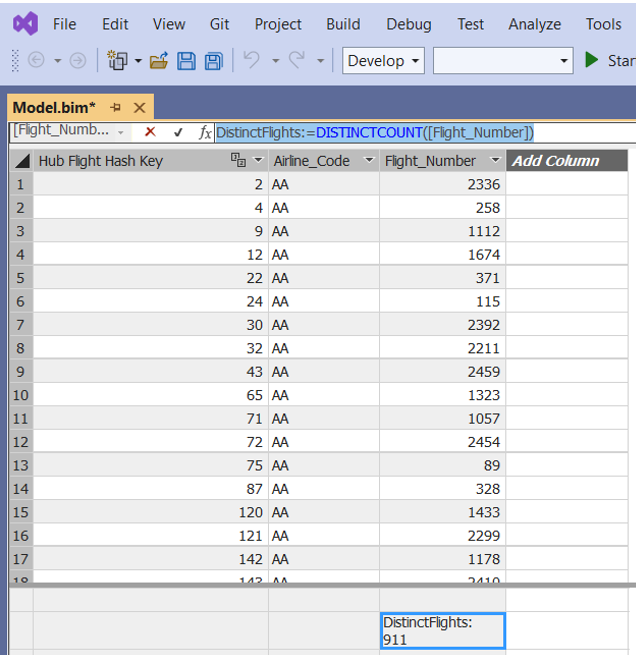
**DAX Queries and Screenshots**

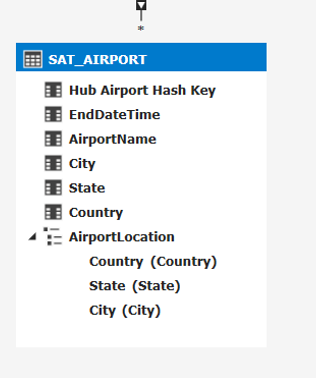
**1) Total No. of different flights running**

DistinctFlights:=DISTINCTCOUNT([Flight\_Number])



* + - 1. **Create Hierarchy:**

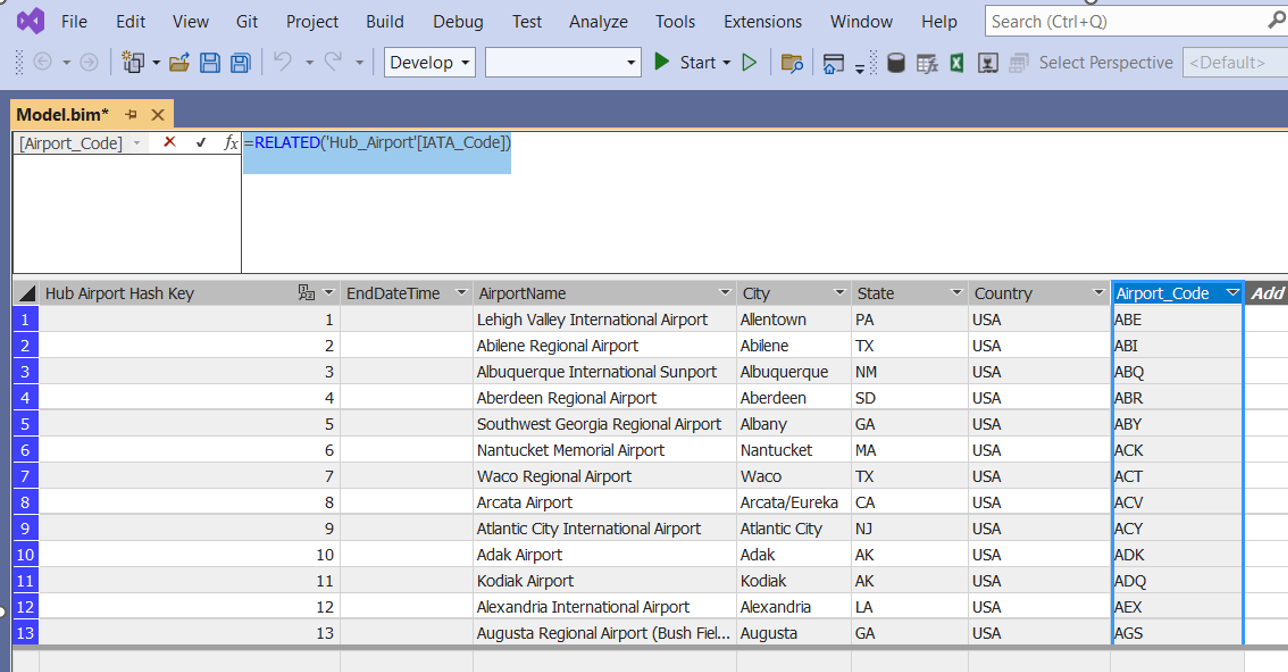
1. **Country**
2. **State**
3. **City**

****

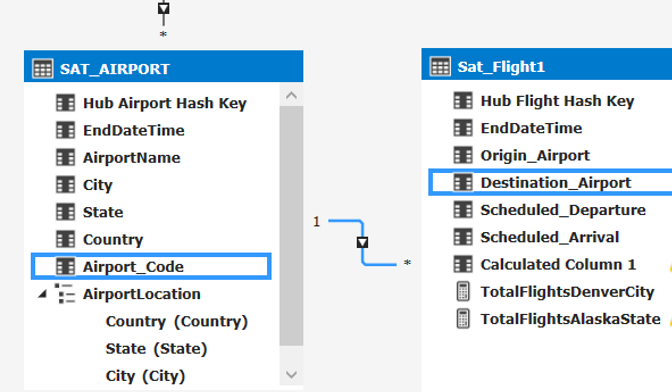
* + - 1. **Flights going to particular country (USA)**

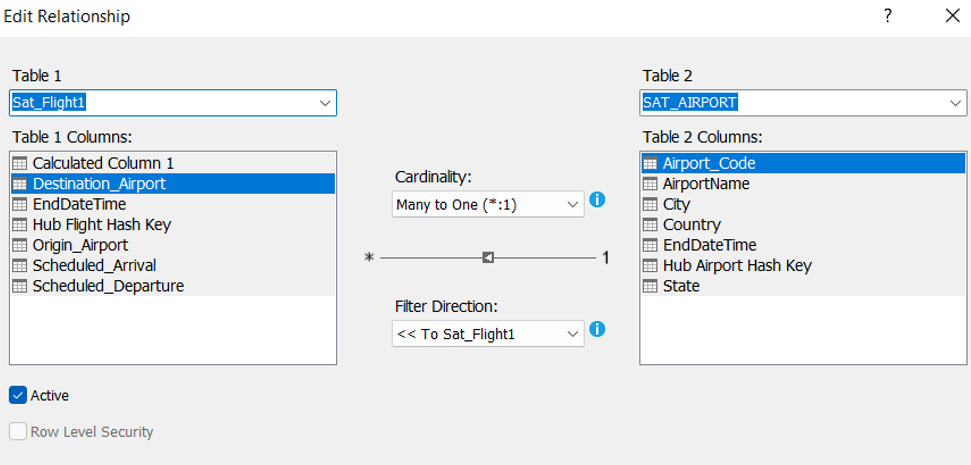
A calculated column ‘Airport\_Code’ is created in ‘SAT\_AIRPORT’ table

=RELATED('Hub\_Airport'[IATA\_Code])



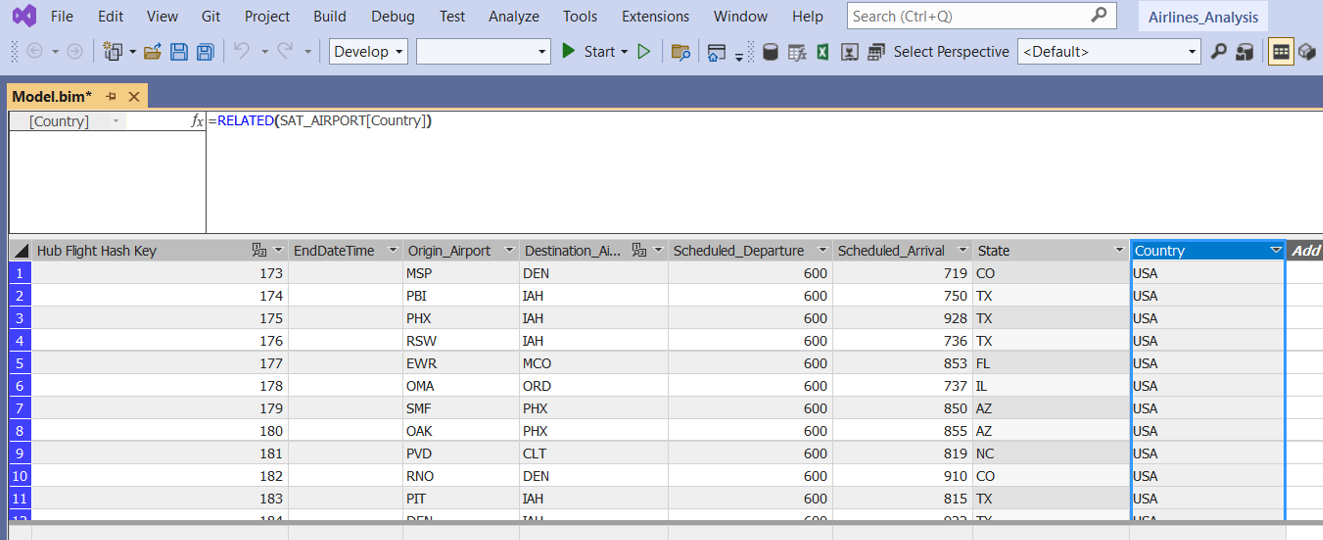
A relationship is created between tables ‘Sat\_Airport’ and ‘Sat\_Flight1’ through columns ‘Airport\_Code’ and ‘Destination\_Airport’





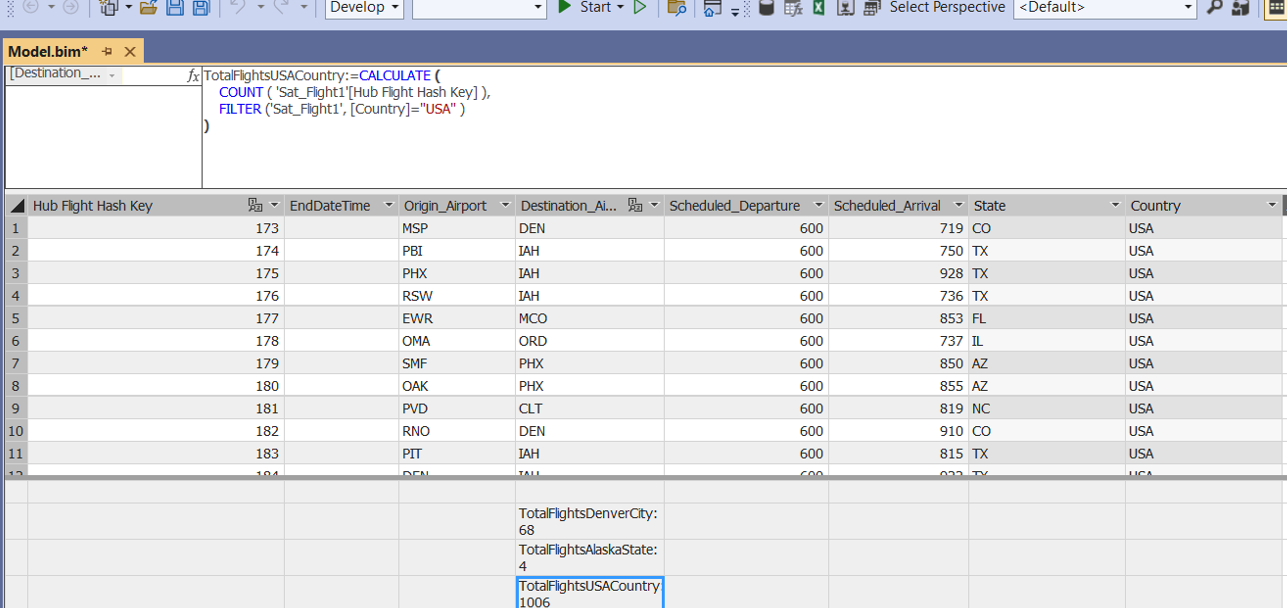
A calculated column ‘Country’ is created in ‘Sat\_Flight1’

=RELATED(SAT\_AIRPORT[Country])



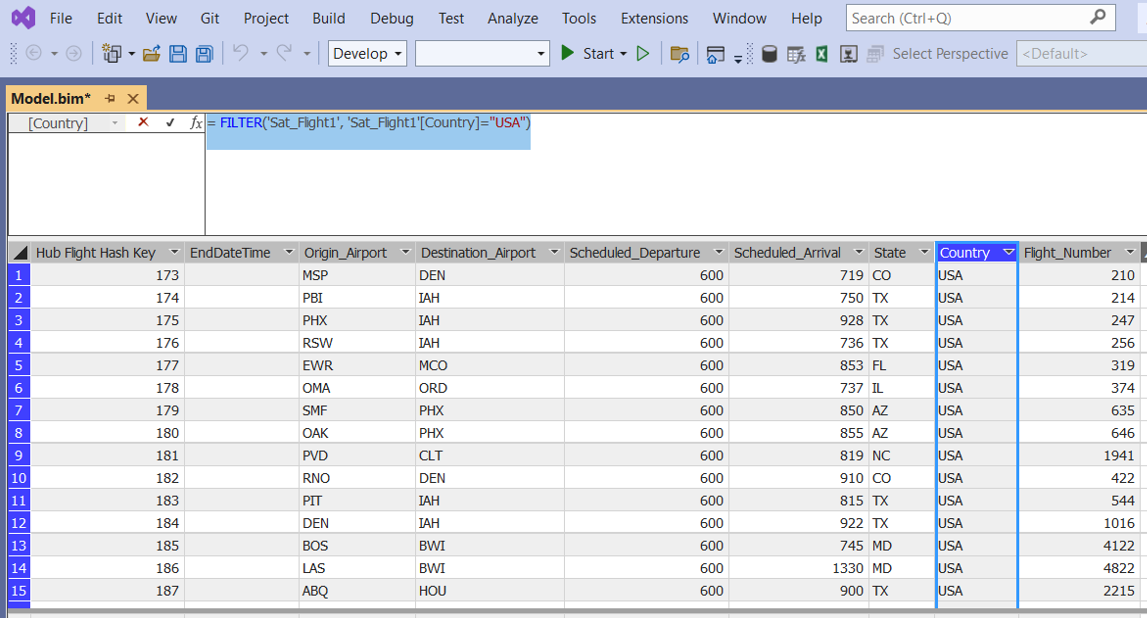
Then total number of flights going to USA is calculated using the query:

