004790	Greater Manchester Police	Stolen goods	A no further action disposal
2	E01004790	Greater Manchester Police	Stolen goods	A no further action disposal
3	E01004790	Greater Manchester Police	Controlled dru...	Offender given drugs pos...
4	E01004790	Greater Manchester Police	Controlled dru...	Nothing found - no further...
5	E01004805	Greater Manchester Police	Offensive wea...	A no further action disposal
6	E01004805	Greater Manchester Police	Offensive wea...	A no further action disposal
7	E01004806	Greater Manchester Police	Controlled dru...	Offender given drugs pos...
8	E01004773	Greater Manchester Police	Controlled dru...	Offender given drugs pos...
9	E01004773	Greater Manchester Police	Article for use i...	Community resolution
10	E01004773	Greater Manchester Police	Controlled dru...	Khat or Cannabis warning
11	E01004773	Greater Manchester Police	Controlled dru...	A no further action disposal
12	E01004773	Greater Manchester Police	Controlled dru...	A no further action disposal
13	E01004773	Greater Manchester Police	Controlled dru...	A no further action disposal
14	E01004773	Greater Manchester Police	Controlled dru...	A no further action disposal
15	E01004773	Greater Manchester Police	Controlled dru...	A no further action disposal



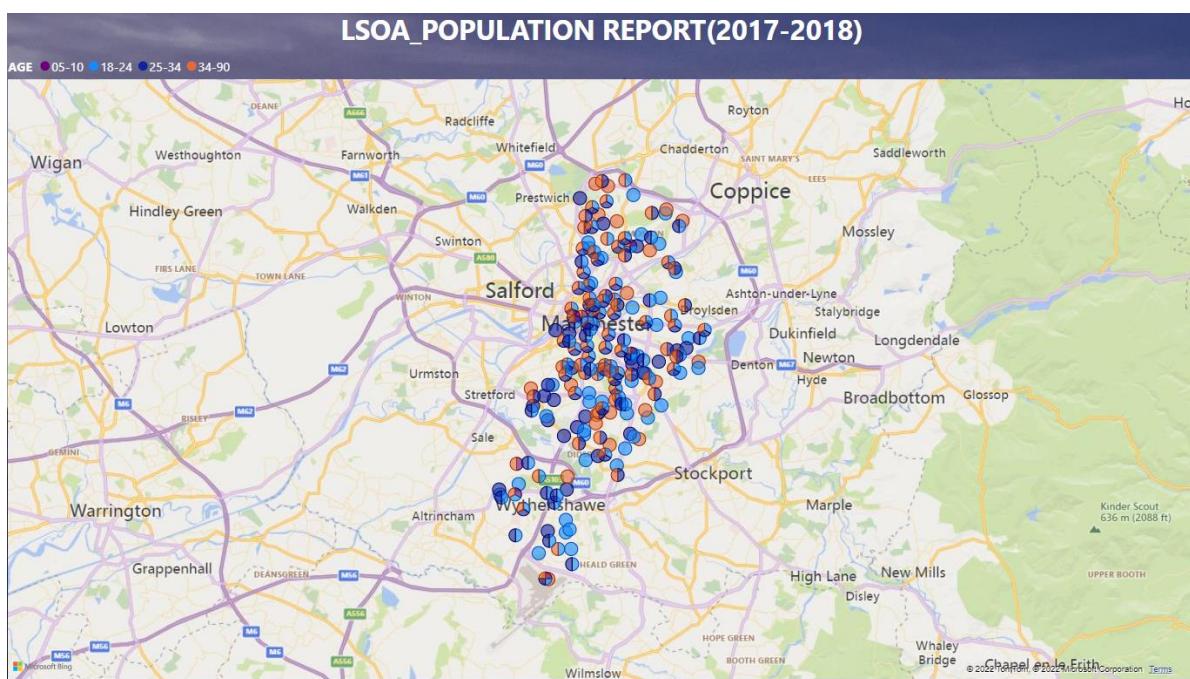
This report is of the year 2018, based on the total objected reported by the Manchester police. The bar graph depicts the information that the maximum object searched are controlled drugs. However, the other searched objects have far lowest than controlled drugs.

```

/* CRIME REPORT ON THE BASIS OF GENDER AND POPULATION OF MANCHESTER AREA*/
|BEGIN TRY
|SELECT DISTINCT COUNTRY='United Kingdom',City='Manchester',
T3.[2018- Street].Crime_ID, T3.[2018- Street].Latitude,
T3.[2018- Street].Longitude,
T3.LSOA_POPULATION.[Area Codes],
REPLACE(REPLACE(T3.[2017-2018_Stop-and-Search].[Age range],'over 34','34-90'), 'under 10', '05-10') AS AGE,
T3.[2017-2018_Stop-and-Search].Gender AS GENDER
FROM T3.[2018- Street]
FULL JOIN T3.LSOA_POPULATION
ON T3.[2018- Street].LSOA_code = T3.LSOA_POPULATION.[Area Codes]
FULL JOIN T3.[2017-2018_Stop-and-Search]
ON T3.[2018- Street].Latitude = T3.[2017-2018_Stop-and-Search].Latitude
WHERE Crime_ID IS NOT NULL AND
T3.[2017-2018_Stop-and-Search].[Age range] IS NOT NULL AND
T3.[2017-2018_Stop-and-Search].Gender IS NOT NULL
and T3.LSOA_POPULATION.[LA (2019 boundaries)]= 'Manchester'
|END TRY
|BEGIN CATCH
PRINT'RESULT NOT FOUND'
|END CATCH

