



**Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore**  
**Shri Vaishnav School of Management**

**Choice Based Credit System (CBCS) in Light of NEP-2020**  
**MBA-BUSINESS ANALYTICS - III SEMESTER (2022-2024)**

**MBAI301C ADVANCED HUMAN VALUES AND PROFESSIONAL ETHICS**

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME									
			THEORY			PRACTICAL			L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*					
MBAI301C	AECC	Advanced Human Values and Professional Ethics	60	20	20	-	-	3	-	-	3	

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical: C - Credit; AECC- Ability Enhancement Compulsory Course

\***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

**Course Objective**

The objective of the course is to disseminate the theory and practice of moral code of conduct and familiarize the students with the concepts of “right” and “good” in individual, social and professional context

**Examination Scheme**

The internal assessment of the students’ performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

**Course Outcomes**

1. Help the students to understand right conduct in life.
2. To equip students with understanding of the ethical philosophies, principles, models that directly and indirectly affect personal and professional life.

**COURSE CONTENT**

**Unit I: Inculcating Values at Workplace**

1. Values: Concept, Sources, Essence
2. Classification of Values.
3. Values in Indian Culture and Management: Four False Views, Value Tree
4. Eastern and Western Values; Values for Global Managers

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**Unit II: Professional Ethics**

1. Ethics: Concept, Five P's of Ethical Power, Organisational Tools to Cultivate Ethics
2. Theories of Ethics: Teleological and Deontological
3. Benefits of Managing Ethics in an Organisation
4. Ethical Leadership

**Unit III: Indian Ethos and Management Style**

1. Indian Ethos and Workplace
2. Emerging Managerial Practices
3. Ethical Considerations in Decision Making and Indian Management Model
4. Core Strategies in Indian Wisdom and Ethical Constraints

**Unit IV: Human Behavior – Indian Thoughts**

1. Guna Theory
2. Sanskara Theory
3. Nishkama Karma
4. Yoga: Types, Gains; Stress and Yoga

**Unit V: Spirituality and Corporate World**

1. Spirituality: Concept, Paths to Spirituality
2. Instruments to achieve spirituality
3. Vedantic Approach to Spiritual and Ethical Development
4. Indian Spiritual Tradition.

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\***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

**Suggested Readings**

1. Kausahl, Shyam L. (2006). *Business Ethics – Concepts, Crisis and Solutions*. New Delhi: Deep and Deep Publications Pvt. Limited
2. Murthy, C.S.V. (2012). *Business Ethics –Text and Cases*. Himalaya Publishing House: Mumbai
3. Chakraborty, S. K. (1999). *Values and Ethics for Organizations*. Oxford university press
4. D.Senthil Kumar and A. Senthil Rajan (2008). *Business Ethics and Values*. Himalaya Publishing House: Mumbai

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**MBAI302C PROJECT MANAGEMENT**

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME							CREDITS		
			THEORY			PRACTICAL			L		T	P
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*					
MBAI302C	CC	Project Management	60	20	20	-	-	3	-	3		

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; CC- Core Course

\***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

**Course Objectives**

The course is intended to develop the knowledge of the students in the management of projects. It is aimed at imparting knowledge on managing entire life cycle of a project – from conceptualization to commissioning.

**Examination Scheme**

The internal assessment of the students’ performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

**Course Outcomes**

1. Understanding of various phases in a project life cycle.
2. Ability to establish feasibility of a project and various methods of project financing
3. Learn to organize and coordinate with different functions for successful project implementation
4. Develop ability to monitor and control projects, and risks involved.

**COURSE CONTENT**

**Unit I: Concept of Project**

1. Overview, key concepts, classification, characteristics of project
2. Project life cycle and its phases
3. Project feasibility: project identification, market and demand analysis, technical analysis, and technology selection

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MBAI302C	CC	Project Management	60	20	20	-	-	3	-	3	

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; CC- Core Course

\***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

**Unit II: Project Feasibility and Investment Evaluation**

1. Project cost estimate
2. Project appraisal: time value of money, project cash flows, payback period, cost of capital, project rate of return
3. Sources of financing
4. Optimum capital structure and it's theories
5. Investment decision rule

**Unit III: Project Implementation**

1. Project planning and scheduling
2. Network analysis, construction of networks
3. Time-cost trade-off and crashing of projects
4. Resource allocation using network analysis, resource leveling
5. Project contracting: types of contracts in projects, steps in project contracting

**Unit IV: Human and Social Aspects of Managing Projects**

1. Project organization
2. Project leadership: motivation, communication, conflict handling in projects
3. Social cost-benefit analysis, UNIDO approach