TotalFlightsUSACountry:=CALCULATE ( COUNT ( 'Sat\_Flight1'[Hub Flight Hash Key] ), FILTER ('Sat\_Flight1', [Country]="USA" ))



A calculated table ‘FlightsGoingToUSACountry’ is created to display details of flights going to USA

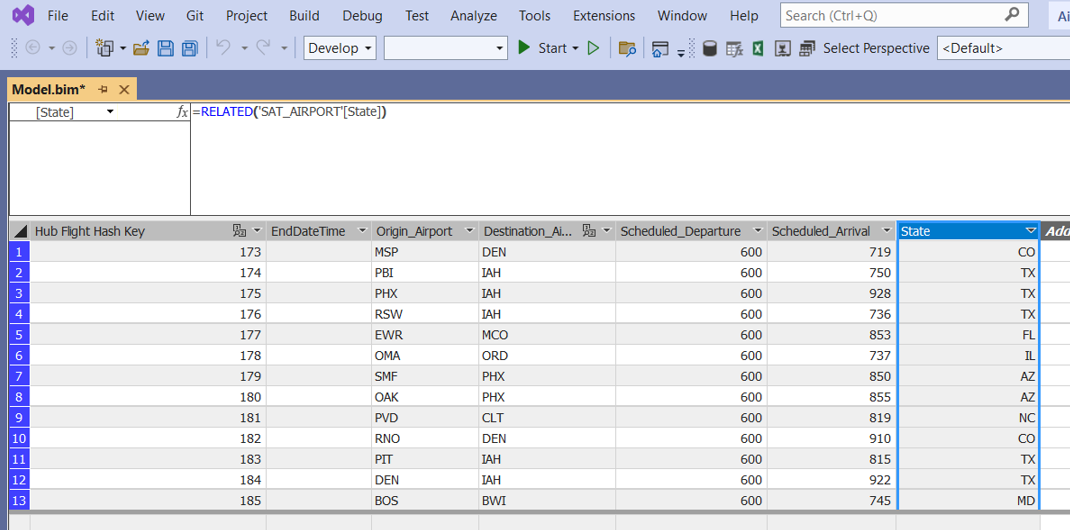
= FILTER('Sat\_Flight1', 'Sat\_Flight1'[Country]="USA")



* + - 1. **Flights going to a state (Alaska)**

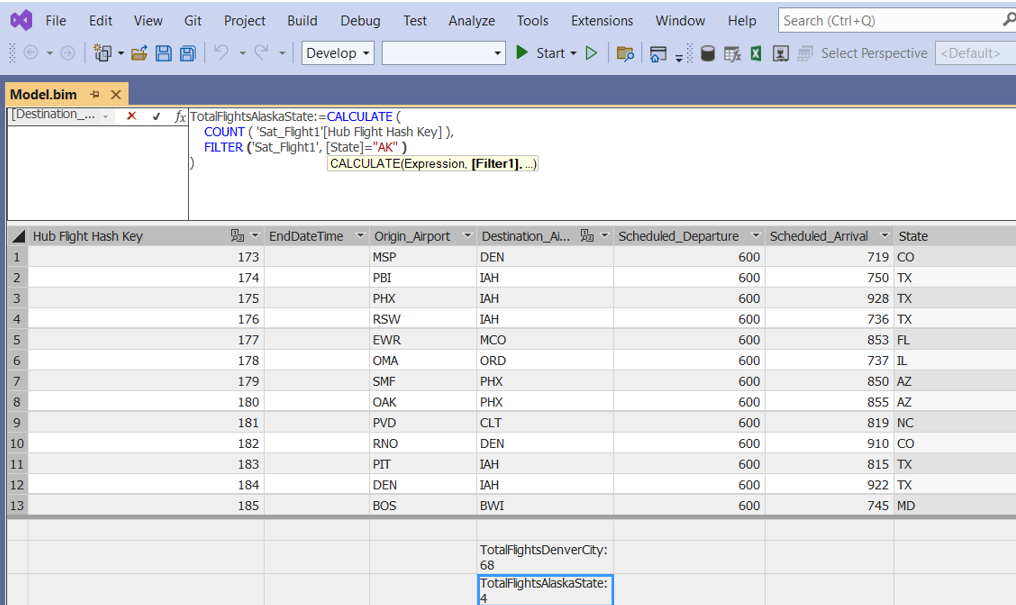
A calculated column ‘State’ is created in ‘Sat\_Flight1’ table

=RELATED('SAT\_AIRPORT'[State])



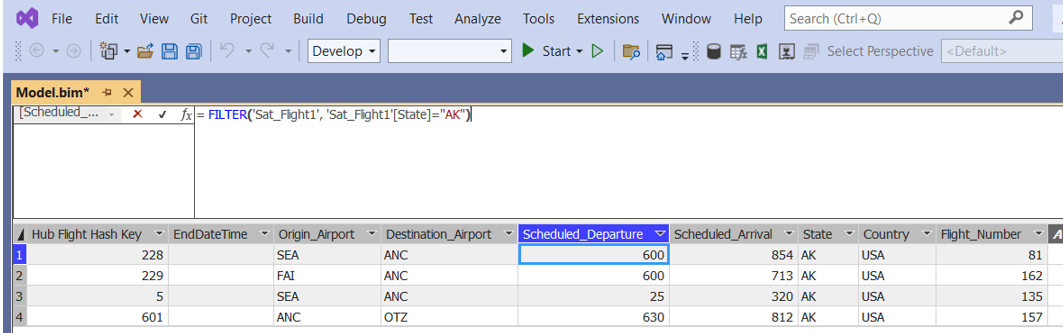
Then total number of flights going to Alaska state is calculated using the query:

TotalFlightsAlaskaState:=CALCULATE ( COUNT ( 'Sat\_Flight1'[Hub Flight Hash Key] ), FILTER ('Sat\_Flight1', [State]="AK" ))



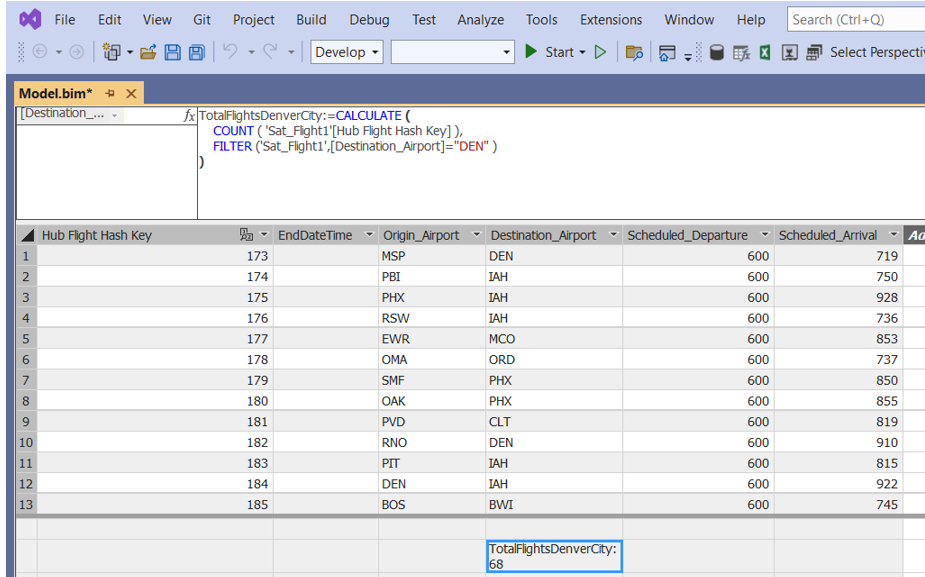
A calculated table ‘FlightsGoingToAlaskaState’ is created to display flight details going to Alaska State

