Course Objectives	**Oracle Cloud Infrastructure Architect** ● Gain a comprehensive understanding of the architecture, components, and services offered by OCI. ● Introduction to Machine Learning with Python-Learn the basics of machine learning using Python, including key concepts and techniques. ● Utilize OML4Py-Understand and leverage the Oracle Machine Learning for Python (OML4Py) Transparency Layer and Automated Machine Learning features. ● Learn how to create, manage, and deploy machine learning models using OCI's data science tools and services. ● Explore how to integrate and utilize various OCI services to enhance machine learning workflows and operations. **Oracle Cloud Infrastructure Data Science Professional** ● Gain a comprehensive understanding of the OCI ecosystem and its services related to data science and machine learning. ● Learn the fundamentals of machine learning and how to apply them using Python. ● Explore OML4Py Capabilities- Delve into Oracle Machine Learning for Python (OML4Py), including its transparency layer and automated machine learning features. ● Machine Learning Model Managemen- Learn how to build, manage, and deploy machine learning models on OCI. ● Implement MLOps Practices - Understand and apply Machine Learning Operations (MLOps) practices to streamline the ML lifecycle and ensure efficient collaboration and deployment. **Oracle Apex:** ● Explore the foundational concepts of Oracle APEX, including its architecture, workspace management, and development environment. ● Design and implement advanced web applications utilizing Oracle APEX's rich set of features. Create complex forms, reports, and interactive grids.

	- Apply best practices for performance tuning and optimization of APEX applications. Implement efficient data handling and ensure fast application performance. - Utilize APEX's built-in themes, templates, and dynamic actions to enhance the user interface and user experience. Incorporate custom HTML, CSS, and JavaScript to tailor applications to specific needs. - Apply security measures within APEX applications to protect against common web vulnerabilities. Manage authentication and authorization to control access to application components. - Connect APEX applications with external data sources and web services. Use RESTful services and APIs to extend application functionality. - Deploy skills in deploying APEX applications across different environments. Perform application backups, version control, and workspace management. - Develop proficiency in debugging techniques and troubleshooting common issues in APEX applications. