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**Practical No 1**

**Aim: Creation of Dimensions and Fact tables.**

**Solution:**

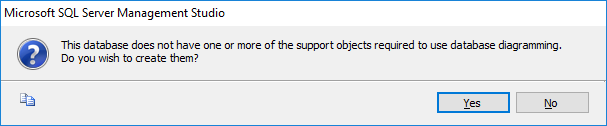
**Open Application -> Microsoft SQL Server 2008 R2 -> SQL Server Management Studio**

1. **Select Connect Tab -> Database Engine -> Select Server Name(local)**
2. **Right Click the Database -> New Database**
3. **Types “StudentReport” as the database name, click on OK to close the dialog box and to create the database.**

**Create a Database Diagrams**

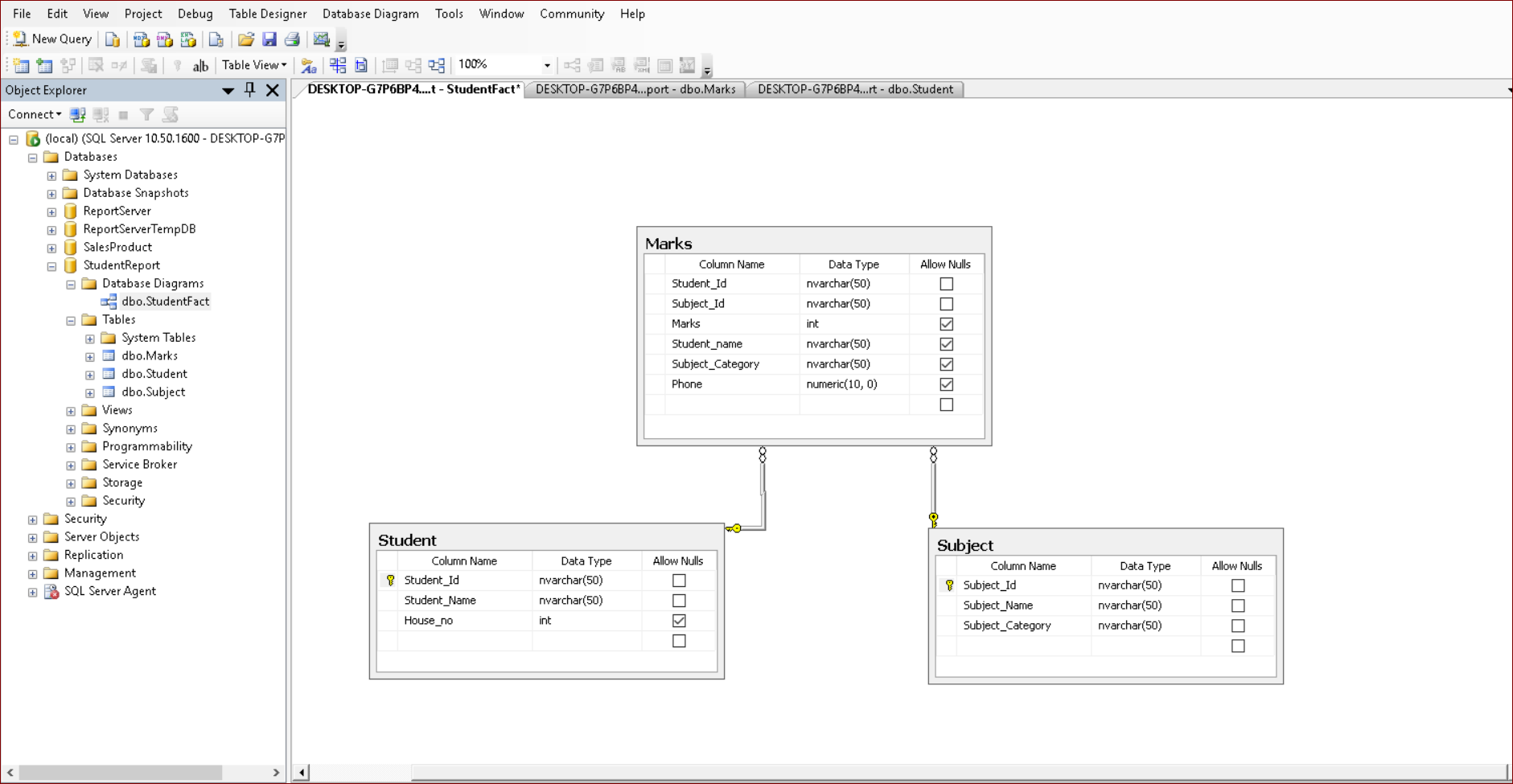
**Expand the “StudentReport” database folder.**

1. **Click on Database Diagrams to expand it**

****

**On click of it, above Dialog box appears, click on Yes to close it.**

1. **Right Click on Database Diagrams -> New Database Diagrams**
2. **Create fact and Dimension Tables. (Right click on surface, choose New Table to add tables on Database Diagrams.)**



1. **Establish relationship between fact and dimension tables.**
2. **Save Database Diagrams with name as “StudentFact”. (After saving Database Diagrams fact and dimension tables are automatically placed in Table tab.)**

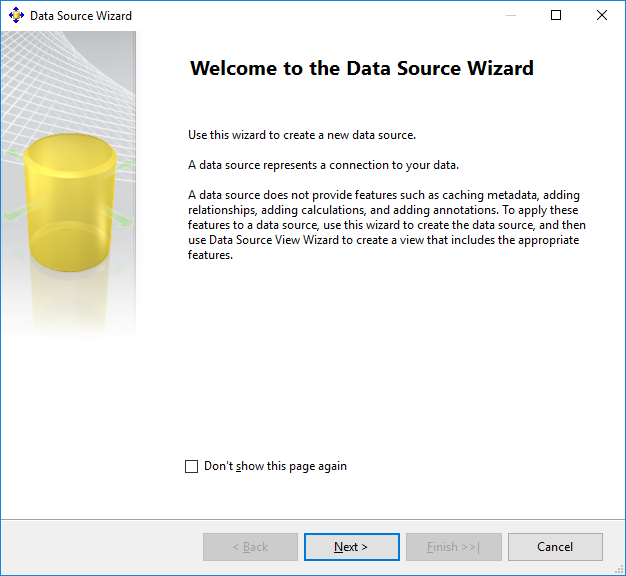
**Practical No 2**

**Aim: Create Data Source using SSAS (SQL Server Analysis Services.)**

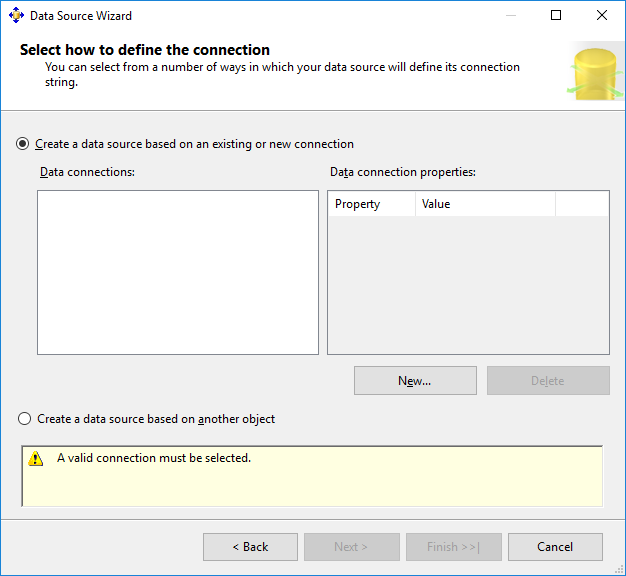
**Solution:**

**Open Application -> Microsoft SQL Server 2008 R2 -> SQL Server Business Intelligence Development Studio**

1. **Select File -> New Project -> Choose Analysis Service Project -> Name it as “Student2021” and click on OK.**
2. **Right Click on Data Sources -> New Data Source**

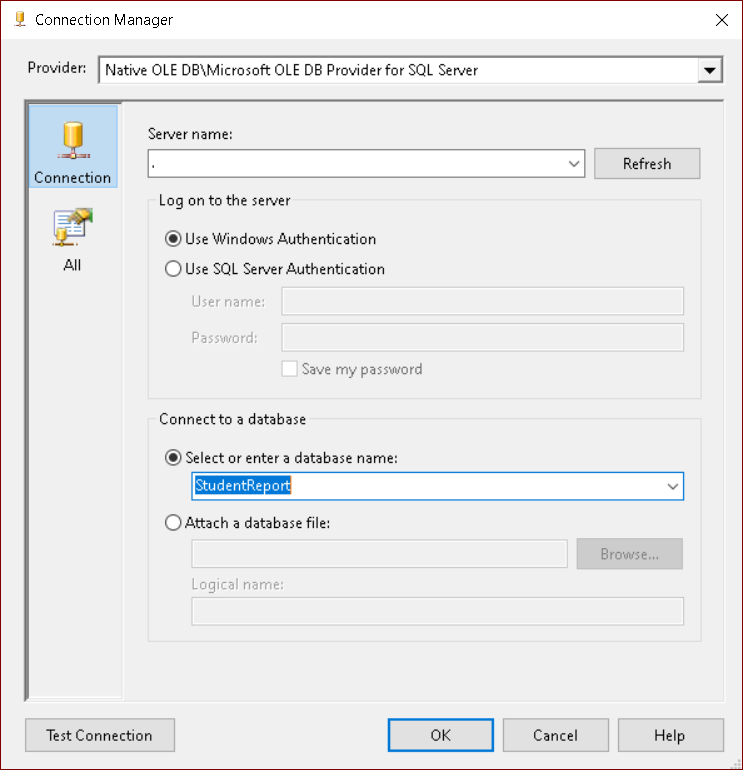
****

**Click on Next.**

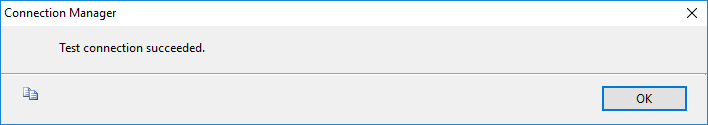
****

**Click on New.**

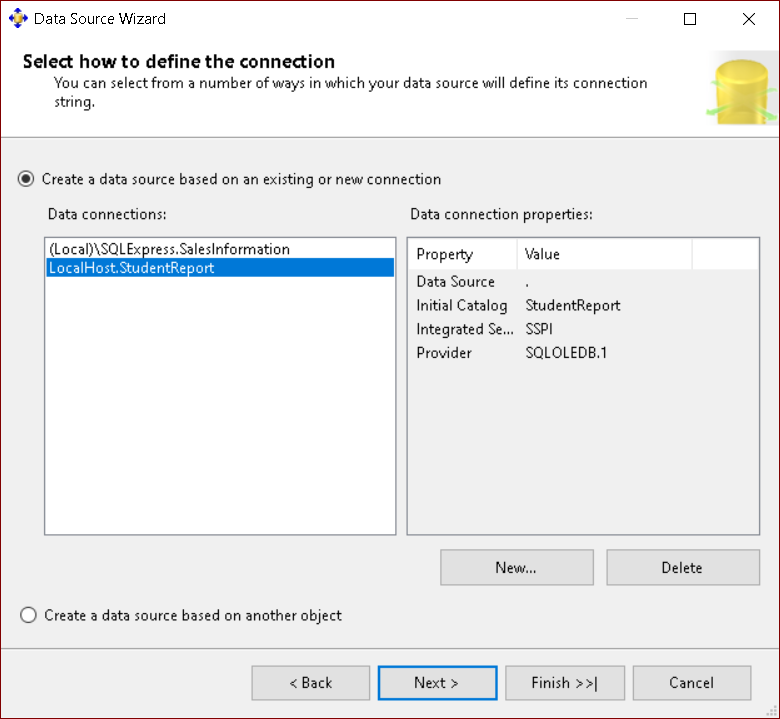
1. **Choose Provider as “Microsoft OLEDB Provider for SQL Server”, Server Name as “.”, Select database name as “StudentReport”. (Created in SQL Server Management studio).**