= FILTER('Sat\_Flight1', 'Sat\_Flight1'[State]="AK")



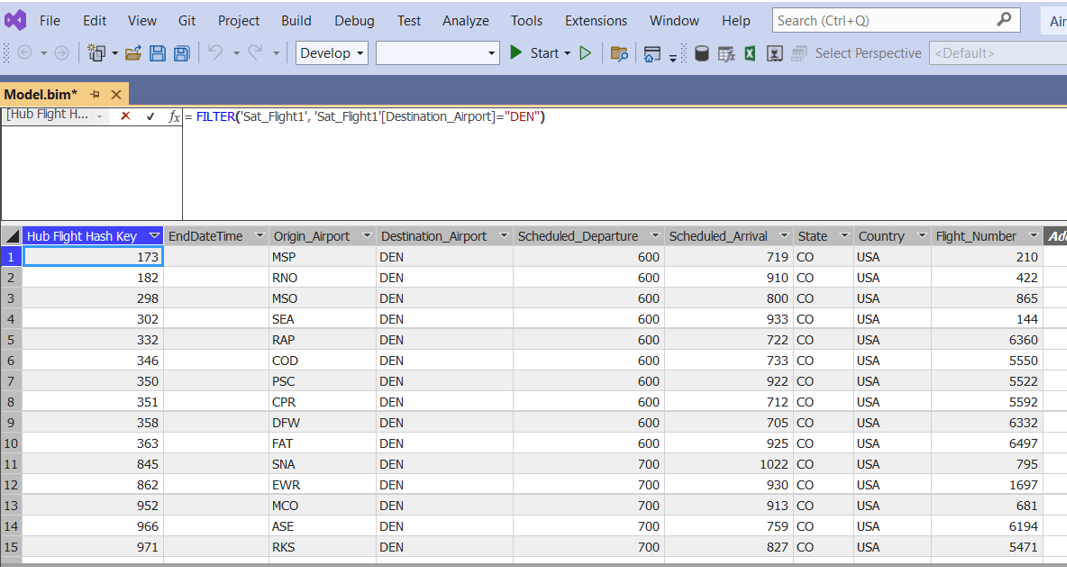
* + - 1. **Flights Going to a city (Denver)**

TotalFlightsDenverCity:=CALCULATE ( COUNT ( 'Sat\_Flight1'[Hub Flight Hash Key] ), FILTER ('Sat\_Flight1',[Destination\_Airport]="DEN" ))



A calculated table ‘FlightsGoingToDenverCity’ is created to find Flights going to Denver city

= FILTER('Sat\_Flight1', 'Sat\_Flight1'[Destination\_Airport]="DEN")

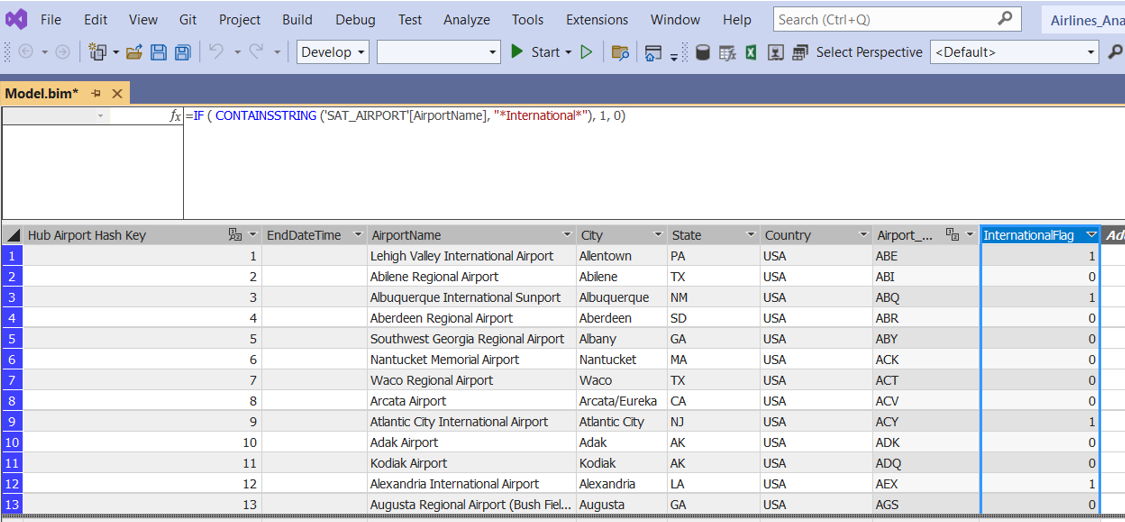


* + - 1. **Perform calculation to Identify Regional/International Airport.**

**To find international airports**

A calculated column ‘InternationalFlag’ is created in ‘SAT\_AIRPORT’ table

=IF ( CONTAINSSTRING ('SAT\_AIRPORT'[AirportName], "\*International\*"), 1, 0)



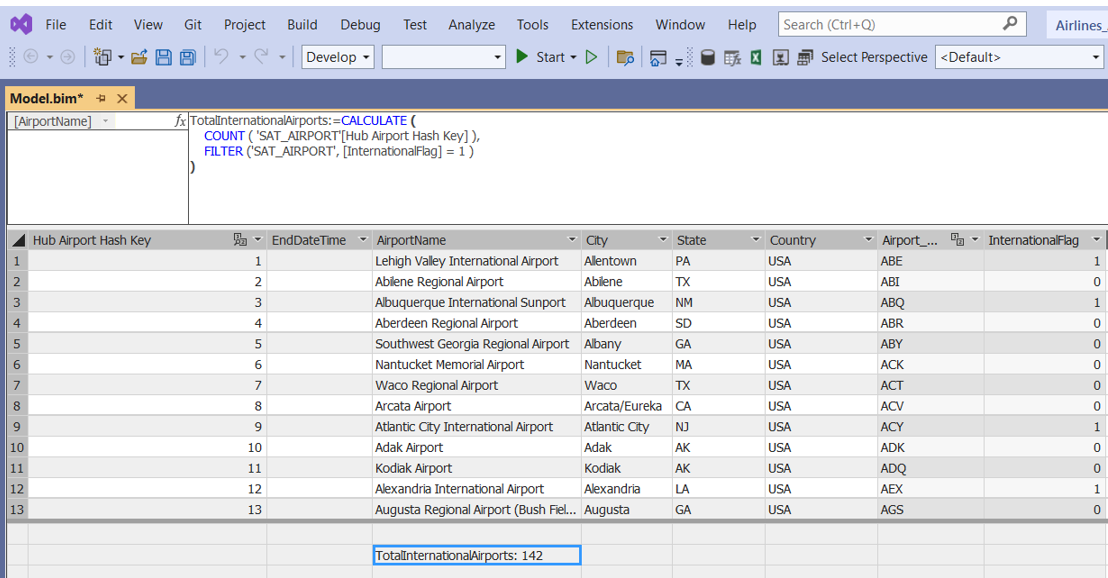
Then total number of international airports is calculated using the query:

