MSBI AND SQL TRAINING: COMBO COURSE

About Intellipaat

Intellipaat is a global online professional training provider. We are offering some of the most updated, industry-designed certification training programs in the domains of Big Data, Data Science & AI, Business Intelligence, Cloud, Blockchain, Database, Programming, Testing, SAP and 150 more technologies.

We help professionals make the right career decisions, choose the trainers with over a decade of industry experience, provide extensive hands-on projects, rigorously evaluate learner progress and offer industry-recognized certifications. We also assist corporate clients to upskill their workforce and keep them in sync with the changing technology and digital landscape.

About The Course

Our MSBI and SQL certification master's program lets you gain proficiency in Microsoft Business Intelligence. You will work on real-world industry projects pertaining to the three components of MSBI—viz., SSIS for ETL, SSAS for analysis, and SSRS for reporting—along with data mining queries, Visual Studio, SQL Server, OLAP, generating Cubes, data sources, and converting raw data into business insights. As part of this online classroom training, you will also receive the official course material issued by Microsoft for 'Analyzing Data with SQL Server Reporting Services' and 'Querying Data with Transact-SQL'.

Instructor Led Training
46 Hrs of highly interactive instructor led training

Self-Paced Training
46 Hrs of Self-Paced sessions with Lifetime access

Exercise and project work
92 Hrs of real-time projects after every module

Lifetime Access
Lifetime access and free upgrade to latest version

Support
Lifetime 24*7 technical support and query resolution

Get Certified
Get global industry recognized certifications

Job Assistance
Job assistance through 80+ corporate tie-ups

Flexi Scheduling
Attend multiple batches for lifetime & stay updated.

Why take this Course?

MSBI is a powerful Business Intelligence tool that is used by enterprises across the board for quick decision-making, coming up with in-depth reporting, and deriving meaningful insights. This combo training course will provide you the right wherewithal to work on critical projects that need extensive knowledge of SSAS, SSIS, and SSRS. This can open the doors to high-paying jobs in the best companies.

MSBI SSIS Course Content

1. What is BI?

2. ETL Overview

3. Working with Connection Managers

4. Data Transformations

5. Advance Data Transformation

6. Slowly Changing Dimensions

7. Overview of Fuzzy Look-up Transformation and Lookup and Term Extraction

8. Concepts of Logging & Configuration

MSBI SSRS Course Content

1. Introduction to SSRS

2. Matrix and Tablix Overview

3. Parameters and Expression

4. Reports and Charts creation

5. Dashboard Building

6. Reports and Authenticity

MSBI SSAS Course Content

1. Getting started with SSAS

2. Structures and Processes

3. Type of Database Relationship

4. SSAS Cube

5. Cube: Operations & Limitations

6. Cube and In-memory Analytics

7. Data Source View

8. Dimensions

9. Measures & Features of Cube

10. Measures and Features of Cube Cont.

11. Working with MDX

12. Functions of MDX

13. DAX language

14. BI Semantic Model

15. Plan and deploy SSAS

16. Analyzing Big Data with Microsoft R

SQL Course Content

1. Introduction to SQL

2. SQL Operators

3. Working with SQL: Join, Tables, and Variables

4. Deep Dive into SQL Functions

5. Working with Subqueries

What is BI?

❖ Introduction to Business Intelligence

❖ Understanding the concept of Data Modeling

❖ Data Cleaning, learning about Data Analysis

❖ Data Representation, Data Transformation.

ETL Overview

- ❖ Introduction to ETL, the various steps involved Extract

- ❖ Transform, Load, using a user's email ID to read a flat file

- ❖ Extracting the User ID from email ID

- ❖ Loading the data into a database table.

Working with Connection Managers

- ❖ Introduction to Connection Managers – logical representation of a connection,

- ❖ The various types of Connection Managers – Flat file, database,

- ❖ Understanding how to load faster with OLE DB,

- ❖ Comparing the performance of OLE DB and ADO.net, learning about Bulk

  Insert,

- ❖ Working with Excel Connection Managers and identifying the problems.