1. **Click on Test Connection.**

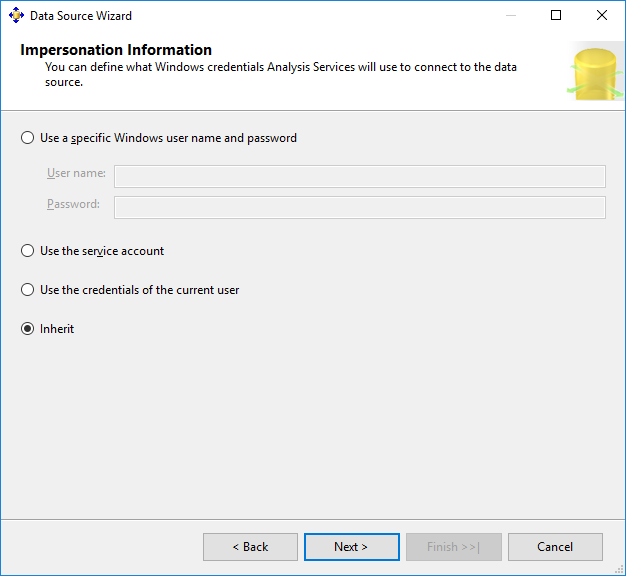
****

**Click on OK.**



**Click on Next.**

1. **Choose “Inherit” option.**

****

**Click on Next.**

1. **Click on Finish.**



**Name Data Source as “StudentReport”.**

**Practical No 3**

**Aim: Create Data Source View using SSAS (SQL Server Analysis Services.)**

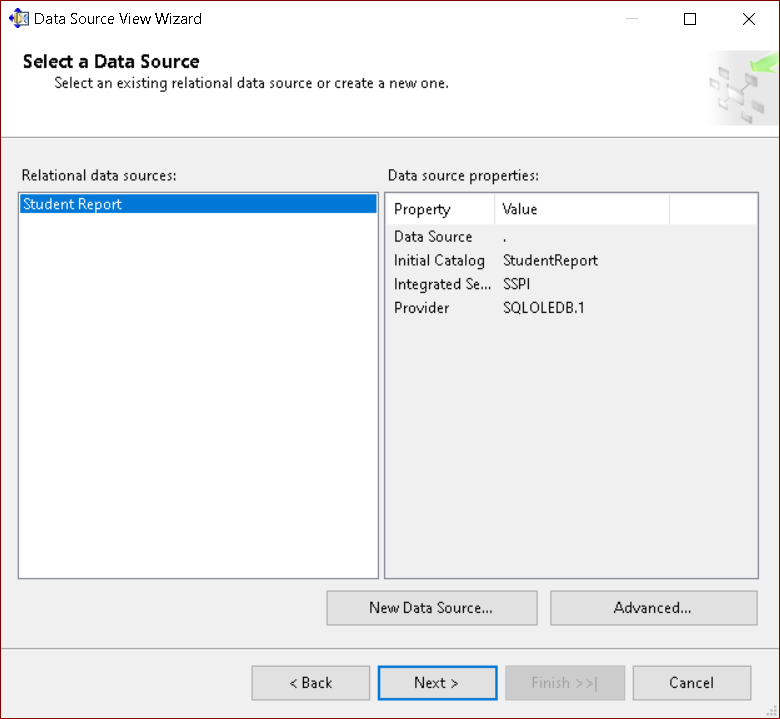
**Solution:**

1. **Right click on Data Source View -> New Data Source View**

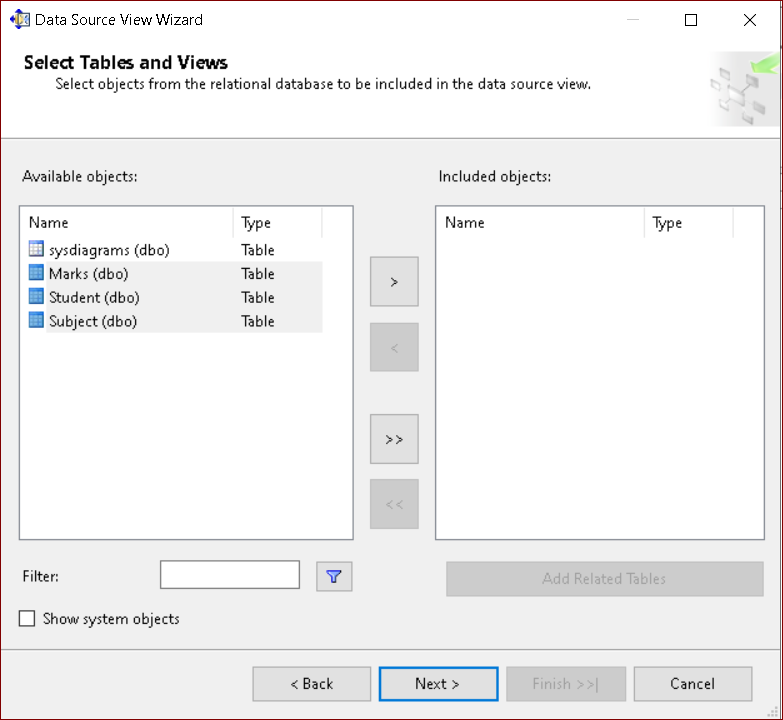
****

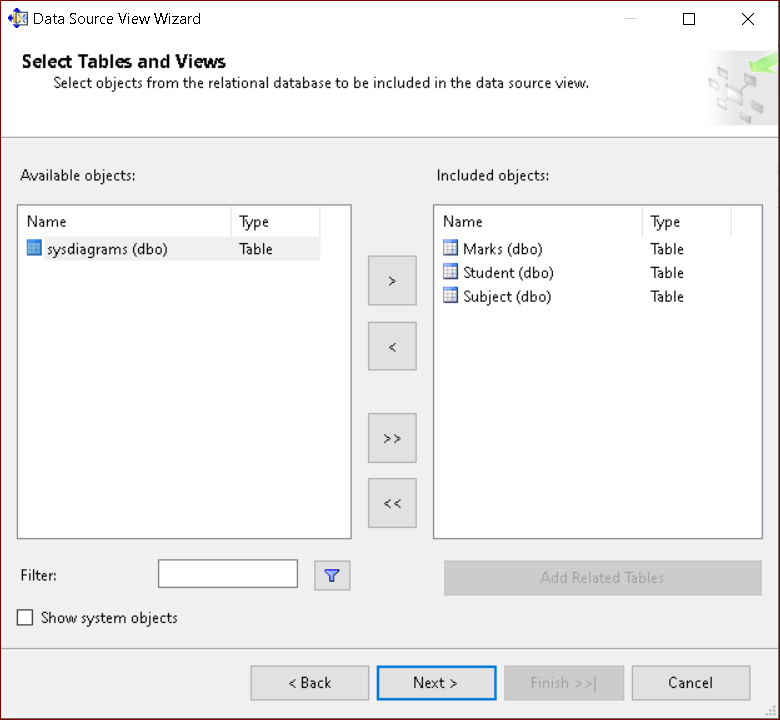
**Click on Next.**

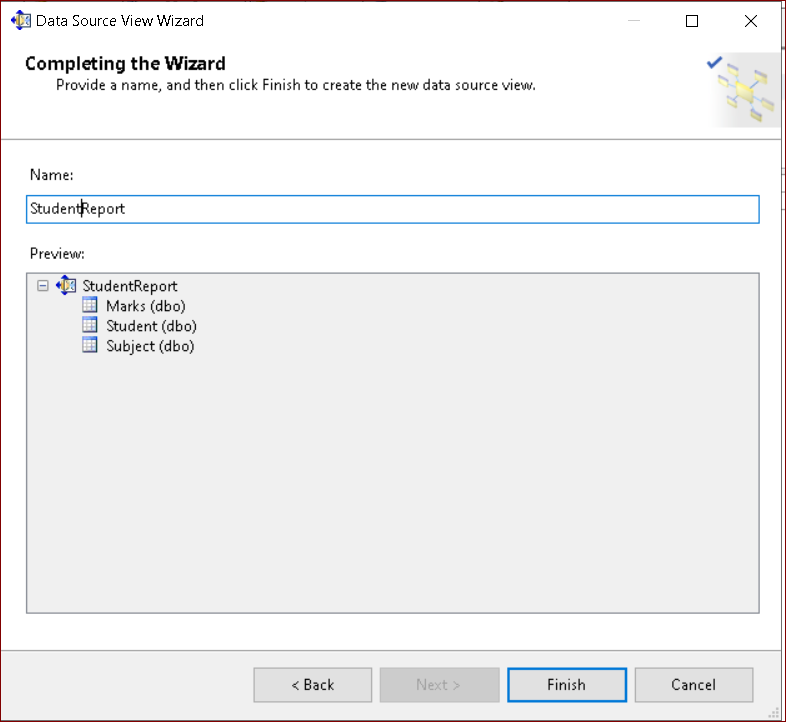
1. **Click on Next.**



1. **Select Tables and Views.**