```

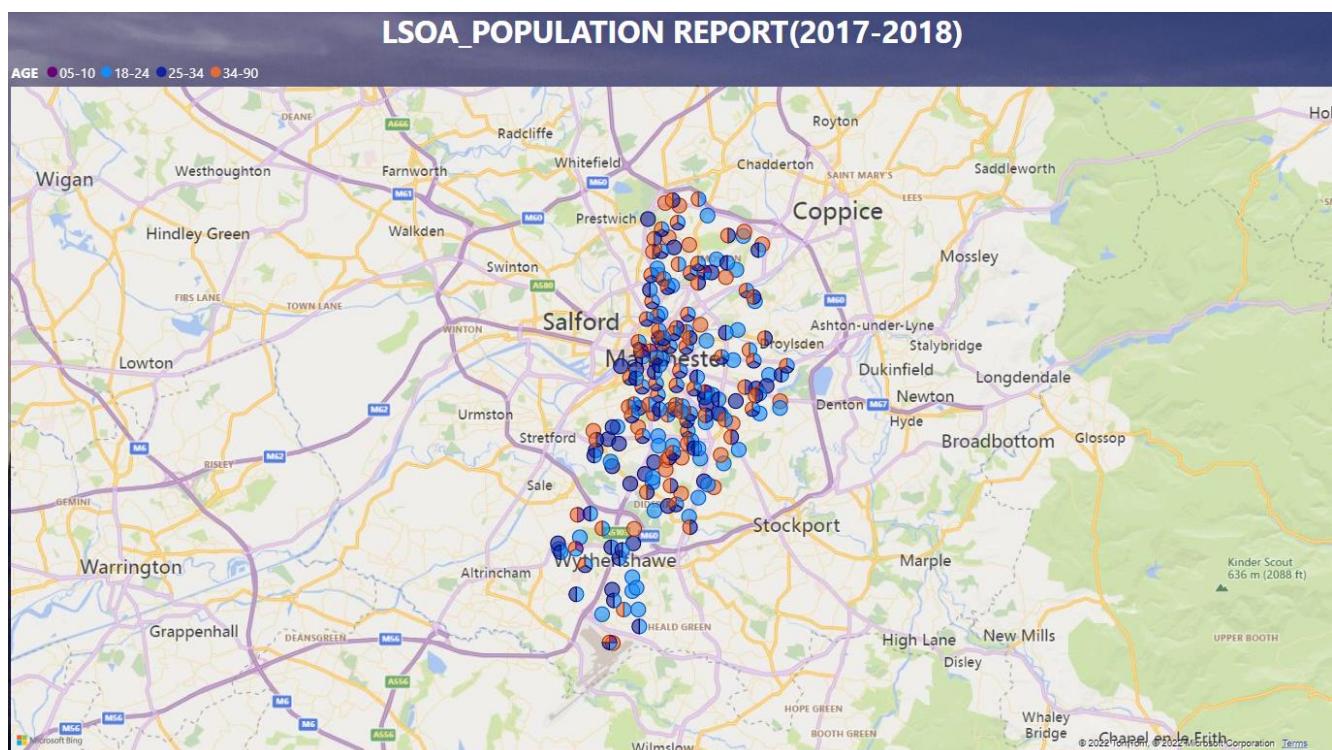
	COUNTRY	City	Crime_ID	Latitude	Longitude	Area Codes	AGE	GENDER
1	United Kingdom	Manchester	0000c41f448b4aa6d2bddb2e49d1e2e7579b36e1d880afe9...	53.477944	-2.244594	E01033677	18-24	Male
2	United Kingdom	Manchester	0000c41f448b4aa6d2bddb2e49d1e2e7579b36e1d880afe9...	53.477944	-2.244594	E01033677	25-34	Male
3	United Kingdom	Manchester	00018cca86b256eea1934c97b7c6e5f6986fb1d4131036ddd...	53.482225	-2.238637	E01033658	05-10	Male
4	United Kingdom	Manchester	00018cca86b256eea1934c97b7c6e5f6986fb1d4131036ddd...	53.482225	-2.238637	E01033658	18-24	Female
5	United Kingdom	Manchester	00018cca86b256eea1934c97b7c6e5f6986fb1d4131036ddd...	53.482225	-2.238637	E01033658	18-24	Male
6	United Kingdom	Manchester	00018cca86b256eea1934c97b7c6e5f6986fb1d4131036ddd...	53.482225	-2.238637	E01033658	25-34	Male
7	United Kingdom	Manchester	00018cca86b256eea1934c97b7c6e5f6986fb1d4131036ddd...	53.482225	-2.238637	E01033658	34-90	Male
8	United Kingdom	Manchester	000bb9af139fcf392e76be07067d06857ee9147a46070710c...	53.477944	-2.244594	E01033677	18-24	Male
9	United Kingdom	Manchester	000bb9af139fcf392e76be07067d06857ee9147a46070710c...	53.477944	-2.244594	E01033677	25-34	Male
10	United Kingdom	Manchester	000bf8e060e9222fb32a15e1538a3084127153344c52b5e1c...	53.502037	-2.199023	E01005202	34-90	Male
11	United Kingdom	Manchester	000d57b127ca34ab5f4197ee3197cc08f9d5af717933655d9...	53.508067	-2.209696	E01005202	05-10	Male