Data Transformations

- ❖ Learning what is Data Transformation

- ❖ Converting data from one format to another

- ❖ Understanding the concepts of Character Map, Data Column and Copy

  Column Transformation, import and export column transformation, script and

  OLEDB Command Transformation

- ❖ Understanding row sampling, aggregate and sort transformation, percentage

  and row sampling.

Advance Data Transformation

❖ Understanding Pivot and UnPivot Transformation

❖ Understanding Audit and Row Count Transformation

❖ Working with Split and Join Transformation

❖ Studying Lookup and Cache Transformation

❖ Integrating with Azure Analysis Services, elastic nature of MSBI to integrate

with the Azure cloud service, scale out deployment option for MSBI

❖ Working with cloud-borne data sources and query analysis.

❖ Scaling out the SSIS package, deploying for tighter windows, working with

larger amount of data sources

❖ SQL Server Next for enhancing SQL Server features, more choice of

development languages and data types both on premise and in the cloud.

Slowly Changing Dimensions

❖ Understanding data that slowly changes over time

❖ Learning the process of how new data is written over old data, best practices.

❖ Detail explanation of three types of SCDs –Type1, Type2 and Type3, and their

differences.

Overview of Fuzzy Look-up Transformation and Lookup and Term Extraction

❖ Understanding how Fuzzy Lookup Transformation varies from Lookup Transformation, the concept of Fuzzy matching,

Concepts of Logging & Configuration

❖ Learning about error rows configuration, package logging, defining package configuration, understanding constraints and event handlers.

MSBI SSRS Course Content

Introduction to SSRS

❖ Get introduced to the SSRS Architecture

❖ Components of SSRS Report Building tool

❖ Learning about the data flow in different components.

Matrix and Tablix Overview

❖ Understanding the concepts of Matrix and Tablix

❖ Working with Text Box, learning about formatting, row/column grouping

❖ Understanding sorting, formatting

❖ Concepts of Header, Footer, Totals, Subtotals and Page Breaks.

Parameters and Expression

❖ Learning about Parameters, filter and visibility expression, understanding drill-through and drill-down, defining variables, custom code.

Reports and Charts creation

❖ Introduction to various aspects of Bar Chart, Line Chart, Combination Chart, Shape Chart, Sub Reports

❖ Integration of Power Query and M language with SSRS

❖ Working with additional data sources in MSBI

❖ Rich transformation capabilities addition to MSBI, reusing M functions build for PBIX in SSRS.

Dashboard Building

❖ Learn how to build a Dashboard with Sparklines, Data Bars, Map Charts, Gauge Charts and drilling into reports, the basics of ad hoc reporting.

❖ Data Bar, Sparkline, Indicator, Gauge Chart, Map Chart, Report Drilling, What is Ad hoc reporting?

Reports and Authenticity

❖ Understanding Report Cache, Authorization, Authentication and Report Snapshot

❖ Learning about Subscriptions and Site Security.

Getting started with SSAS

- ❖ Understanding the concept of multidimensional analysis

- ❖ Understanding SSAS Architecture and benefits

- ❖ Learn what is Cube, working with Tables and OLAP databases

- ❖ Understanding the concept of Data Sources, working with Dimension Wizard

- ❖ Understanding Dimension Structure, Attribute Relationships, flexible and rigid

  relationship.

Structures and Processes

- ❖ Learning about Process Dimension, the Process database, creation of Cube,

- ❖ Understanding Cube Structure, Cube browsing, defining the various categories,

  Product Key and Customer Key, Column Naming, processing and deploying a

  Cube, Report creation with a Cube.

Type of Database Relationship

- ❖ Understanding Data Dimensions and its importance

- ❖ The various relationships, regular, referenced, many to many, fact

- ❖ Working on Data Partitions, and Data Aggregations.

SSAS Cube

- ❖ Learning about SSAS Cube

- ❖ The various types of Cubes, the scope of Cube and comparison with Data

  Warehouse.

Cube: Operations & Limitations

❖ The various operations on Cube, the limitations of OLAP Cubes

❖ The architecture of in-memory analytics and its advantages.