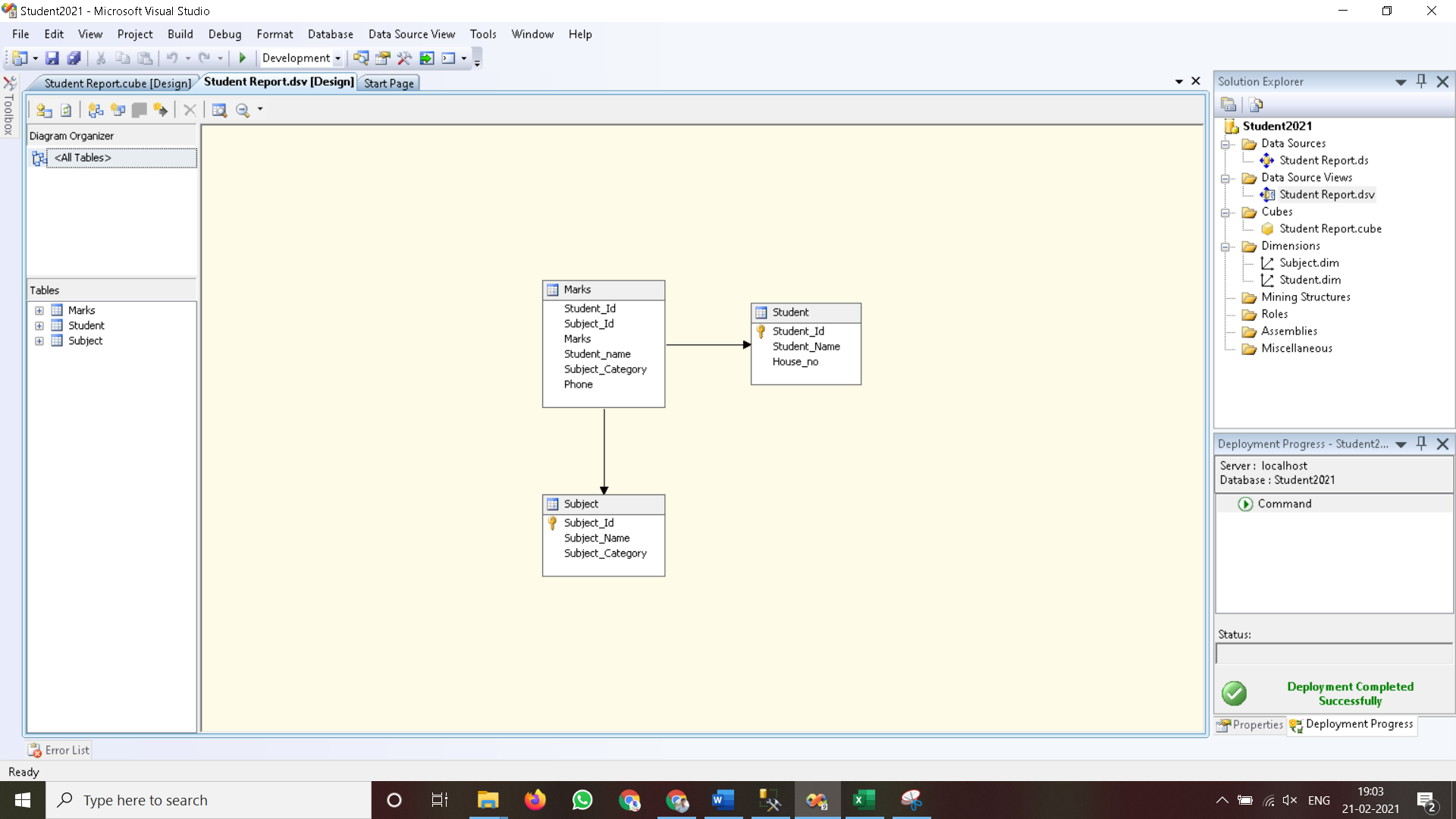






**Name as “Student Report”. Click on Finish.**

1. **Finally, we will get the Data Source View like :**

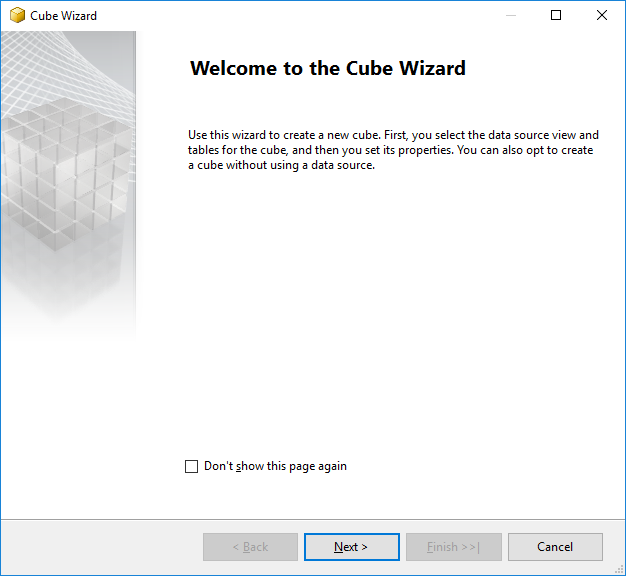


**Practical No 4**

**Aim: Create cube using SSAS (SQL Server Analysis Services.) and process the cube.**

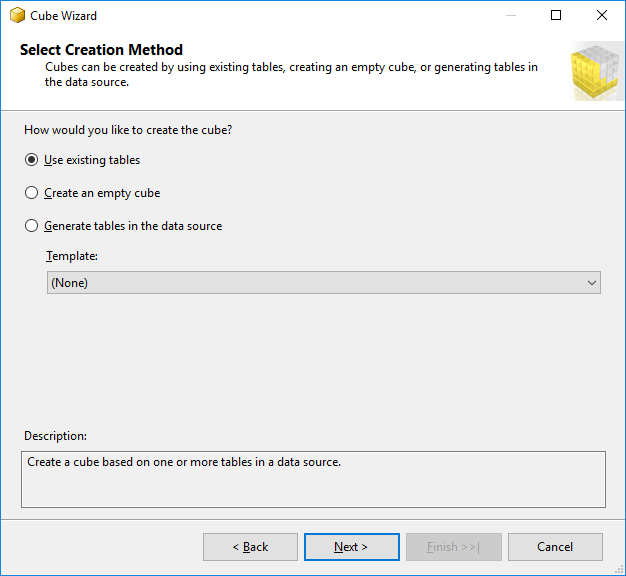
**Solution:**

1. **Right click on Cubes -> New Cube.**

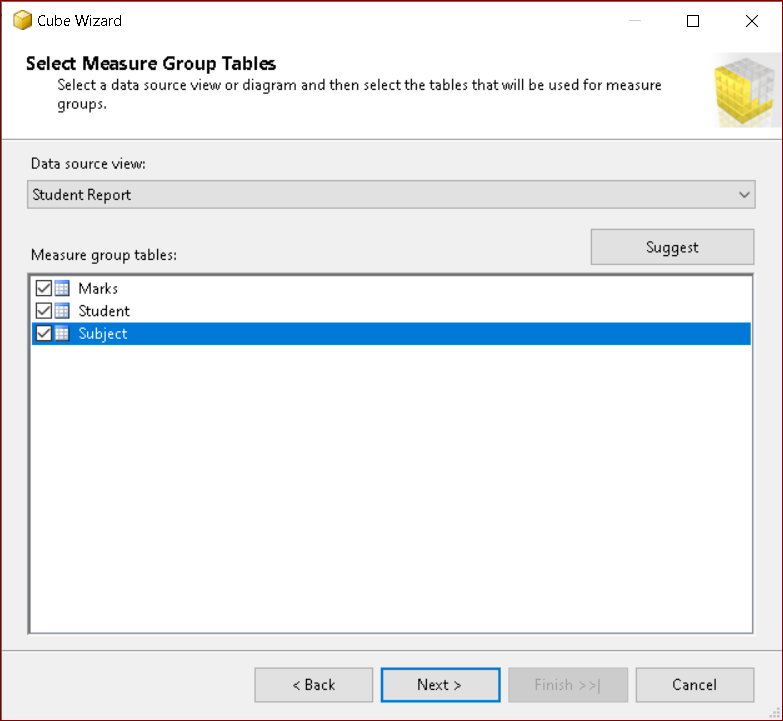


**Click on Next.**

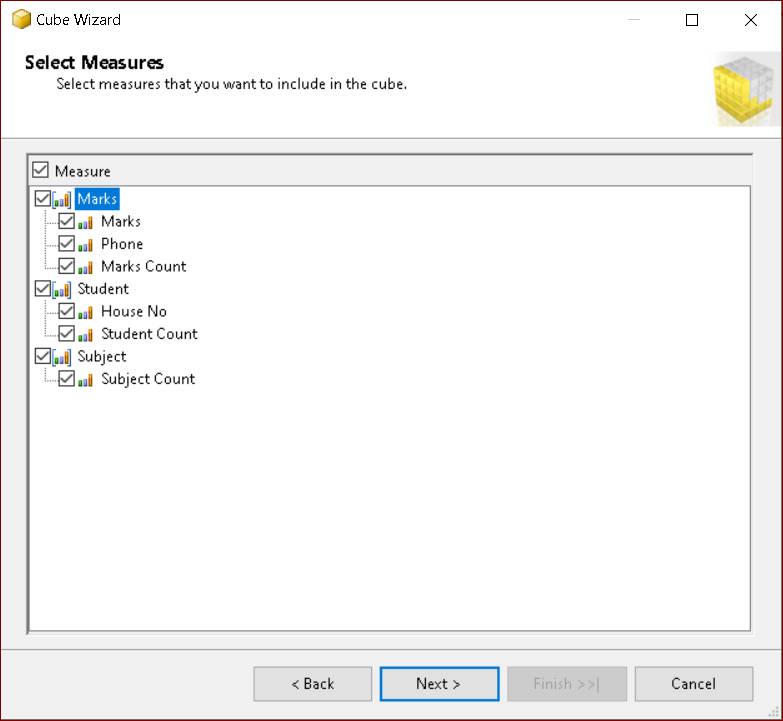
1. **Select First option “Use existing tables”. Click on Next.**



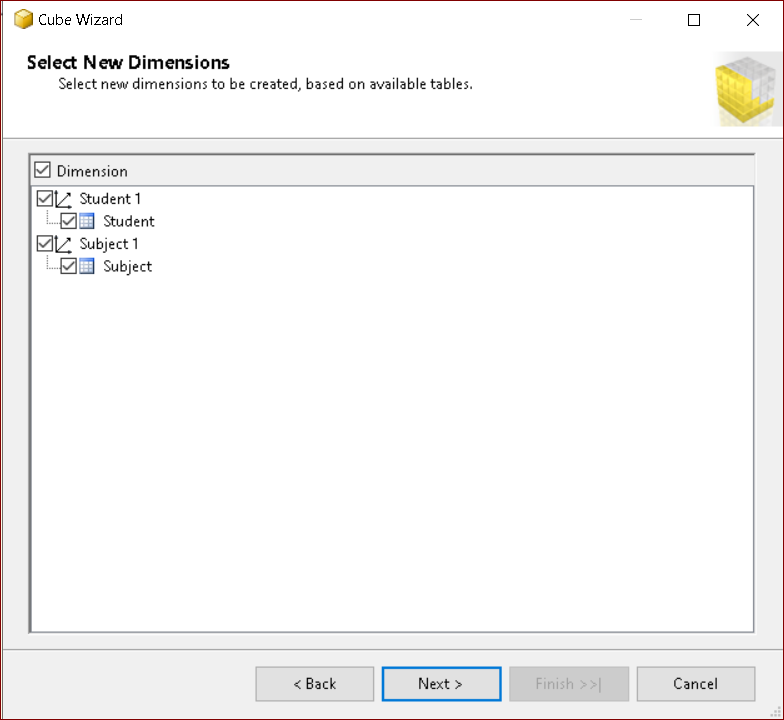
1. **Select Data Source View as “Student Report” and Select all the tables.**