12	United Kingdom	Manchester	000d57b127ca34ab5f4197ee3197cc08f9d5af717933655d9...	53.508067	-2.209696	E01005202	18-24	Male
13	United Kingdom	Manchester	000d57b127ca34ab5f4197ee3197cc08f9d5af717933655d9...	53.508067	-2.209696	E01005202	25-34	Male
14	United Kingdom	Manchester	000f1109a7bb42acb37e55b3a9d3bc34b855a3abe6a683c...	53.517406	-2.22971	E01005167	34-90	Female
15	United Kingdom	Manchester	0011c2bc9b36b5f825c16851602c71e2c4b7f75b5bf22745f...	53.360552	-2.270186	E01005316	25-34	Female
16	United Kingdom	Manchester	0011c2bc9b36b5f825c16851602c71e2c4b7f75b5bf22745f...	53.360552	-2.270186	E01005316	25-34	Male
17	United Kingdom	Manchester	0011c2bc9b36b5f825c16851602c71e2c4b7f75b5bf22745f...	53.360552	-2.270186	E01005316	34-90	Female
18	United Kingdom	Manchester	0011c2bc9b36b5f825c16851602c71e2c4b7f75b5bf22745f...	53.360552	-2.270186	E01005316	34-90	Male
19	United Kingdom	Manchester	0019547136a98bd585ea15edddada672a64909d5f25d5e0a...	53.480483	-2.246568	E01033658	18-24	Male
20	United Kingdom	Manchester	001a0f46a76a1aef5d2536e475cf9091219872327b18eabe0...	53.479559	-2.232549	E01033654	18-24	Male



This report is based on LSOAs on the basis of age group. The map shows the areas according to the age group and their gender with their Unique CrimeID. These are the affected areas of crime in Greater Manchester using longitude and latitude.

These dots represent the crimes done by the people according to their age.