TotalInternationalAirports:=CALCULATE (

COUNT ( 'SAT\_AIRPORT'[Hub Airport Hash Key] ),

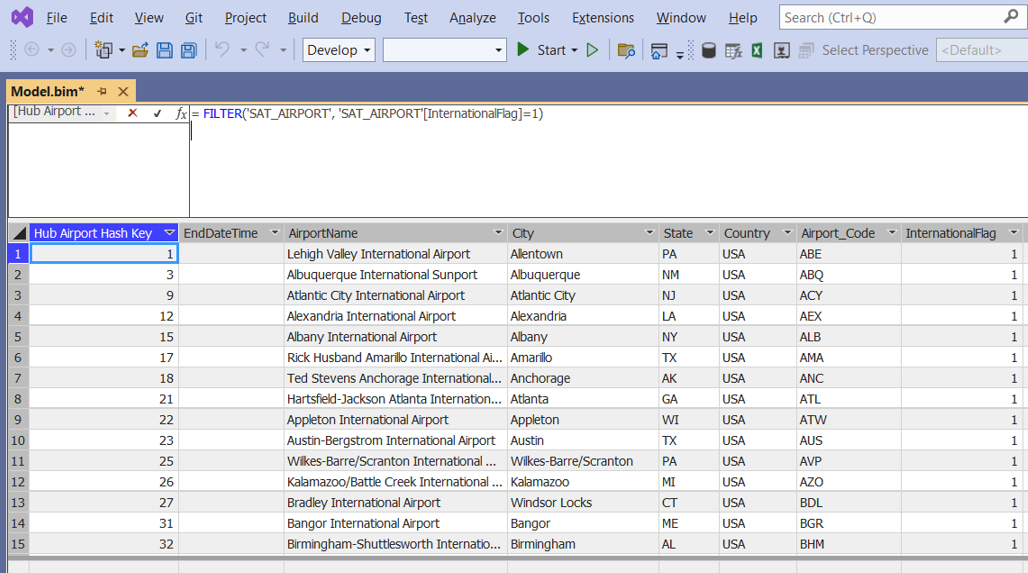
FILTER ('SAT\_AIRPORT', [InternationalFlag] = 1 )

)

****

A calculated table ‘InternationalAirports’ is created to show details of international airports

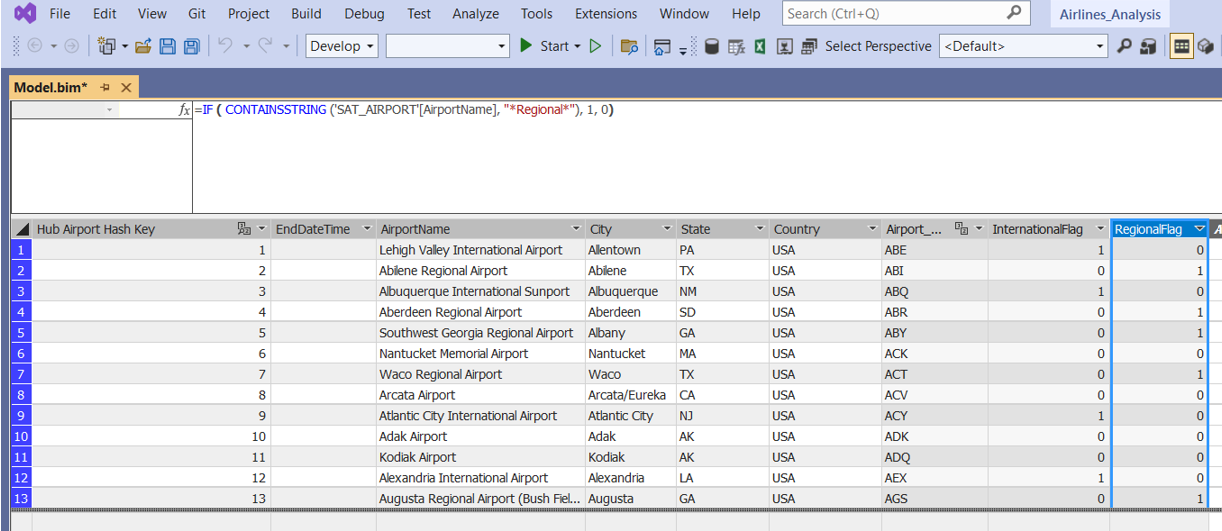
= FILTER('SAT\_AIRPORT', 'SAT\_AIRPORT'[InternationalFlag]=1)



**To find regional airports**

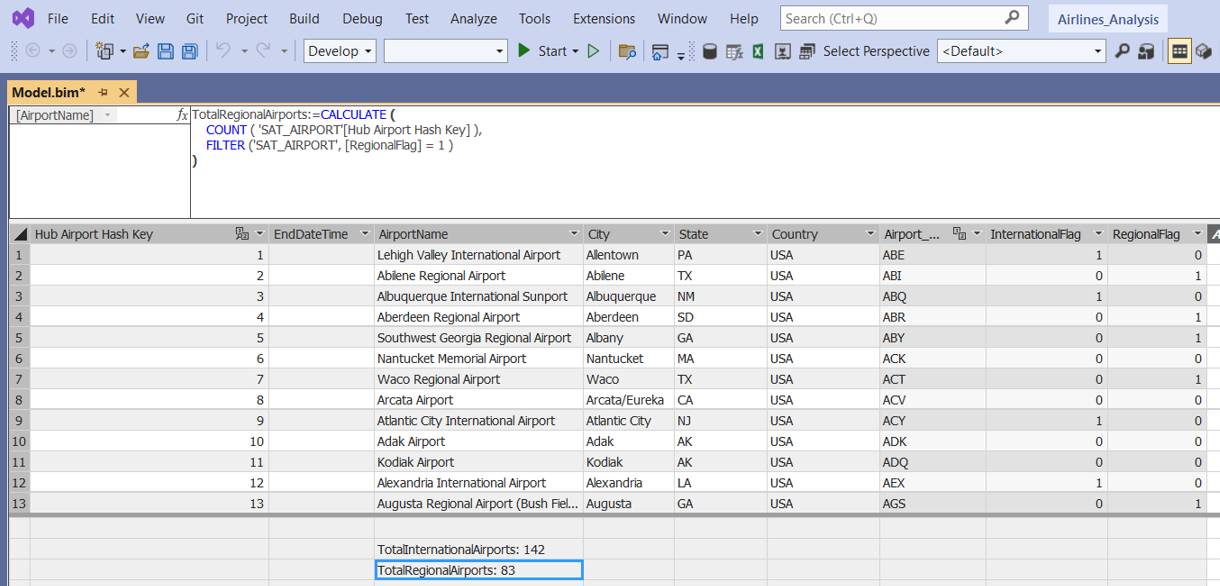
A calculated column ‘RegionalFlag’ is created in ‘SAT\_AIRPORT’ table

=IF ( CONTAINSSTRING ('SAT\_AIRPORT'[AirportName], "\*Regional\*"), 1, 0)



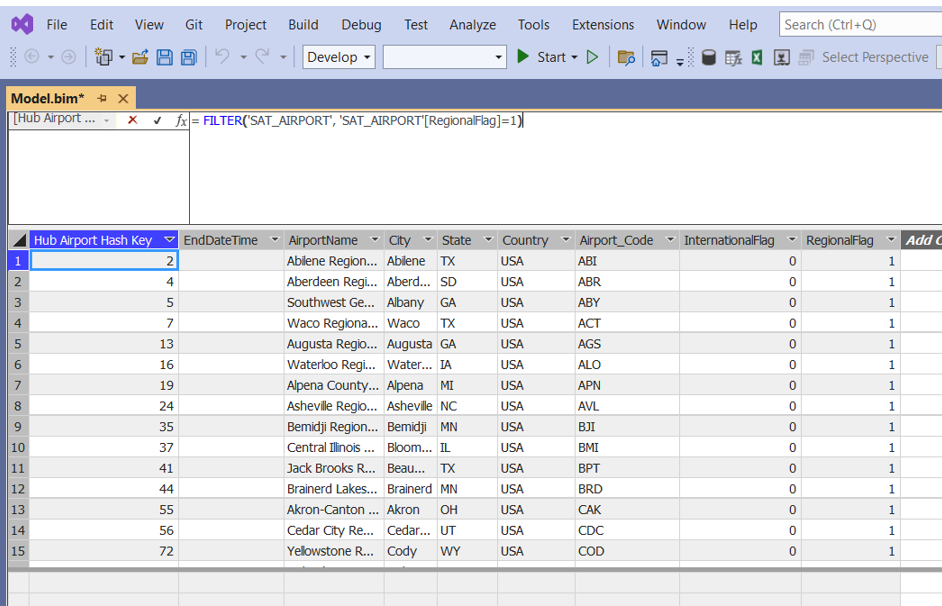
Then total number of regional airports is calculated using the query:

TotalRegionalAirports:=CALCULATE ( COUNT ( 'SAT\_AIRPORT'[Hub Airport Hash Key] ), FILTER ('SAT\_AIRPORT', [RegionalFlag] = 1 ))



A calculated table ‘RegionalAirports’ is created to show details of regional airports

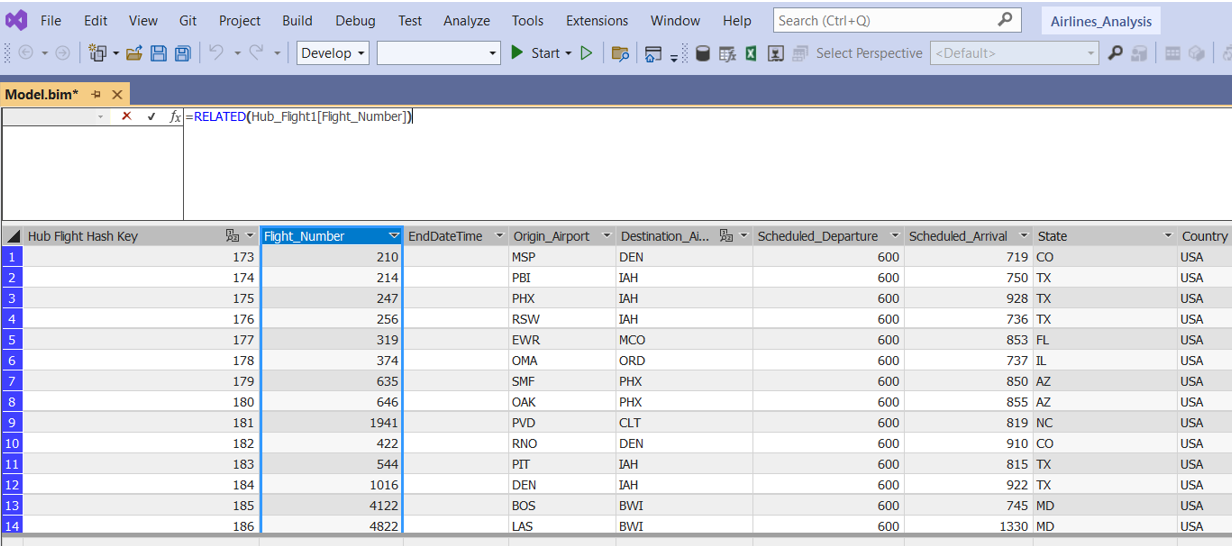
= FILTER('SAT\_AIRPORT', 'SAT\_AIRPORT'[RegionalFlag]=1)



* + - 1. **Flights going to every State.**

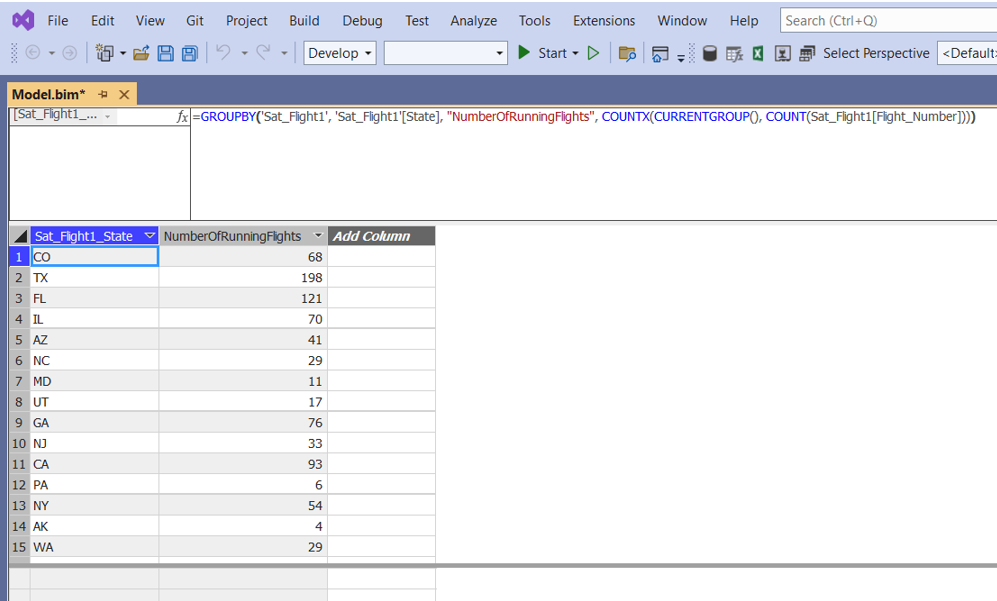
A calculated column ‘Flight\_Numbers’ is created in ‘Sat\_Flight’ table

=RELATED(Hub\_Flight1[Flight\_Number])



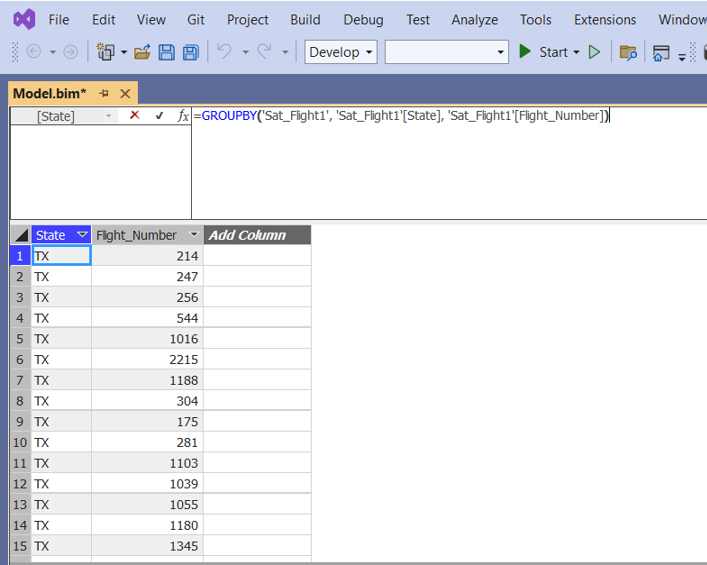
Then a calculated table ‘FlightsGoingToEveryState’ is created to find number of flights going to each state