**Click on Next.**

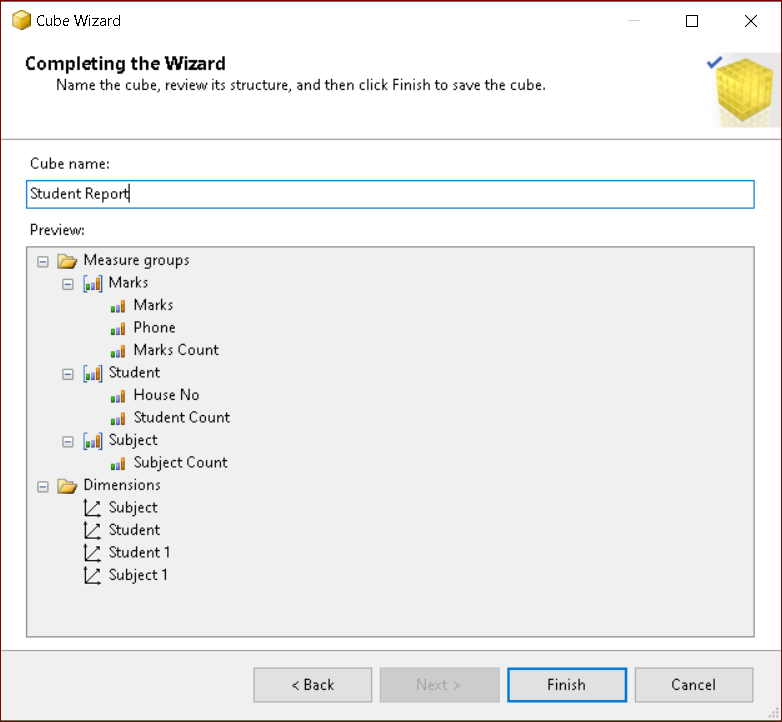


**Click on Next.**



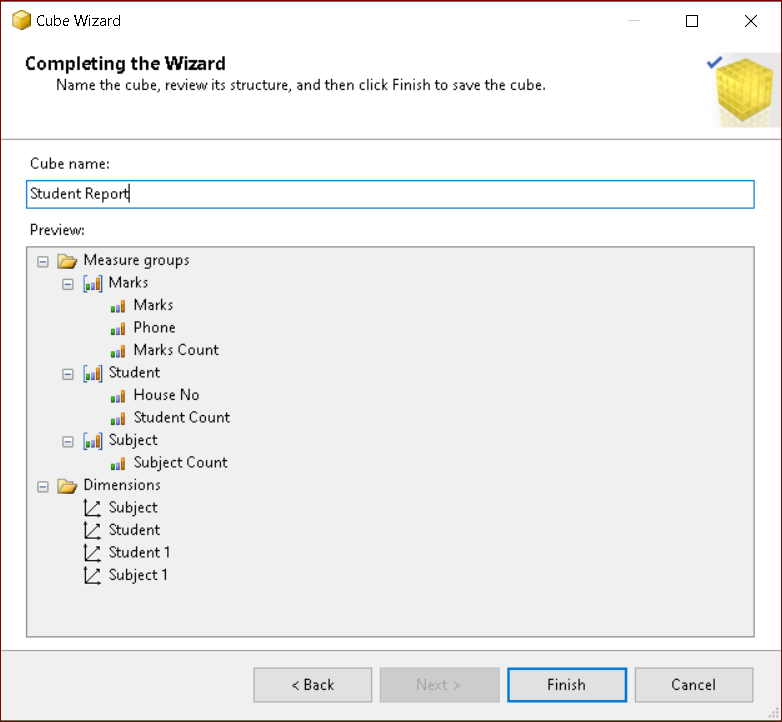
**Click on Next.**

1. **Name Cube as “Student Report”.**

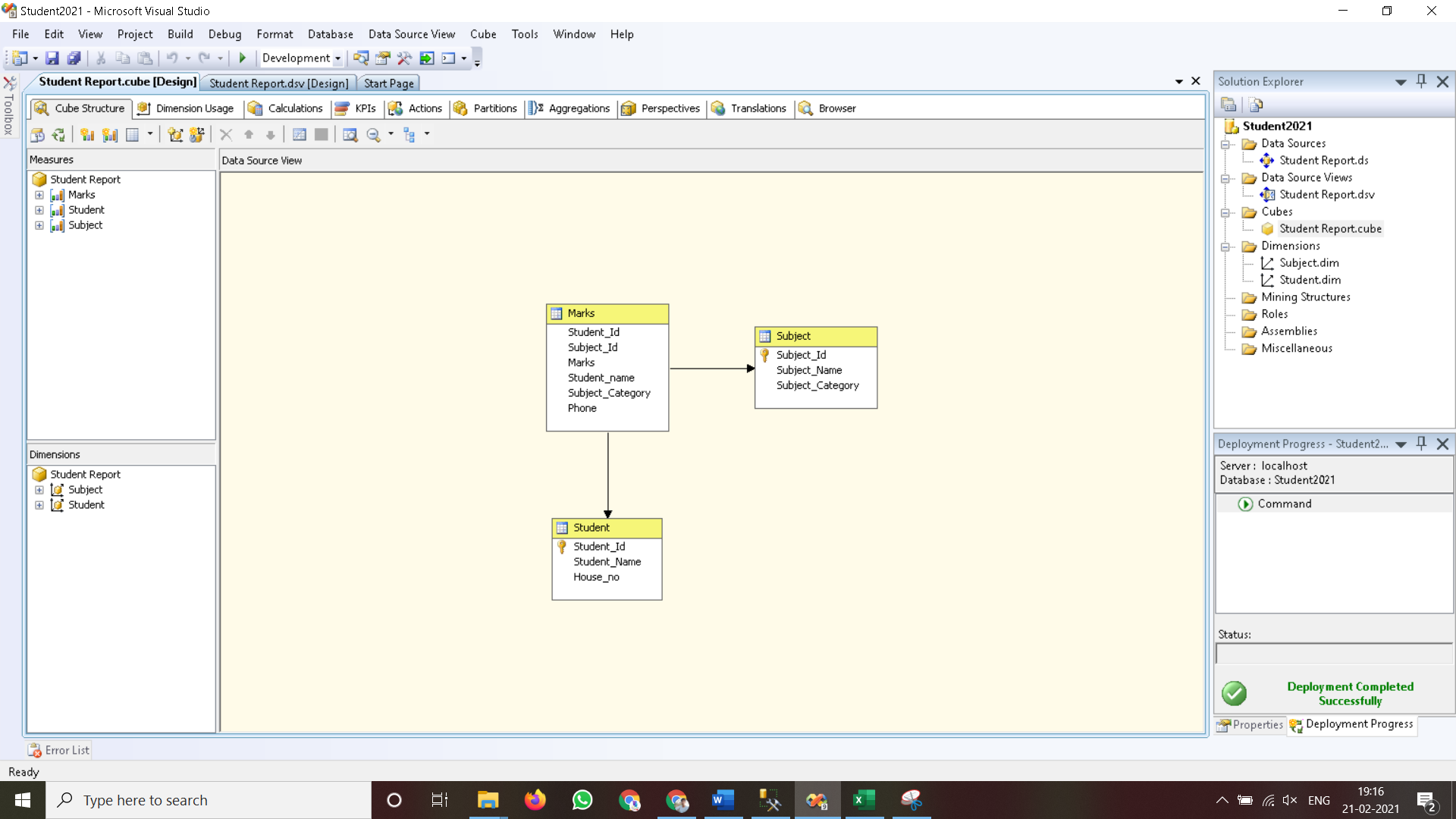


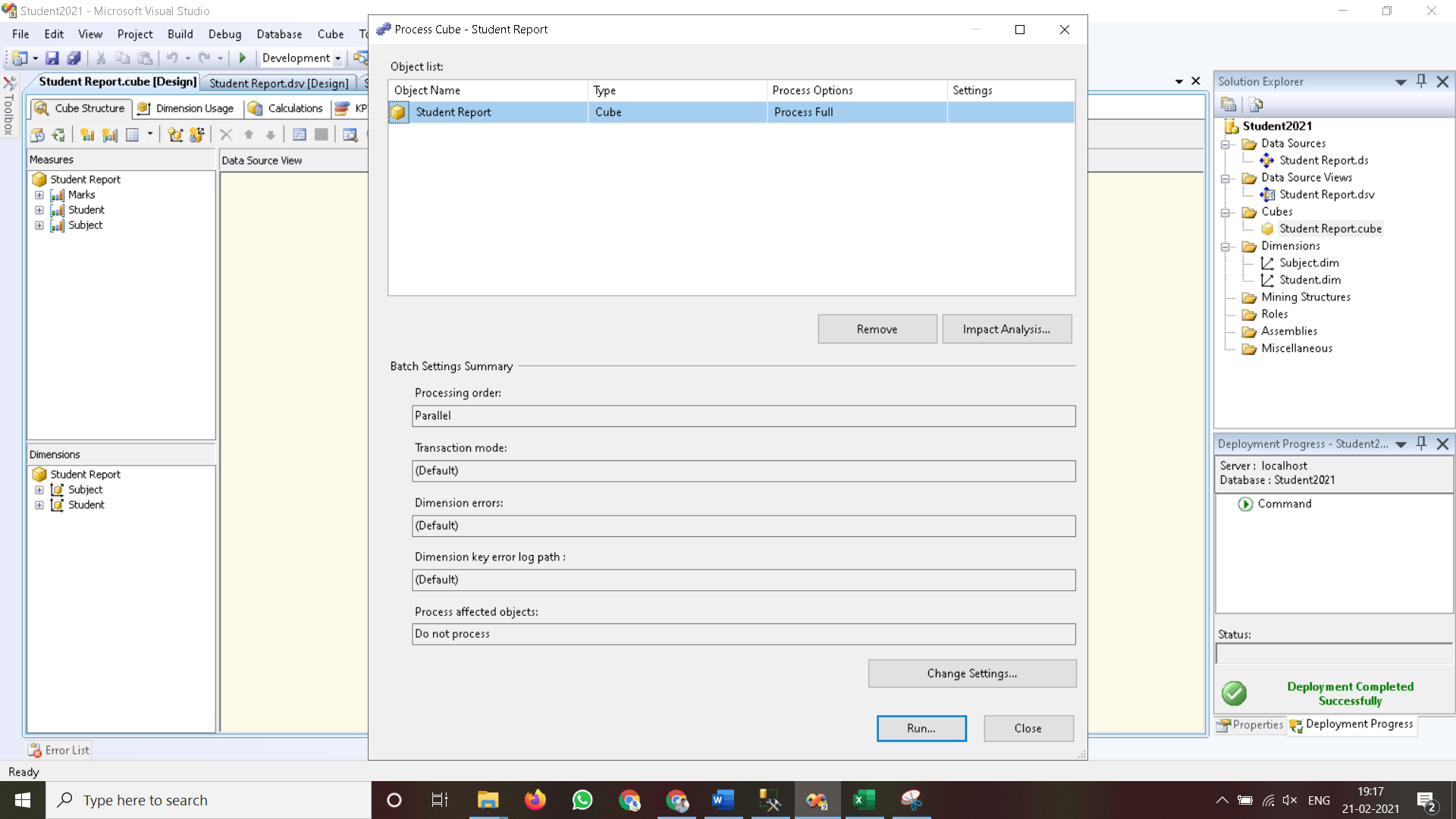
**Click on Finish.**

1. **Finally, we will get the Cube View as well Dimensions View like :**

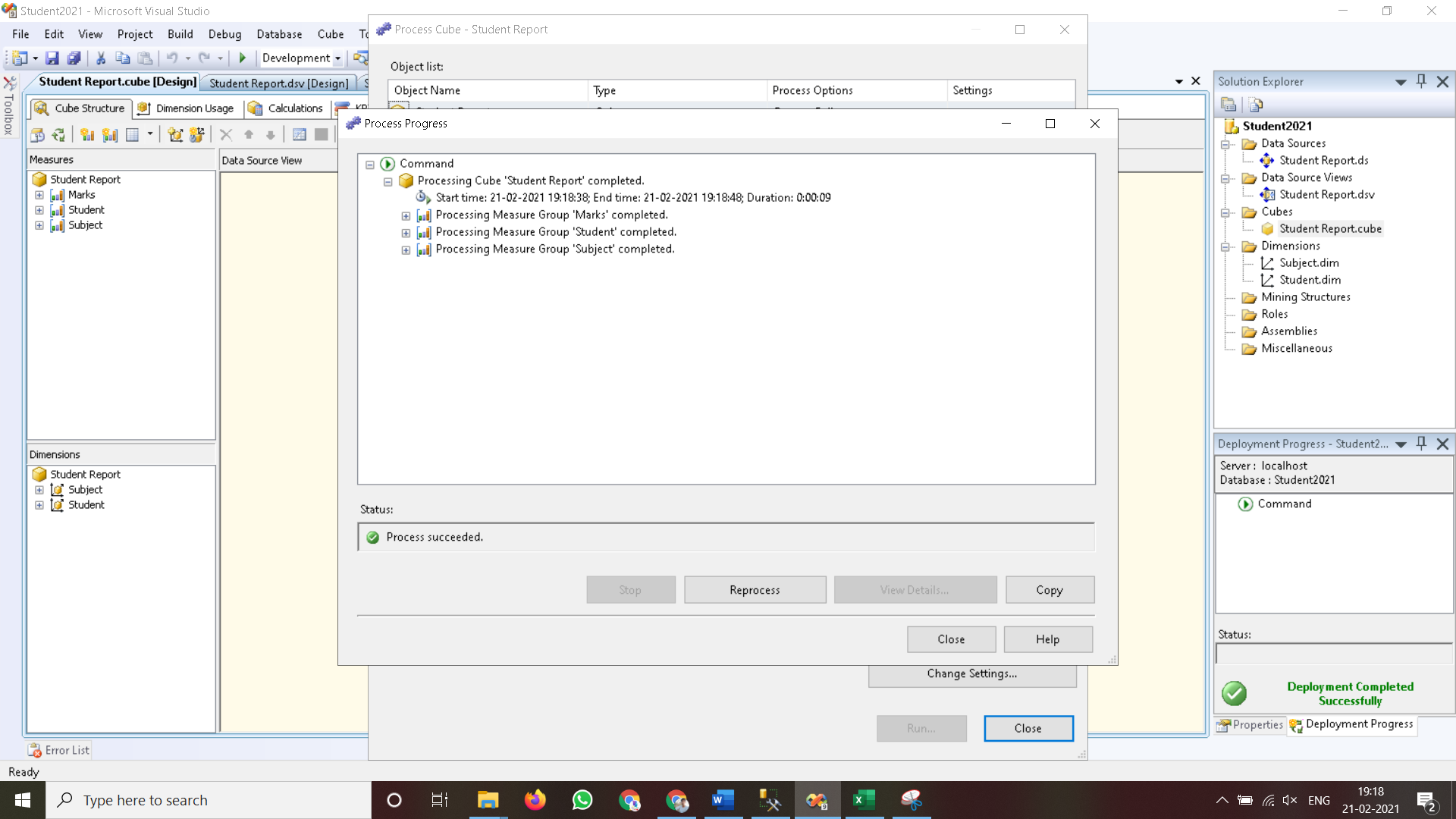


1. **Finally, Process cube by Right click on “Student Report” -> Process.**





1. **Click on Run.**

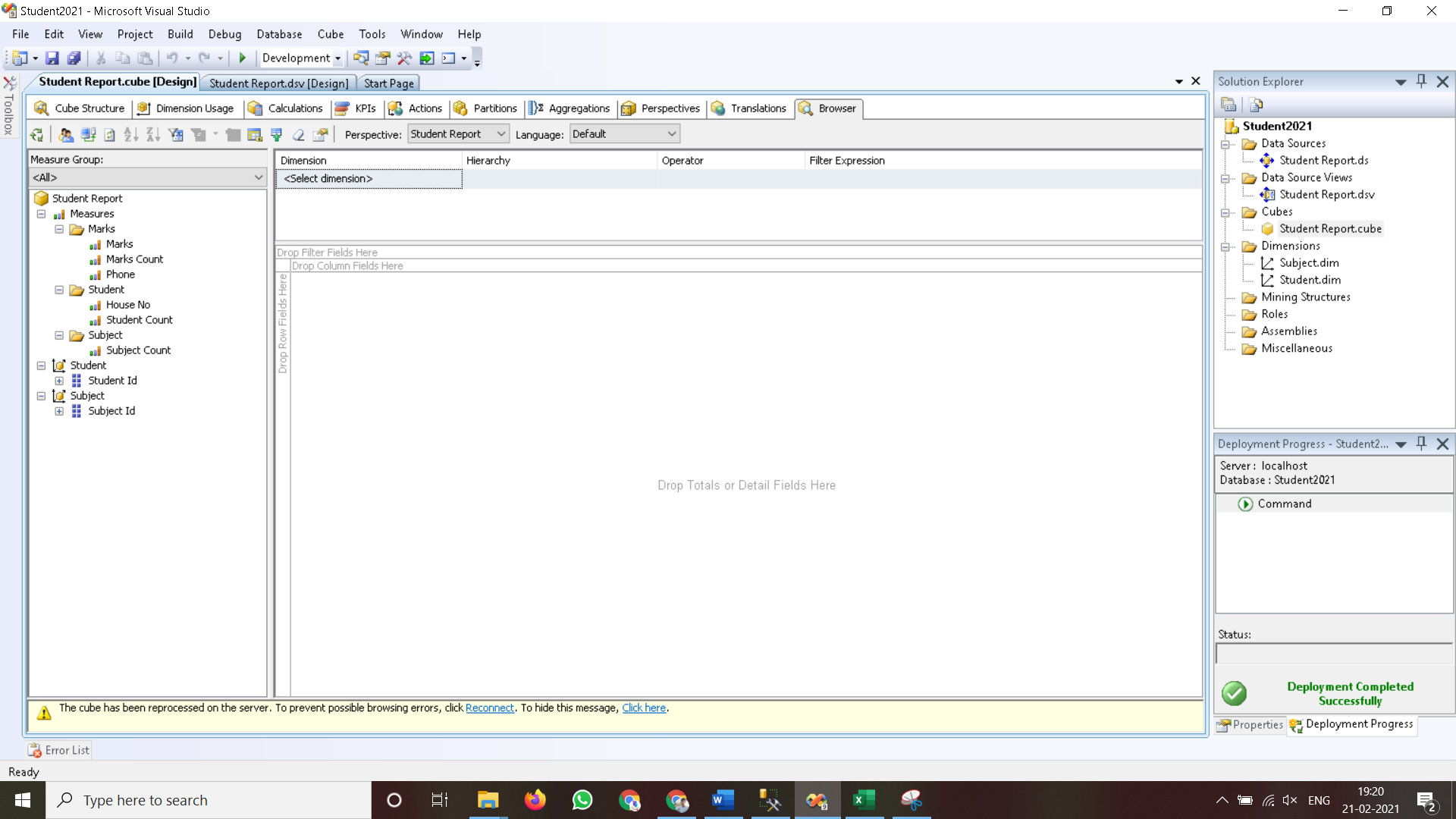