Cube and In-memory Analytics

❖ Deploying cube with existing data warehouse capabilities to get self-service business intelligence

❖ Understanding how in-memory analytics works.

Data Source View

❖ Logical model of the schema used by the Cube

❖ Components of Cube, understanding Named Queries and Relationships.

Dimensions

❖ An overview of the Dimensions concept

❖ Describing the Attributes and Attributes Hierarchies

❖ Understanding Key/Value Pairs, Metadata Reload, logical keys and role-based dimensions.

Measures & Features of Cube

❖ Understanding the Measure of Cube

❖ Analyzing the Measure, exploring the relationship between Measure and Measure Group, Cube features and Dimension usage.

Measures and Features of Cube Cont.

❖ Working with Cube Measures, deploying analytics

❖ Understanding the Key Performance Indicators

❖ Deploying actions and drill-through actions on data

❖ Working on data partitions, aggregations, translations and perspectives.

Working with MDX

❖ Understanding Multidimensional Expressions language

❖ Working with MDX queries for data retrieval

❖ Working with Clause, Set, Tuple, Filter condition in MDX.

Functions of MDX

❖ Learning about MDX hierarchies

❖ The functions used in MDX, Ancestor, Ascendant and Descendant function, performing data ordering

DAX language

❖ Data Analysis Expressions (DAX), Using the EVALUATE and CALCULATE functions, filter DAX queries

❖ Create calculated measures, perform data analysis by using DAX

BI Semantic Model

- ❖ Designing and publishing a tabular data model

- ❖ Designing measures relationships, hierarchies, partitions, perspectives, and calculated columns

Plan and deploy SSAS

- ❖ Configuring and maintaining SQL Server Analysis Services (SSAS)

- ❖ Non-Union Memory Architecture (NUMA)

- ❖ Monitoring and optimizing performance

- ❖ SSAS Tabular model with vNext, Excel portability

- ❖ Importing model from Power BI Desktop

- ❖ Importing a Power Pivot model

- ❖ Bidirectional cross-filtering relationship in MSBI.

Analyzing Big Data with Microsoft R

- ❖ Reading data with R Server from SAS, txt, or excel formats

- ❖ Converting data to XDF format; Summarizing data, rxCrossTabs versus rxCube, extracting quantiles by using rxQuantile; Visualizing data (rxSummary and rxCube, rxHistogram and rxLinePlot) Processing data with rxDataStep

- ❖ Performing transforms using functions transformVars and transformEnvir Processing text using RML packages

- ❖ Building predictive models with ScaleR

- ❖ Performing in-database analytics by using SQL Server

Introduction to SQL

❖ Introduction to relational databases

❖ Basic concepts of relational tables

❖ Working with rows and columns

❖ Various operators used like logical and relational, domains, constraints, stored

procedures, indexes, primary key and foreign key

❖ Understanding group functions, unique key

SQL Operators

❖ Introduction to relational databases

❖ Basic concepts of relational tables

❖ Working with rows and columns

❖ Various operators used like logical and relational

❖ Domains, constraints, stored procedures, indexes, primary key and foreign key,

understanding group functions, unique key

Working with SQL: Join, Tables, and Variables

❖ Deep dive into SQL Tables, working with SQL functions, operators and queries

❖ Creation of tables, retrieving data from tables, combining rows from tables

using Inner, Outer, Cross and Self joins

❖ Deploying Operators like Union, Intersect, Except, creation of Temporary Table,

Set Operator rules

❖ Working with Table variables

Deep Dive into SQL Functions

- ❖ Understanding what SQL functions do

- ❖ Aggregate functions, scalar functions, functions that work on different data sets like numbers, characters & strings, dates

- ❖ Learning Inline SQL functions, general functions and duplicate functions

Working with Subqueries

- ❖ Understanding of SQL Subqueries, rules of Subqueries

- ❖ The statements and operators with which Subqueries can be used

- ❖ Modification of sub queries using set clause

- ❖ Understanding the different types of Subqueries – Where, Insert, Update, Select, Delete, etc., ways to create and view sub-queries

SQL Views, Functions, and Stored Procedures

- ❖ Learning about SQL Views, ways of creating, using, altering, dropping, renaming and modifying Views

- ❖ Understanding Stored Procedures, key benefits of it

- ❖ Working with Stored Procedures, error handling, studying user-defined functions

Deep Dive into User-defined Functions

- ❖ Detailed study of user-defined functions

- ❖ Various types of UDFs like Scalar, Inline Table Value, multi-statement Table

- ❖ What are Stored Procedures? when to deploy Stored Procedures? What is Rank Function? Triggers, when to execute Triggers?