**Unit V: Project Review and Administrative Aspects**

1. Project monitoring and control, variance analysis, performance analysis
2. Abandonment analysis
3. Computer based project management & PMIS

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MBAI302C	CC	Project Management	60	20	20	-	-	3	-	3		

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**Suggested Readings**

1. Chandra, P. (2011). *Project Planning: Analysis, selection, implementation and review*. New Delhi: Tata McGraw Hill.
2. Choudhury S. (2017), *Project Management*. Chennai: McGraw Hill Education (I) Pvt. Ltd.
3. Singh, N. (2003). *Project Management and Control*. New Delhi: Himalaya Publishing House.
4. Nicholas, J.M. (2008). *Project Management for Business and Technology: Principles and practice*. Pearson Publication.
5. Gray, C.F., Larson, E.W. and Desai, G.V. (2010). *Project Management: The managerial process*. New Delhi; Tata McGraw Hill.
6. Pinto, J. (2010). *Project Management: Achieving Competitive Advantage*. New Jersey: Pearson.
7. Abrol, S. (2010). *Cases in Project Management*. New Delhi: Excel Books
8. Maylor, H. (2017). *Project Management*. New Jersey: Pearson.

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**MBA-BUSINESS ANALYTICS - III SEMESTER (2022-2024)**

**MBABAN303 BASICS OF BUSINESS ANALYTICS**

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME							CREDITS	
			THEORY			PRACTICAL		L	T		P
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBABAN303	DSE	Basics of Business Analytics	60	20	20	-	-	3		-	3

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical: C - Credit; DSE- Discipline Specific Elective

\***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

**Course Objective**

The course would enable the students to gain knowledge on turning large amounts of data into meaningful and actionable information.

**Examination Scheme**

The internal assessment of the students’ performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

**Course Outcomes**

1. After learning this course students will have basic knowledge of business analytics.
2. At the end of the course students will be able to utilize the information for making effective business decisions.

**COURSE CONTENT**

**Unit -I Introduction to Business Analytics and Data Science**

1. Concept, Definition of Business Analytics.
2. Evolution of Business Analytics, Importance of Business Analytics,
3. Types of Business Analytics, Career in Business Analytics.
4. Historical Overview of Data Analysis, Data Scientist vs. Data Engineer vs. Business Analyst.
5. What is Data Science, Why Data Science, Applications for Data Science, Data Scientists Roles and Responsibility.

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MBABAN303	DSE	Basics of Business Analytics	60	20	20	-	-	3	-	3	

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; DSE- Discipline Specific Elective

\***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

**Unit-II Introduction to Business Intelligence**

1. Concept, Definitions of Business Intelligence.
2. Evolution of Business Intelligence, Importance of Business Intelligence.
3. Value Chain- Component Framework.
4. Users, Tools used in Business Intelligence.
5. Applications, Roles and Responsibilities.

**Unit III: Introduction to Data Mining**

1. The origins of Data Mining
2. Data Mining Tasks
3. OLAP and OLTP- Architectures, Types, Utility.
4. Multidimensional Data Analysis and Data Modeling
5. Basic concept of Association Analysis and Cluster Analysis

**Unit-IV: Overview of Business Analytics Tools**

1. Microsoft Excel
2. Microsoft PowerPoint
3. Microsoft Access
4. SQL, SPSS
5. Google Analytics and Tableau

**Unit-V Applications of Business Analysis**

1. Marketing Analytics: Concept and Usage
2. Financial Analytics: Concept and Usage
3. HR Analytics: Concept and Usage
4. Operations Analytics: Concept and Usage
5. Other Trends in Analytics

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MBABAN303	DSE	Basics of Business Analytics	60	20	20	-	-	3	-	3	

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; DSE- Discipline Specific Elective

\***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

**Suggested Readings**

1. Prasad. R. N. & Seema Acharya (2011). *Business Analytics*. Wiley: New Delhi.
2. Christian S. Albright & Wayne L. Winston (2015). *Business Analytics & Decision Making*. Cengage Learning: New Delhi.
3. Evans. R. Joel (2014). *Business Analytics*. Pearson Education: New Delhi.

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**MBA-BUSINESS ANALYTICS - III SEMESTER (2022-2024)**

**MBABAN304 STATISTICS FOR ANALYTICS**

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME							CREDITS		
			THEORY			PRACTICAL			L		T	P
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*					
MBABAN304	DSE	Statistics for Analytics	60	20	20	-	-	3	-	3		

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical: C - Credit; DSE- Discipline Specific Elective

\***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

**Course Objective**

This course is designed to provide prospective management studies students with the skills necessary to generate reports, analyses and decisions based on a study of relevant data. This course provides the set of skills that are most frequently used in the work place to generate and critically analyze reports.