**Practical No 5**

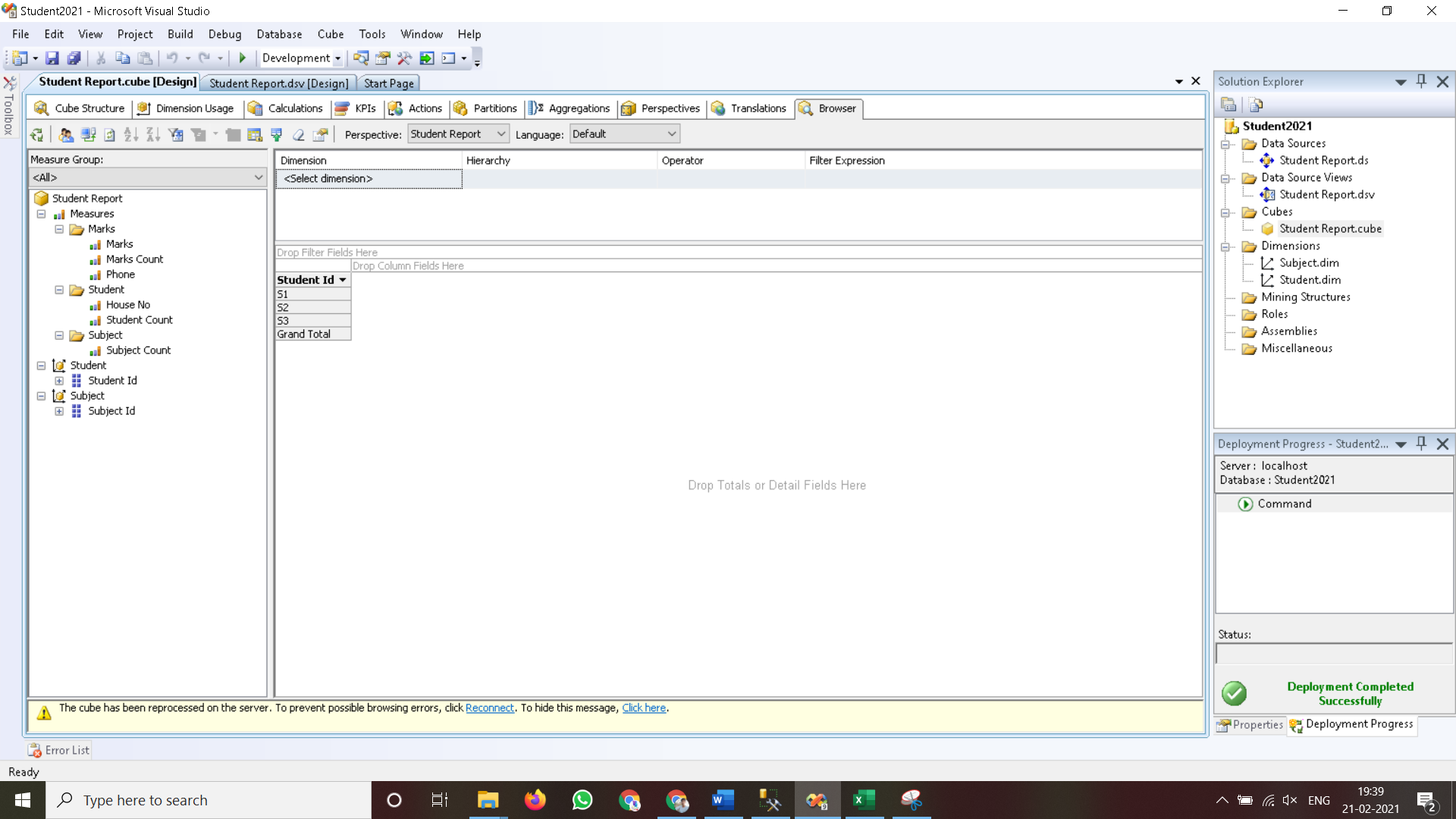
**Aim: View cube data in multidimensional Format.**

**Solution:**

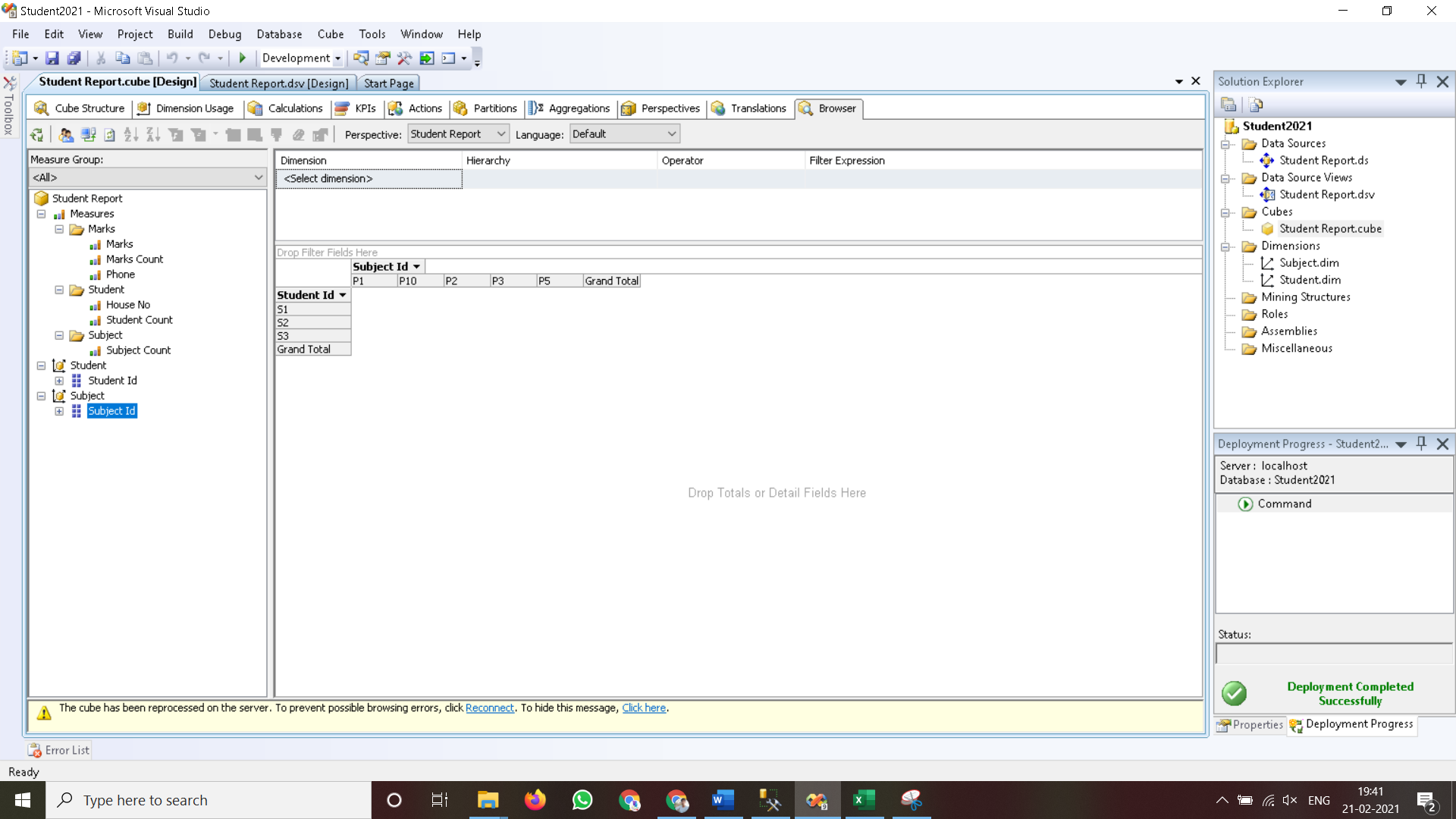
1. **Double Click on “Student Report”. Go to the “Browser” Tab.**



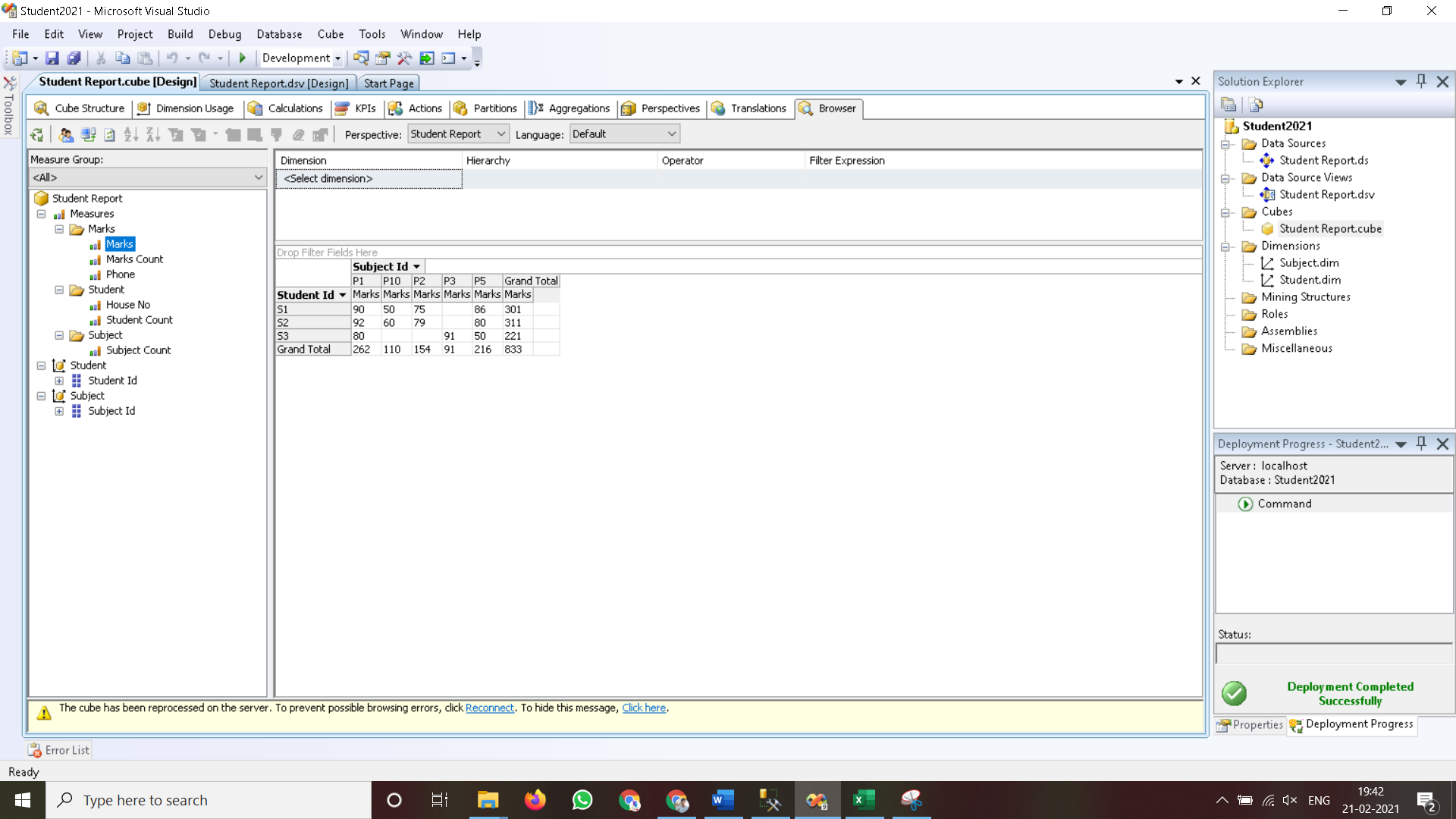
1. **Go to the “Student Dimension”. Right Click on ‘Student\_Id’ -> Add to Row Area.**



1. **Go to the “Subject Dimension”. Right Click on ‘Subject\_Id’ -> Add to Column Area.**



1. **Go to ‘Measures’. Select ‘Marks’ -> Right Click on “Marks” -> Add to Data area.**