SQL Optimization and Performance

- ❖ Detailed understanding of SQL Server Management Studio

- ❖ Learning what is Pivot in Excel and SQL Server, XL path

- ❖ Differentiating between Char, Varchar and NVarchar, working with Indexes

- ❖ Creation of Index, advantages, records grouping, searching, sorting, modifying data, creation of clustered indexes

- ❖ Using index to cover queries, index guidelines and Common Table Expression

Managing Data with Transact-SQL

- ❖ Create Transact SQL Queries

- ❖ Query multiple tables by using joins

- ❖ Implementing functions and aggregate data, modifying data

- ❖ Determining the results of DDL statements on supplied tables and data, and constructing DML statements using OUTPUT statement

Querying Data with Advanced Transact-SQL Components

- ❖ Query data by using subqueries and APPLY

- ❖ Querying data by using table expressions, group and pivot data by using queries

- ❖ Querying temporal data and non-relational data

- ❖ Constructing recursive table expressions to meet business requirements, and using Windowing functions to group and rank the results of a query

Programming Databases Using Transact-SQL

- ❖ Create database programmability objects by using T-SQL

- ❖ Implement error handling and transactions

- ❖ Implement transaction control in conjunction with error handling in stored procedures, and implement data types and NULL

Designing and Implementing Database Objects

- ❖ Design and implement a relational database schema, design and implement indexes

- ❖ Distinguish between indexed and included columns, implementing clustered index, designing and implementing views, implementing column store views

Implementing Programmability Objects

- ❖ Defining table and foreign key constraints, writing Transact-SQL statement

- ❖ Identifying results of Data Manipulation Language (DML), designing stored procedure components, implementing input and output parameters

- ❖ Implementing error handling, transaction control logic in stored procedures, designing trigger logic, DDL triggers

Managing Database Concurrency

- ❖ Implementing transactions, identifying DML statements based on transaction behavior

- ❖ Understanding explicit and implicit transactions

- ❖ Managing isolation levels, identifying concurrency and locking behavior

- ❖ Implementing memory-optimized tables

Optimizing Database Objects

- ❖ Determining accuracy of statistics, designing statistics maintenance tasks

- ❖ Using dynamic management objects

- ❖ Identifying missing indexes, consolidating overlapping indexes, analyzing and troubleshooting query plans

- ❖ Managing performance of database instances

- ❖ Monitoring SQL server performance

Project Works

MSBI Projects

Project 1 : Configuration and Logging

Industry : General

Problem Statement : How to integrate data from multiple sources into the SQL Server

Topics : In this SQL Server Integration Services (SSIS) project you will extensively work on multiple data from heterogeneous source into SQL Server. As part of the project you will learn to clean and standardize data and automate the administrative work. Some of the tasks that you will be performing are adding logs to SSIS package, configuration and saving it to an XML file. Upon completion of the project you will have hands-on experience in handling constraints, error row configuration and event handlers.

Highlights

- ✓ Integrate data from heterogeneous sources
- ✓ Working with Connection Manager
- ✓ Deploying data modeling

Project 2: SSAS Cube Using BI Data Tools 2012

Industry : Sales

Problem Statement : How to create the SSAS Cubes for faster reporting

Topics : In this project you will be work on large volume of data and use it for creating reports and dashboards for sales performance in order to derive valuable insights. You will deploy the sales database in sql server and build SSAS Cubes. Upon completion of the project you will be well-versed to work in a real world business scenario to analyze various parameters and instances in order to derive business insights.