**Examination Scheme**

The internal assessment of the students’ performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

**Course Outcomes**

1. After learning this course the learners will be able to understand the relevance of statistics in the functional areas of business
2. Gain knowledge on how to use excel spread sheets and focus on interpretation of results.

**COURSE CONTENT**

**Unit I: Introduction**

1. Statistical Thinking and Definition of Statistics
2. Basic Statistical Terms
3. Variable Type and Data Measurement Scales

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MBABAN304	DSE	Statistics for Analytics	60	20	20	-	-	3	-	3	

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; DSE- Discipline Specific Elective

\***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

**Unit II: Central Tendency**

1. Measures of Central Tendency
2. Measures of Dispersion - Measures of Shape
3. Examining Data Distribution

**Unit III: Overview of Statistical Methods**

1. Overview of Statistical Methods
2. Sampling and Sampling Methods
3. Presenting Data in Tables and Charts

**Unit IV: Concept of Probability**

1. Basic Concept of probability
2. Types of Probability, Probability Rules
3. Conditions of Probability
4. Probability Distributions
5. Probability Trees, Bayes's Theorem

**Unit V: Binomial, Poisson & Normal Distribution**

1. Binomial Distribution
2. Poisson Distribution
3. The Normal Distribution, Characteristics, Normality check

**Suggested Readings**

1. Deepak Chawla and Neena Sondhi (2008). *Research Methodology Concepts and Case*. Vikas Publishing House Pvt Ltd: New Delhi.
2. Gerald, Keller (2011). *Managerial Statistics*. Cengage Learning. Boston: USA.
3. Arora, P.N. (2009). *Managerial Statistics*. S.Chand Limited: New Delhi.
4. Srivastava T.N. (2008). *Statistics for Management*. Tata McGraw Hill Publishing: New Delhi.

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**MBA-BUSINESS ANALYTICS - III SEMESTER (2022-2024)**

**MBABAN305 DATA MANAGEMENT**

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME							CREDITS		
			THEORY			PRACTICAL			L		T	P
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*					
MBABAN305	DSE	Data Management	60	20	20	-	-	3	-	3		

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical: C - Credit; DSE- Discipline Specific Elective

\***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

**Course Objective**

The objective of the course is to enable an understanding of data management concept and process data management process.

**Examination Scheme**

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

**Course Outcomes**

1. After the course students will be familiar with the techniques of data management.
2. Students will have understanding of data architecture, and
3. R programs and its applications.

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MBABAN305	DSE	Data Management	60	20	20	-	-	3		-	3	

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; DSE- Discipline Specific Elective

\***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

**COURSE CONTENT**

**Unit I Database Management System**

1. Introduction, Concept, Evolution of Database, Database Environment
2. Purpose of Database System, View of Data, Relational Databases, Transaction Management,
3. Architecture and Working of a Simple Centralized Database System,
4. Tradition al File Systems vs. Modern Database Management Systems,
5. Types and Properties of Database, Types of Database Users, Advantages of using DBMS.

**Unit II- Database Core Concepts and Applications**

1. Introduction to Data Model and Types of Data Model, Importance
2. Basic Building Blocks, Business Rules, Degrees of Data Abstraction.
3. Schemas and Instances, Three Schema Architecture.
4. Languages and Interfaces, DBMS Components.
5. Classification of Database Management Systems.

**Unit III: Database Design, ER-Diagram and Unified Modeling Language**

1. Database Design and ER Model: Overview, ER-Model, Constraints,
2. ER-Diagrams, ERD Issues, Weak Entity Sets, Codd’s Rules, Relational Schemas.
3. Introduction to UML Relational Database Model: Logical View of Data, Keys, Integrity Rules.
4. Relational Database Design: Features of Good Relational Database Design,
5. Atomic Domain and Normalization (1NF, 2NF, 3NF, BCNF).

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**MBA-BUSINESS ANALYTICS - III SEMESTER (2022-2024)**

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME							CREDITS		
			THEORY			PRACTICAL			L		T	P
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*					
MBABAN305	DSE	Data Management	60	20	20	-	-	3	-	3		

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical: C - Credit; DSE- Discipline Specific Elective

\***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

**Unit IV- Relational Algebra and Calculus**

1. Relational Algebra: Introduction, Selection, And Projection, Set Operations,
2. Renaming, Joins, Division, Syntax, Semantics.
3. Operators, Grouping and Ungrouping, Relational Comparison.
4. Calculus: Tuple Relational Calculus, Domain Relational Calculus,
5. Calculus Vs Algebra, Computational Capabilities.