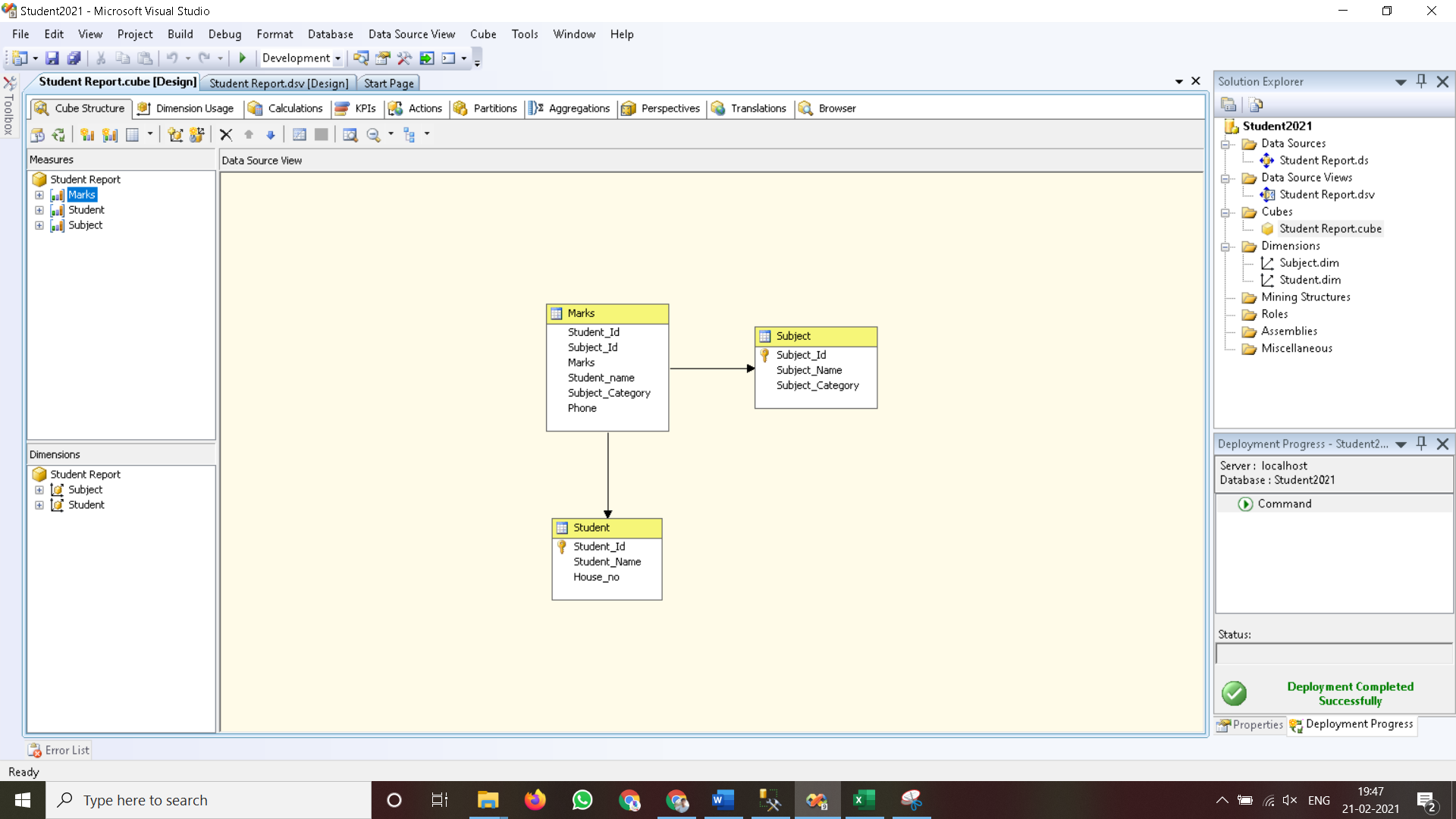


**Practical No 6**

**Aim : Working with measures in the cube.**

**Solution :**

1. **Double click on ‘Student Report’. Go to cube structure.**



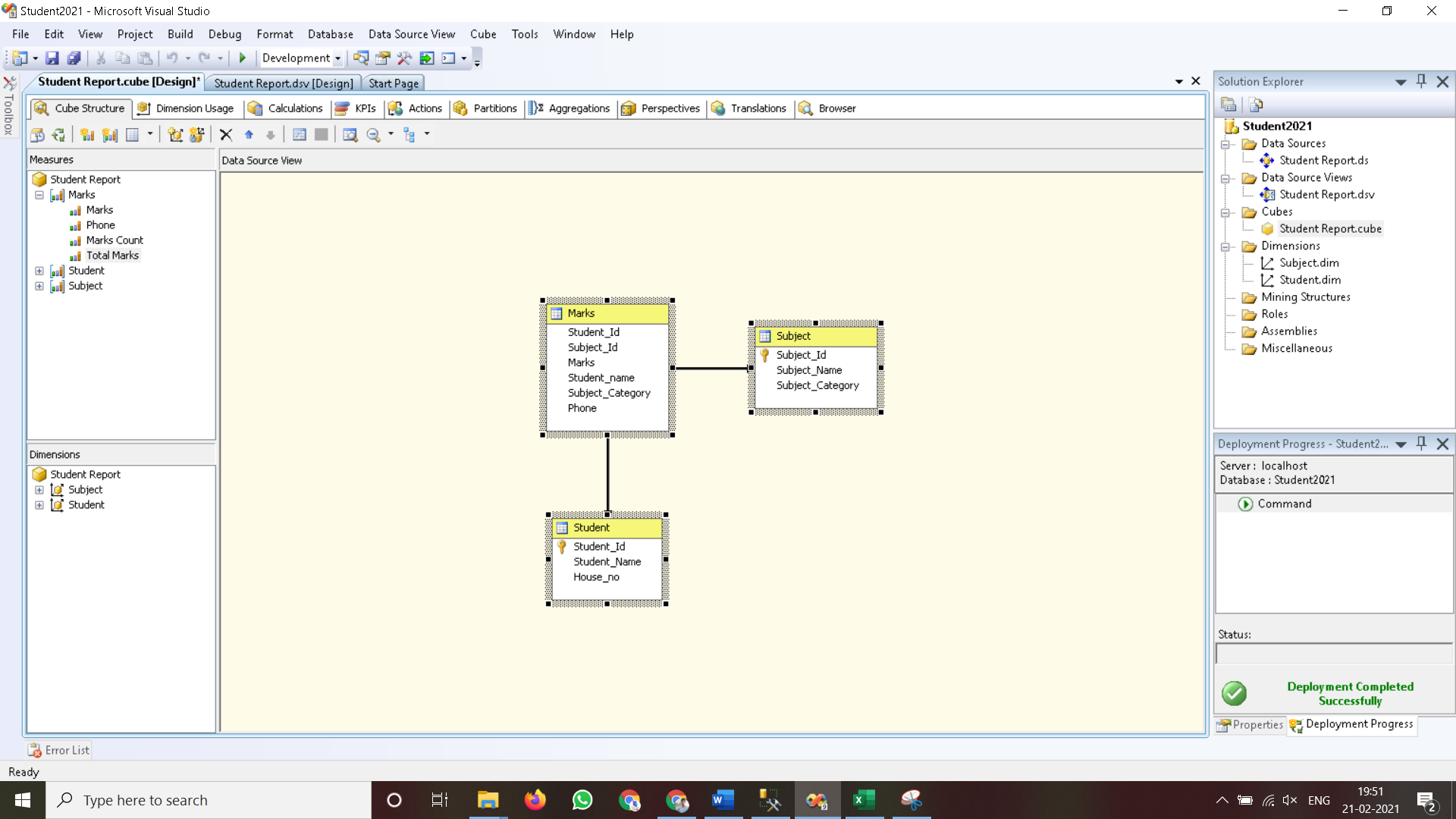
1. **Right click on ‘Marks’ -> New Measure.**

**Select Usage = “Sum” , Source table = “Marks” and Source Column = “Marks”.**

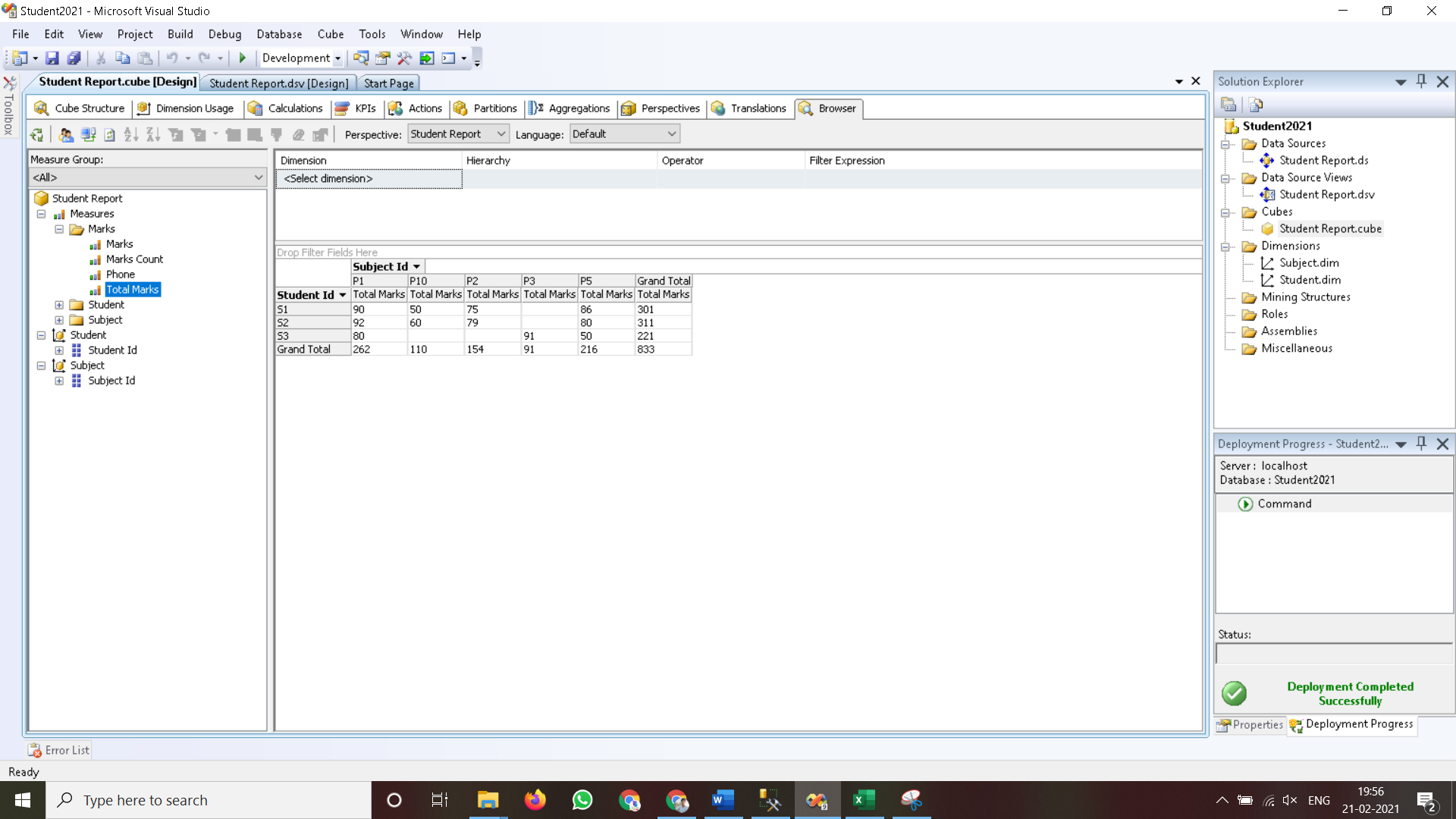


**Click on OK.**

1. **Rename Measure as “Total Marks”.**



1. **Process Cube and Go to Browser and Reconnect it. Right Click on “Total Marks” -> Add to Data Area.**