=GROUPBY('Sat\_Flight1', 'Sat\_Flight1'[State], "NumberOfRunningFlights", COUNTX(CURRENTGROUP(), COUNT(Sat\_Flight1[Flight\_Number])))



A calculated table ‘FlightsGoingToEveryStateDetails’ is created to show flight numbers of flights going to every state

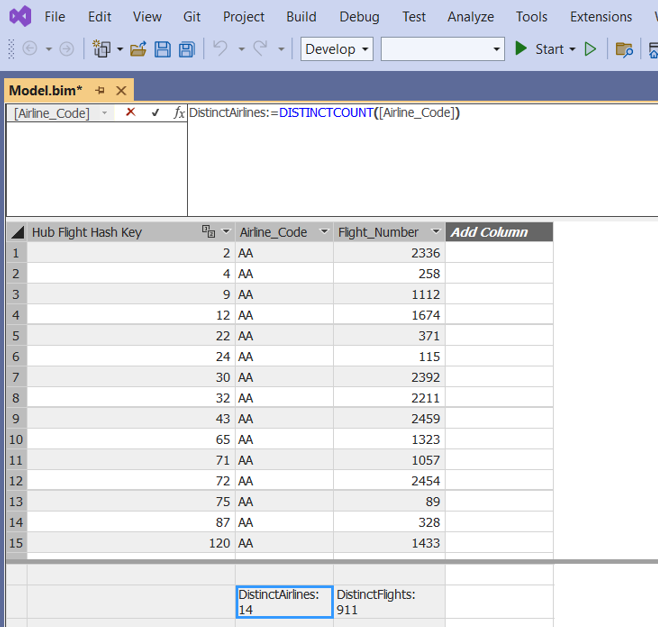
=GROUPBY('Sat\_Flight1', 'Sat\_Flight1'[State], 'Sat\_Flight1'[Flight\_Number]



* + - 1. **Find Different Airlines Available**

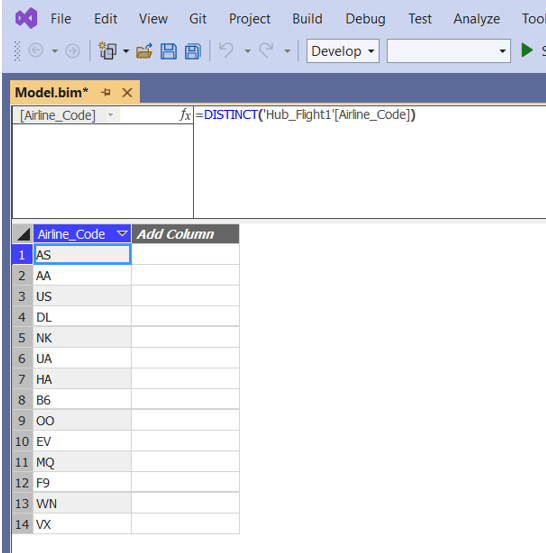
Total no. of different airlines

DistinctAirlines:=DISTINCTCOUNT([Airline\_Code])



To get names of different airlines create new calculated table ‘NamesOfDifferentAirlines’ is created

=DISTINCT(‘Hub\_Flight1’[Airline\_Code])



* + - 1. **Which Airline has the maximum running flights**

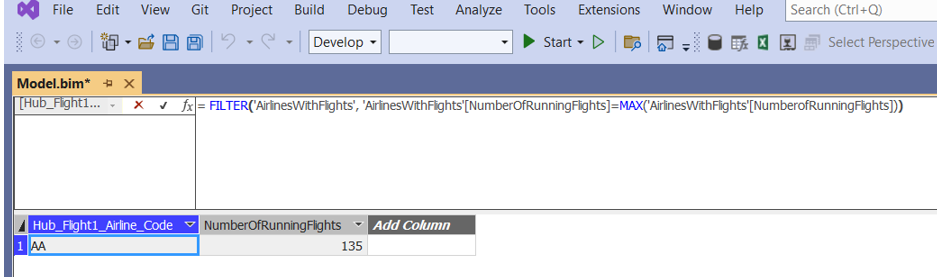
A calculated table ‘AirlinesWithFlights’ is created

=GROUPBY('Hub\_Flight1', 'Hub\_Flight1'[Airline\_Code], "NumberOfRunningFlights", COUNTX(CURRENTGROUP(), COUNT(Hub\_Flight1[Flight\_Number])))



A calculated table ‘AirlineWithMaximumFlights’ is created to find airline with Max number of Running Flights

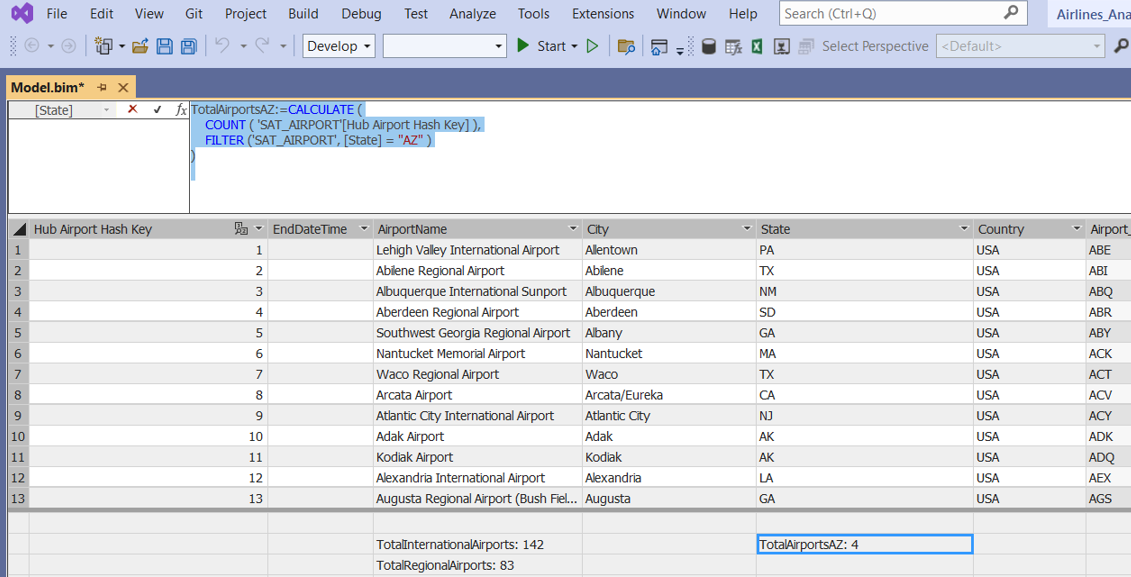
= FILTER('AirlinesWithFlights', 'AirlinesWithFlights'[NumberOfRunningFlights]=MAX('AirlinesWithFlights'[NumberofRunningFlights]))