Complete Dashboard (Power BI)

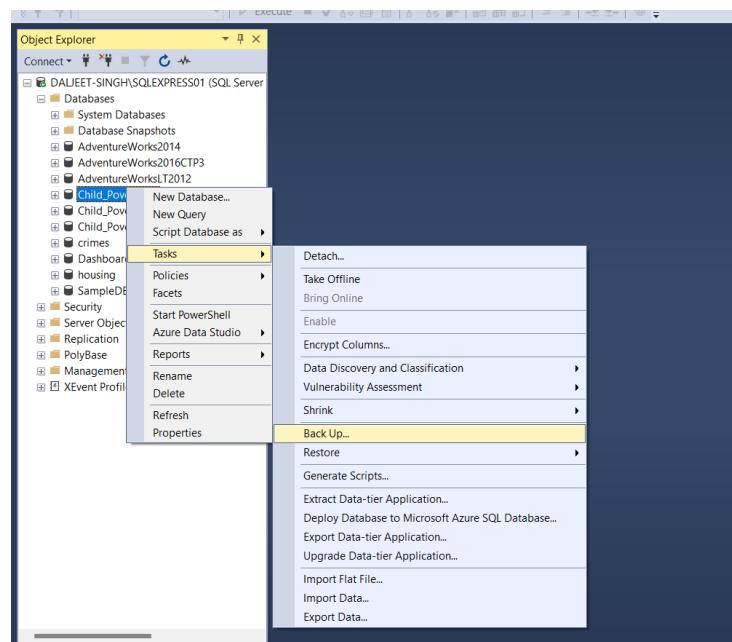


Backup and Restore

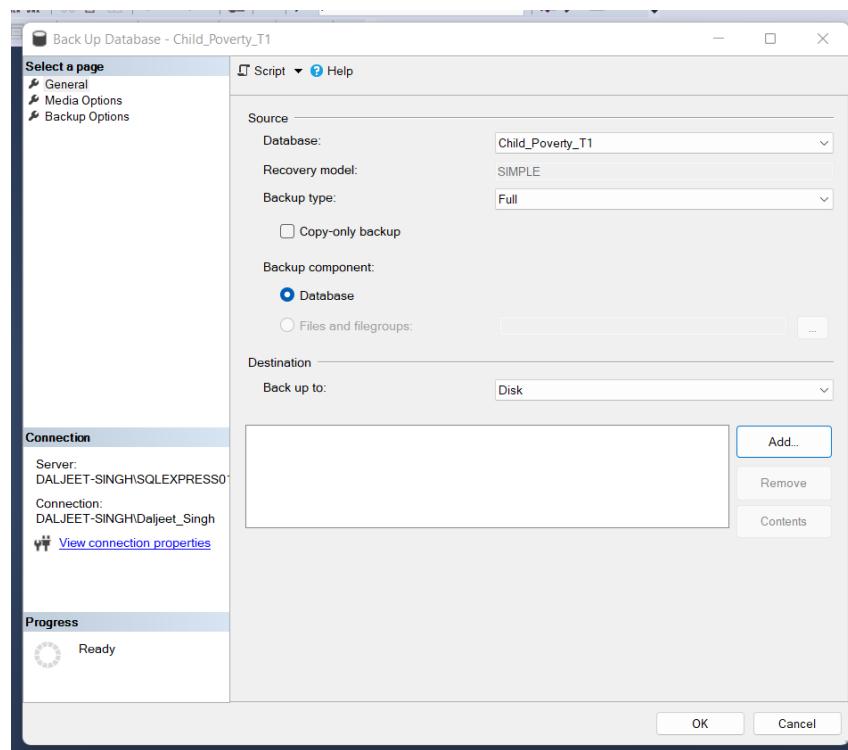
As I have completed my project in SQL SERVER MANAGAMNET STUDIO. To run all the queries, we need backup files and the process of importing the data through backup files for each task is mentioned below:

BACKUP STEPS:

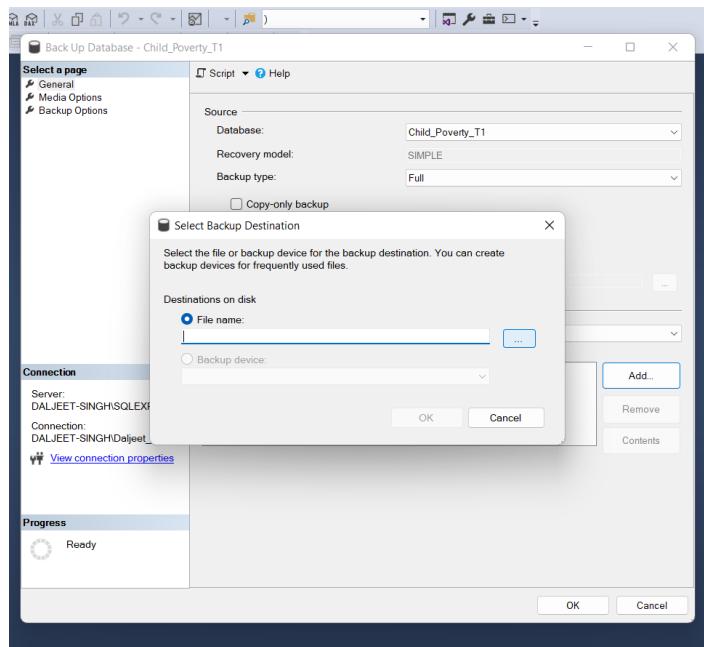
1. Under the database, click on task and select backup.