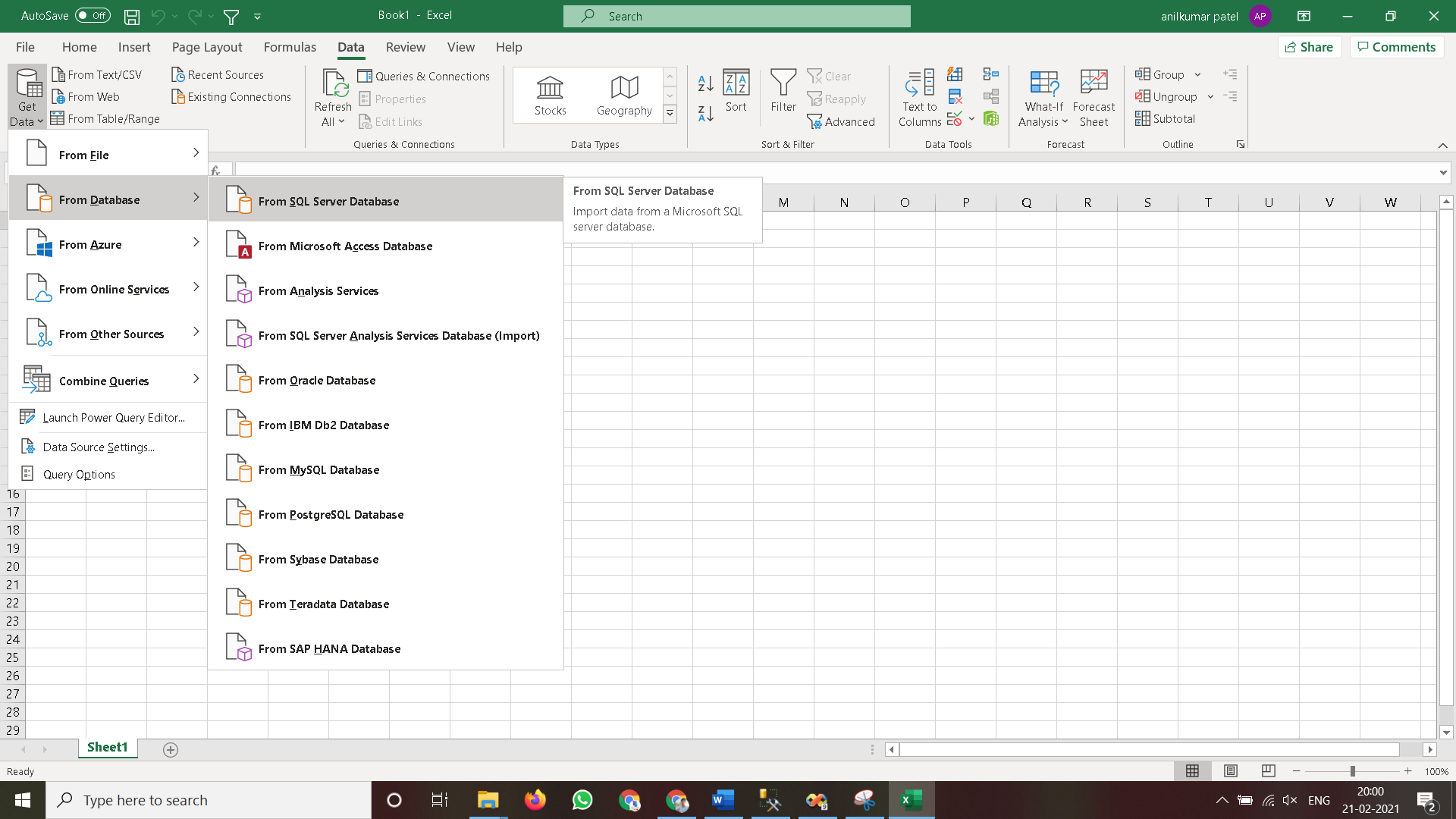


**Practical No 7**

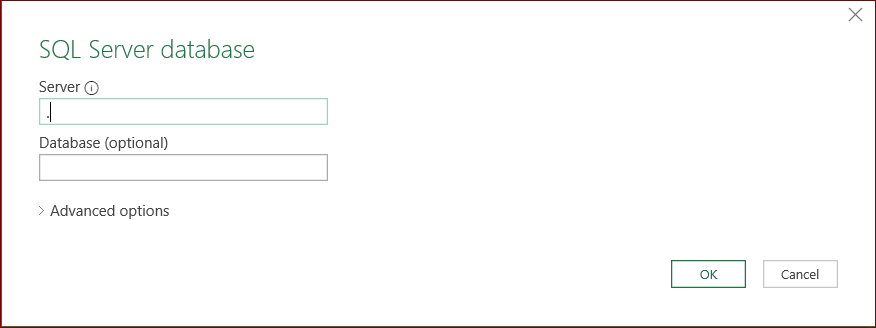
**Aim: Creating an Excel Pivot Table and Pivot Chart by using the OLAP cube data.**

**Solution:**

1. **Open MS-Excel. Click on Data Menu.**
2. **Go to Get Data 🡪 From Database 🡪 From SQL Server Database.**

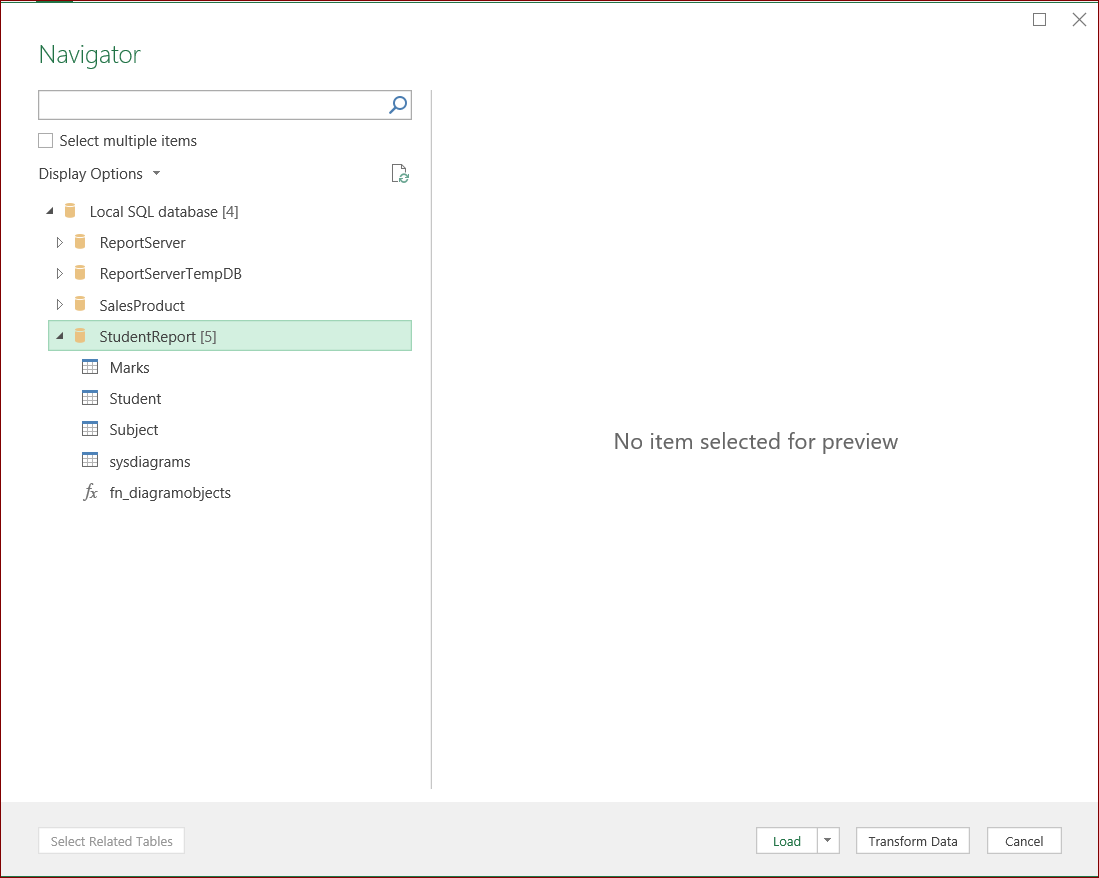


* 1. **From SQL Server -> Type Server name as “.”**



**Click on OK.**

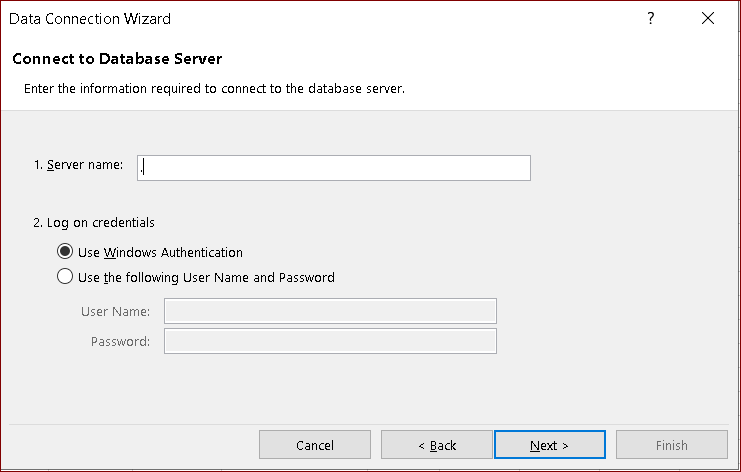
**Choose SQL Database -> “StudentReport”.**



**Click on Load.**

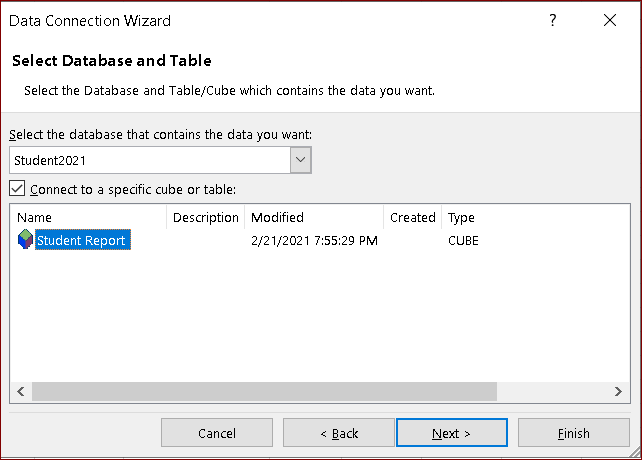
1. **Go to Get Data 🡪 From Database 🡪 From SQL Server Database.**

**Type Server name as “.” & Use Windows Authentication.**

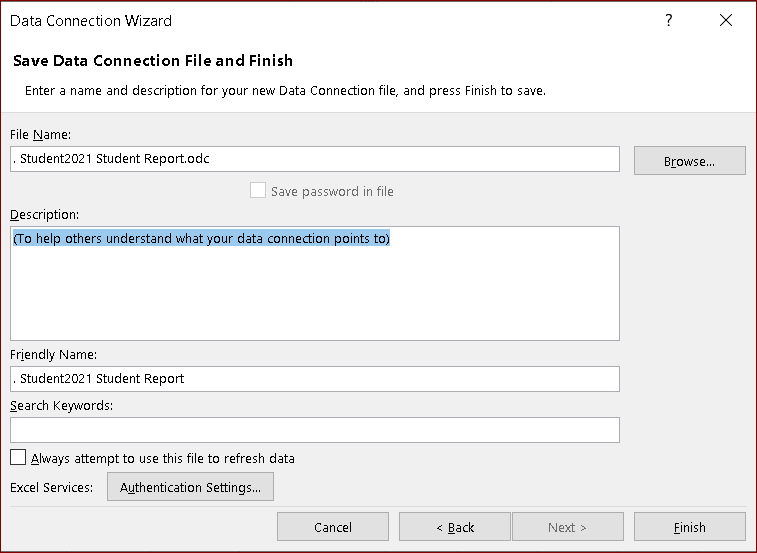


**Click on Next.**

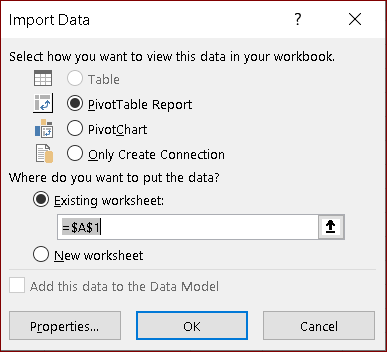
**Choose Analysis Database as “Student2021”. Click on Next.**