Highlights

- ✓ Create multidimensional cubes
- ✓ Deploying MDX query language
- ✓ Working with in-memory analytics

Project 3 Building Dashboard

Industry : Sales

Problem Statement : How to convert a relational design into a table in SQL Server

Topics : In this project you will be working on SQL Server Reporting Services (SSRS) and deploying it for building dashboards in a business environment. The Business Intelligence Report that you create will be used to calculate sales based on the years and currencies that you choose. Some of the tasks that you will be performing as part of this project are – design and create Gauge and Map Charts, Spark lines and Data Bar and perform drill-through Reports, and ad hoc Reporting.

SQL Projects

Project 1: Writing complex Sub Queries

Industry : General

Problem Statement : How to create sub queries using SQL

Topics : This project will give you hands-on experience in working with SQL sub-queries and utilizing it in various scenarios. Some of the sub-queries that you will be working with and gain hands-on experiences in are – IN or NOT IN, ANY or ALL, EXISTS or NOT EXISTS, and other major queries.

Highlights

- ✓ Accessing and manipulating databases
- ✓ Operators & Control Statements in SQL
- ✓ Executing queries in SQL against databases.

Project 2: Querying a large relational database

Industry General

Problem Statement : How to get details about customers by querying the database

Topics : In this project you will work on downloading a database and restoring it on the server. You will then query the database to get customer details like name, phone number, email id, sales made in a particular month, increase in month-on-month sales and even total sales made to a particular customer.

Highlights :

- ✓ Table basics and data types
- ✓ Various SQL Operators
- ✓ Various SQL Functions.

Project 3: Relational database design

Industry : General

Problem Statement : How to convert a relational design into a table in SQL Server

Topics : In this project you will work on converting a relational design that has enlisted within it the various users, user roles, user accounts and their statuses. You will create a table in SQL Server and insert data into it. With at least 2 rows in each of the tables, you have to ensure that you have created respective foreign keys.

Highlights

- ✓ Define Relations/Attributes
- ✓ Define the Primary Keys
- ✓ Create Foreign Keys

Job Assistance Program

Intellipaat is offering job assistance to all the learners who have completed the training. You should get a minimum of 60% marks in the qualifying exam to avail job assistance. Intellipaat has exclusive tie-ups with over 80 MNCs for placements.

Successfully finish the training → Get your resume updated → Start receiving interview calls

Intellipaat Alumni Working in Top Companies

Robin Jack in

Mainframe Senior Developer at IBM

This software testing automation training is the most practical and easy way to learn Selenium covering all topics.

David Juvan in

Software Tester at Dell

I'm extremely impressed with this training session. Thanks to the instructor who was very patient in explaining all our doubts clearly. I was concerned initially if I have made a rright choice in picking up a right institute. But now I will definitely recommend Intellipaat for training course

Niharika Mittal in

Blockchain Developer and Testing Enthusiast at IBM

This is a great way to learn Selenium automated testing. The best part is that the entire Selenium course is in line with the industry certification.

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Frequently Asked Questions

Q 1. What is the criterion for availing the Intellipaat job assistance program?

Ans. All Intellipaat learners who have successfully completed the training post April 2017 are directly eligible for the Intellipaat job assistance program.

Q 2. Which are the companies that I can get placed in?

Ans. We have exclusive tie-ups with MNCs like Ericsson, Cisco, Cognizant, Sony, Mu Sigma, Saint-Gobain, Standard Chartered, TCS, Genpact, Hexaware, and more. So you have the opportunity to get placed in these top global companies.

Q 3. Do I need to have prior industry experience for getting an interview call?

Ans. There is no need to have any prior industry experience for getting an interview call. In fact, the successful completion of the Intellipaat certification training is equivalent to six months of industry experience. This is definitely an added advantage when you are attending an interview.

Q 4. If I don't get a job in the first attempt, can I get another chance?

Ans. Definitely, yes. Your resume will be in our database and we will circulate it to our MNC partners until you get a job. So there is no upper limit to the number of job interviews you can attend.

Q 5. Does Intellipaat guarantee a job through its job assistance program?

Ans. Intellipaat does not guarantee any job through the job assistance program. However, we will definitely offer you full assistance by circulating your resume among our affiliate partners.