2. Specify the backup file path while clicking on add button

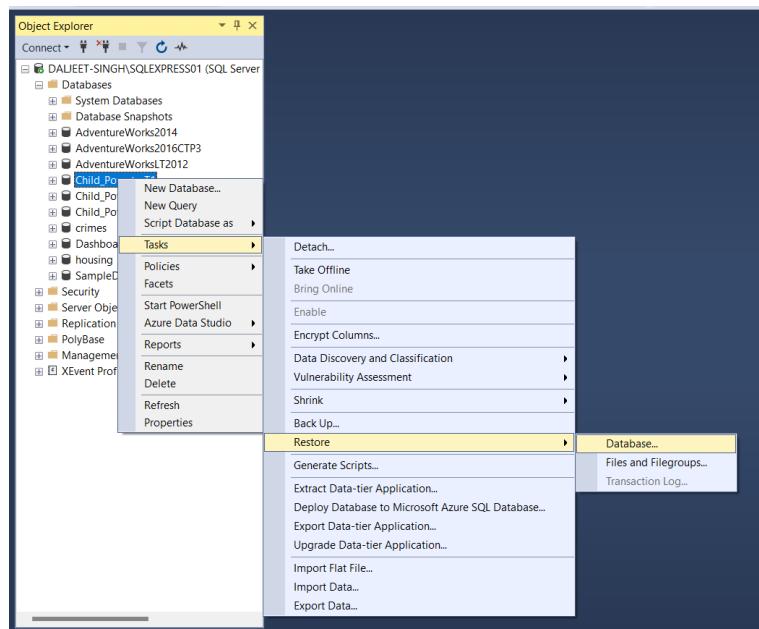


3. At the end, select the file with .bak extension.

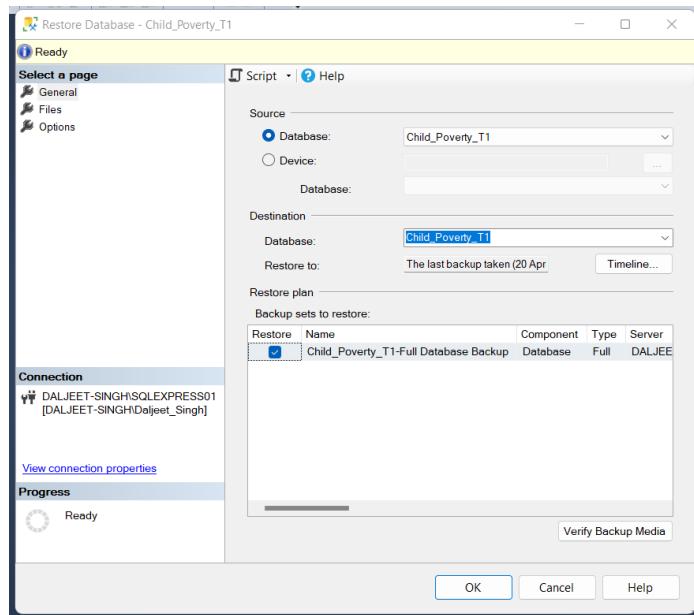


RESTORE

1. Just below the backup, select restore for restoring the data.



2. Again select database and click OK.



Conclusion

In the nutshell, I have analysed the data on Child poverty for respective countries in task 1 and observed the basis necessities is the major reason of child poverty where children need to do work to earn ‘Bread and Butter’ and this report helps to examine the futuristic parameters to overcome these issues by just reading the data.

Similarly in task 2, we need to target the data of Vietnam country and their try to understand their education system for all the schools. I have created KPIs’ (Keep Performance Indicators) using data bars. With that, we can analyse the performance of children, teachers and parents by replacing it with the updated data and also Dashboard provides the complete information of this task.

Task 3 is all about the crimes in Greater Manchester (UK) from 2017-2018. With LSOA codes, I have tried to figure out the areas that are affected by crime. We can also locate the areas of Manchester to find out crime done according to the different ages. The technology used for this specific task is GIS map in POWER BI.

References

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**Thank you
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