**Unit V: Constraints, Views and SQL**

1. Constraints & Types of Constrains, Integrity Constraints
2. Views: Introduction to Views, Data Independence, Security,
3. Comparison Between Tables and Views, Updates on Views
4. SQL: Data Definition, Aggregate Function, Null Values, Nested Sub Queries, Joined Relations.
5. Triggers.

**Suggested Readings**

1. Gardener, M (2013). *Beginning R: The Statistical Programming Language*. Wiley India: New Delhi.
2. Teetor, P. (2014). *R Cookbook (O’ Reilly)*. Shroff Publishers: Mumbai.
3. Raghu Ramakrishnan (3e). *Database Management Systems*. McGraw Hills Education: USA.
4. Scott Urman (2004). *ORACLE PL/SQL Programming*. BPB Publications: India.
5. Henry F Korth, Abraham Silberschatz(5e). *Database Systems Concepts*. Pearson Publication: London.
6. Alexis Leon, Mathews Leon – Leon (1e). *Database Management Systems*. Vikas Publications: India.
7. Kevin Loney, George Koch (latest). *Oracle 9i The Complete Reference*. Oracle Press: USA.

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**MBABAN306 DATA WAREHOUSING FOR ANALYTICS**

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME							CREDITS		
			THEORY			PRACTICAL			L		T	P
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*					
MBABAN306	DSE	Data Warehousing for Analytics	60	20	20	-	-	3	-	3		

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**Course Objective**

This course will help the students understanding on the design and management of data warehouse (DW) and business intelligence (BI) systems. The DW is the central element in collecting, integrating, and making sense – knowledge discovery – of an organization’s data. BI concerns the full range of analytical applications and its delivery to the desktop of users.

**Examination Scheme**

The internal assessment of the students’ performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

**Course Outcome**

1. After learning this student will be able to form the basis of modern business analytics and decision making in organizations today.

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**COURSE CONTENT**

**Unit I: Managing Data**

1. Individual Data Management, Organisational Data Management
2. Components of Organisational Memory, Evaluation of Database Technology
3. File-Oriented Systems, Meeting the Need for Random Access Processing Information as Resource, Other Limitations of Traditional File Systems
4. Data Base Systems, Hierarchical Network Model Systems
5. Relational Database Systems - Database Systems: Hardware, Software, Data, People and Relationship of the four System Components.

**Unit II: Introduction to Data Warehousing**

1. Introduction to Data Warehousing, Advantages and Disadvantages of Data Warehousing
2. Data Mart, Aspects of Data Mart, Online Analytical Processing
3. Characteristics of OLAP, OLAP Tools, OLAP Data Modeling
4. OLAP Tools and the Internet , Difference between OLAP and OLTP,
5. Multidimensional Data Model, Data Modeling using Star Schema and Snowflake Schema.

**Unit III: Introduction to Data Mining**

1. Introduction, Definition of Data Mining, Data mining parameters, How Data Mining works?
2. Types of relationships, Architecture of Data Mining, Kinds of Data which can be mined
3. Functionalities of Data Mining, Classification on Data Mining system
4. Various risks in Data Mining, Advantages and disadvantages of Data Mining
5. Ethical issues in Data Mining, Analysis of Ethical issues, Global issues

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**Unit IV: Data Mining Techniques**

1. Introduction, Statistical Perspective on Data Mining, Statistics-need
2. Similarity Measures, Decision Tree-Illustrations
3. Neural Network, Neural Network versus Conventional Computers
4. Kohonen’s Self-Organizing Maps
5. Genetic Algorithms, Applications of Genetic Algorithm

**Unit V: Architecting the Data**

1. Introduction, Types of Data
2. Enterprise Data Model, Enterprise Subject Area Model
3. Enterprise Conceptual Model, Enterprise Conceptual Entity Model
4. Granularity of the Data, Data Reporting and Query Tools
5. Data Partitioning, Metadata, Total Data Quality Management (TDQM).

**Suggested Readings**

1. Kimball,R., Ross,M., Thornthwaite, W.,Mundy,J. and Becker (2008). *The Data Warehouse Lifecycle Toolkit: Practical Techniques for Building Data Warehouse and Business Intelligence Systems*. John Wiley & Sons: New York: USA.
2. Morabito, J., Stohr, E., Genc, Y (2011). *Enterprise Intelligence: A Case Study and the Future of Business Intelligence*. *International Journal of Business Intelligence Research*, 2(3), 1-20.
3. Kimball, R. and Ross, M. (2006). *The Data Warehouse Toolkit” The Complete Guide to Dimensional Modeling Second Edition*. John Wiley & Sons: New York: USA.
4. Kimball, R., and Caserta (2004). *The Data Warehouse ETL Toolkit. Practical Techniques for Extracting, Cleaning, Conforming, and Delivering Data*. John Wiley & Sons: New York: USA.

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