# 2. SSIS Process

## Create database to import data

* Start Microsoft SQL Server
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  Description automatically generatedCreate database name Resume
* Then, we will import data to the database by using “Import Flat File” option

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* Browse to your data directory

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## 2.2 Create SSIS project

* After creating database, then we create a SSIS project in Visual Studio
* Click on “Integration Service Project” to create a SSIS project

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* In the “Project name” field, type your project name

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* We will have a screen like below . After that, choose “Data flow” tab, then drag the “Flat File Source” option to the Data Flow window

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* Right click on the “Flat File Source”, choose “Edit” option and browse to your data directory

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* Add “Multicast”, “OLE DB Destination” and “Sort” to the “Data Flow” window, then connect them (note: the number of them is dependent on your data)

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* Use “OLE DB Destination” to define Fact and Dimension tables based on your data

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* Right click on “Sort”, then choose the attribute that you want to sort by. For example, I chose sort for Job\_Dim, so I chose job\_ad\_id to sort the table by that job\_ad\_id attribute. Ater that, click on “Remove rows with duplicate sort value” to remove duplicate value, then click on OK

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* Click on a “OLE DB Destination”, choose “Edit” option. Click on “New”, it will show a window. Click on “New” button, another window will pop up .In the Provider filed, choose the option like in the image below, type in your SQL Server Name to the “Server Name” field, then choose the database we created in the previous steps. Click on OK

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* Then, you will be brough back to the “OLE DB Destination Editor”. Click on New (second button) to create table, in this case, I am creating table for Job\_Dim. Then Click on “Mapping option” to see if the table was created successfully. Do the same for the remaining tables

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* After creating all the tables, it will look like this, then those table will be created in the SQL Server

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* Click “Run” button to see if the data is imported successfully

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## 2.3 Create Foreign Key and Primary Key

* When we created tables in 2.2, we also set primary key for those tables, so we don’t need to do it anymore.
* To add foreign key for the tables, we use Foreign Key constraint in SQL Server

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# 3. SSAS Process

## 3.1 Create Cube

* Create a new project with Visual Studio and choose “Analysis Services Multidimensional Project”

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* In the “Solution Explorer”, right click on “Data Sources” and choose “New Data Source”. Then click on “Next” button in “Data Source Wizard” window. After that, choose “New”

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* In the “Connection Manager” window, config the setting like the image below (in “Server Name” and “Database” fields, alternate with your server name and database name)

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* After establishing a connection to the database, then, click on “Next” button in “Data Source Wizard” window. After that, create a username and password to login into SSAS, then click on finish

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* Then we will create a Data Source View by clicking on it and choose “New Data Source View”. In the “Data Source View Wizard”, click on Next

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* Then choose your data source and click on “Next” button

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* Now, we add all the tables in the data source, then click on “Next”

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* Preview the tables one more time and click on “Finish” button

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* Then, click on Cubes and choose “New Cube” to create Cube

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* In Cube Wizard, click on “Next”, then we choose Fact table as Measures, click on “Next”

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* Now, we choose Dimensions, then click on “Next”

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* Preview Measure and Dimensions one more time

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* We will have a Cube Structure like the image below

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* You can add more attributes to a dimension by dragging arbitrary attribute from Data Source view (right side) to Dimension structure (right side)

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* Now, click on Start button to deploy it

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* Now right click on the cube and choose “Process” to process it

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* Main screen of SSAS

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## 3.2 SSAS Query

Question 1. Which combination of job requirements (communication skills, education, experience, computer skills, etc.) has the highest callback rate per type of job ?

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Question 2. Is there a significant difference in callback rates based on race, gender, and resume quality combined per type of job?

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Question 3. Are there any particular job industries or types that have a higher likelihood of having employment holes in

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Question 4. How does the presence of certain special skills impact the likelihood of being called back for different job types ?

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Question 5. Are there any notable differences in callback rates for applicants with volunteer or military experience compared to those without?

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Question 6. Is there a correlation between resume quality and the likelihood of receiving a call back?

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Question 7. What factors contribute to a high-quality resume?

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Question 8. Is there a disparity in callback rates based on "race" and "gender"?

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Question 9. Is there any correlation between the level of computer skills required and the job industry? Do certain industries tend to require more computer skills?

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Question 10. Do applicants with higher levels of education tend to have higher resume quality?

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