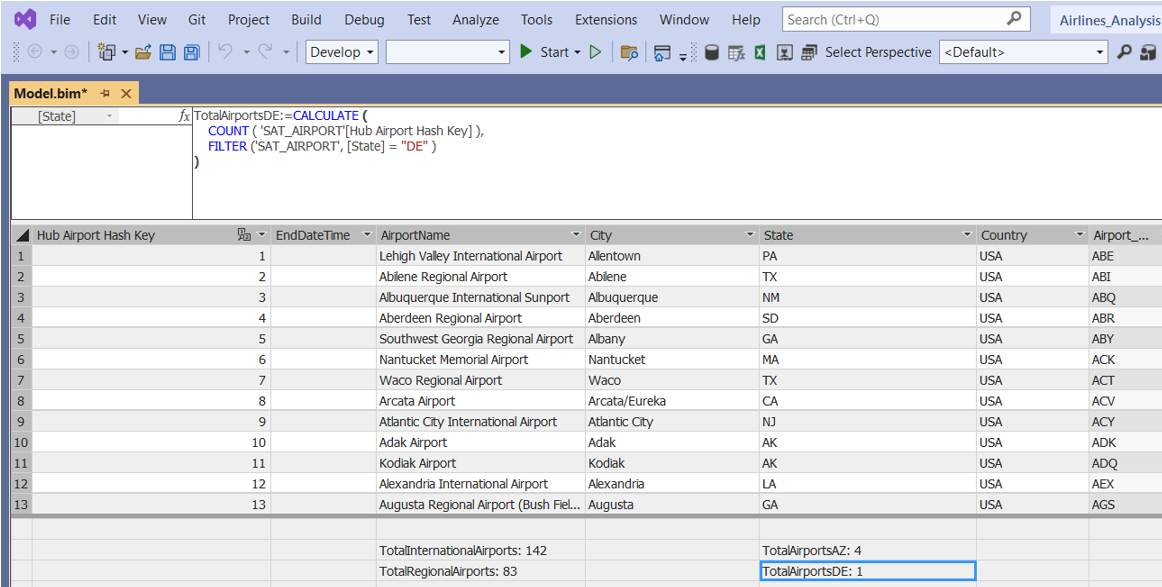
* + - 1. **No of Airports in the state AZ, DE, and NY.**

Number of airports for individual cities:

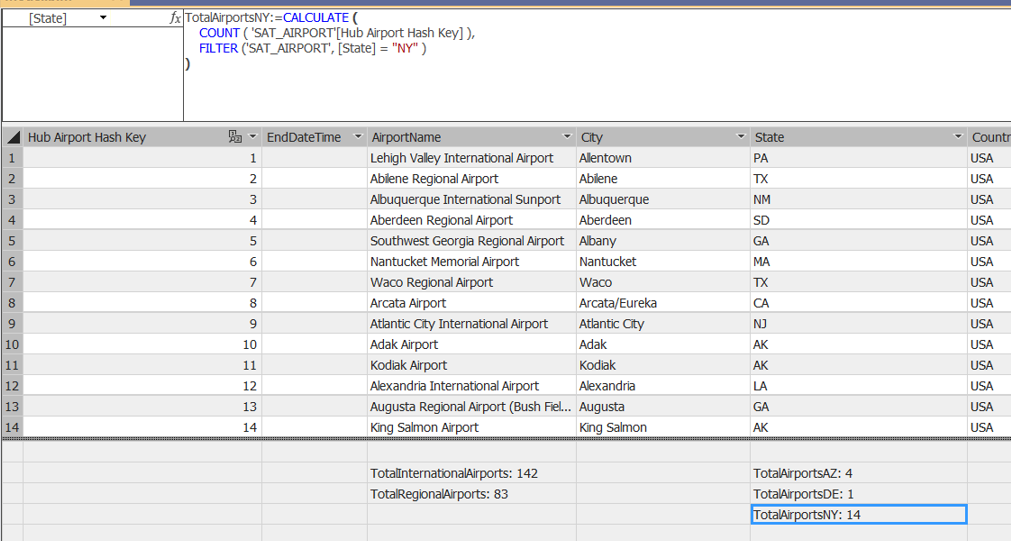
TotalAirportsAZ:=CALCULATE ( COUNT ( 'SAT\_AIRPORT'[Hub Airport Hash Key] ), FILTER ('SAT\_AIRPORT', [State] = "AZ" ))



TotalAirportsDE:=CALCULATE ( COUNT ( 'SAT\_AIRPORT'[Hub Airport Hash Key] ), FILTER ('SAT\_AIRPORT', [State] = "DE" ))

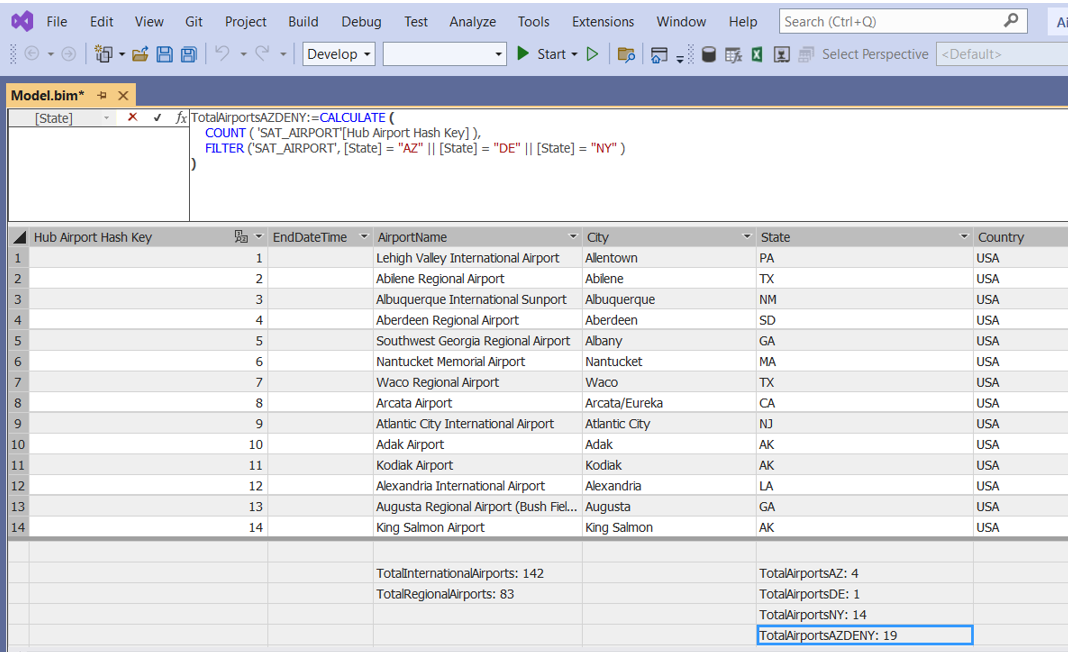


TotalAirportsNY:=CALCULATE ( COUNT ( 'SAT\_AIRPORT'[Hub Airport Hash Key] ), FILTER ('SAT\_AIRPORT', [State] = "NY" ))

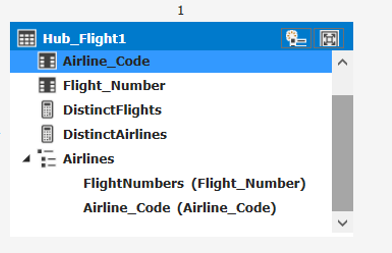


Number of airports for three cities combined:

TotalAirportsAZDENY:=CALCULATE ( COUNT ( 'SAT\_AIRPORT'[Hub Airport Hash Key] ), FILTER ('SAT\_AIRPORT', [State] = "AZ" || [State] = "DE" || [State] = "NY" ))



* + - 1. **Create Hierarchy for Airlines and its flight numbers.**

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