**Click on Finish.**

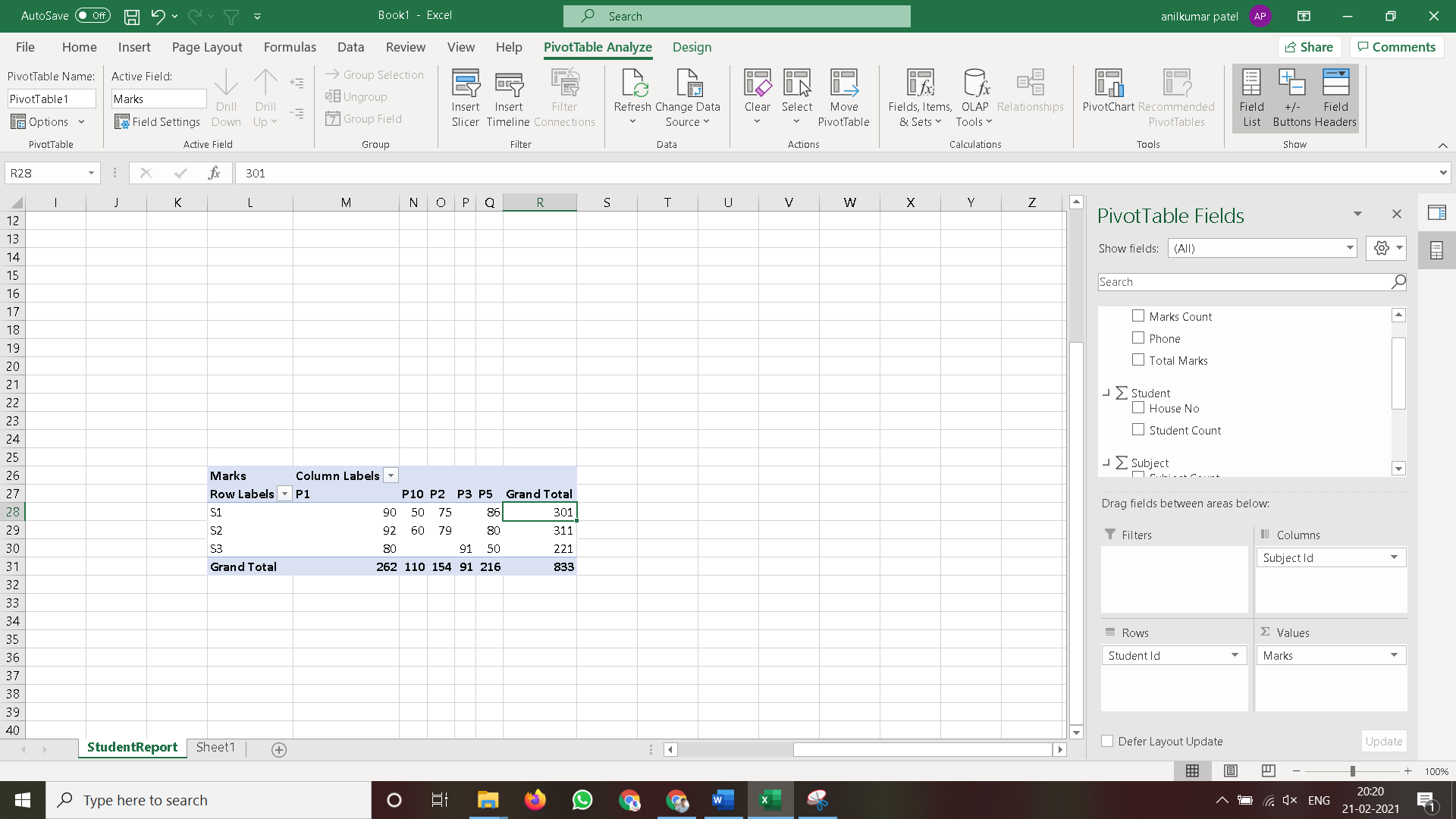


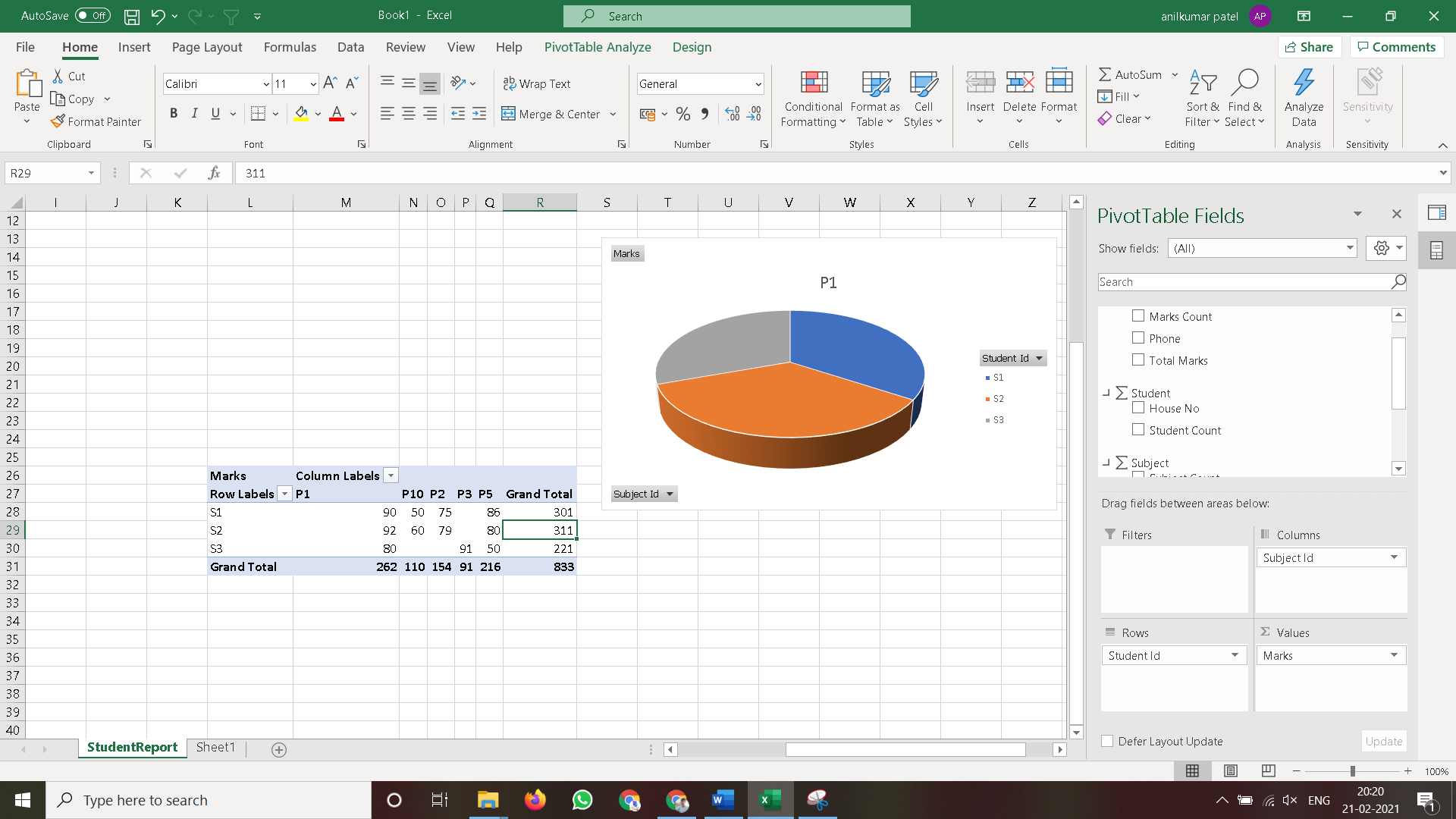
**Click on Finish.**

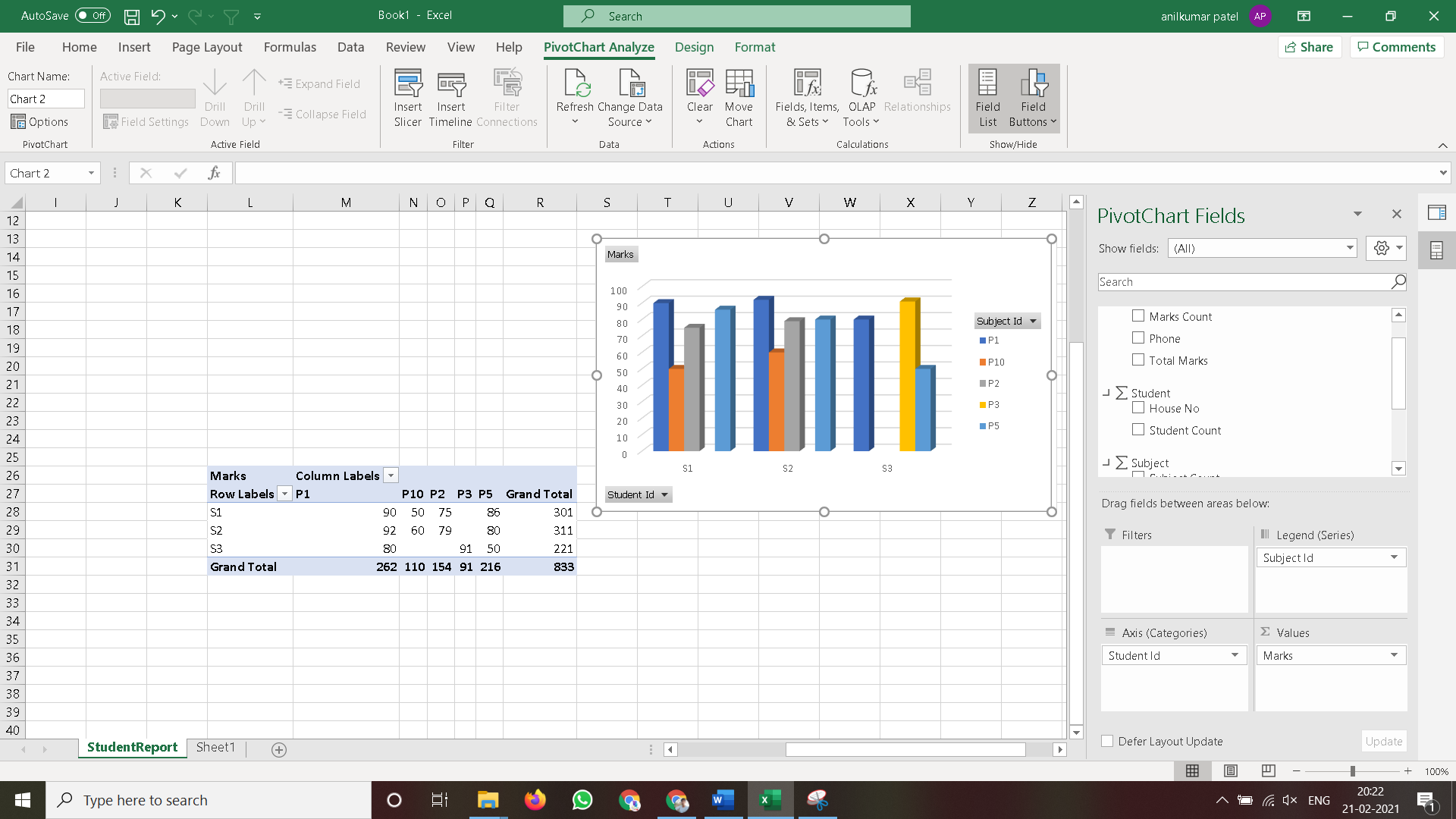


**Click on OK.**

1. **Select PivotTable and Which was created after dragging fields into PivotTable Fields.**



1. **Select Result Area. Go to Insert Menu. Select Pie Chart option.** 
2. **Select Result Area. Go to Insert Menu. Select Column option.**



**Practical No 8**

**Aim: Firing Queries on Tables.**

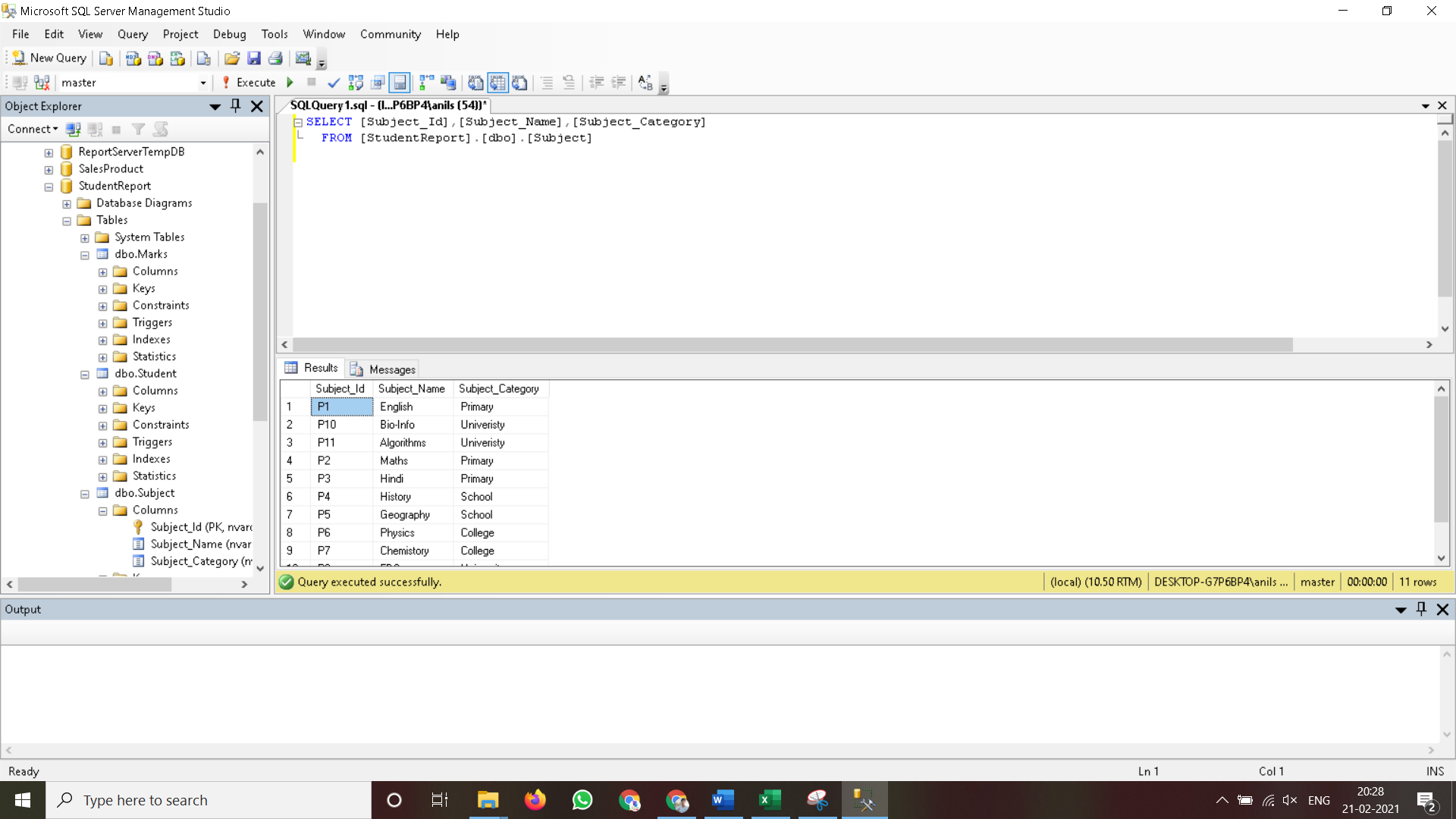
**Solution:**

**Open Application -> Microsoft SQL Server 2008 R2 -> SQL Server Management Studio**

1. **Select Connect Tab -> Database Engine -> Select Server Name(local)**
2. **Expand ‘Database’ -> Expand ‘StudentReport’ -> Expand Tables.**
3. **Fire following queries:**

**3.1.** SELECT [Subject\_Id],[Subject\_Name],[Subject\_Category]

FROM [StudentReport].[dbo].[Subject]



**3.2.** SELECT [Student\_Id],[Student\_Name]

FROM [StudentReport].[dbo].[Student]



**3.3.** SELECT [Student\_Id],[Student\_Name],[Subject\_Id], [Marks], [Subject\_Category] FROM [StudentReport].[dbo].[Marks]

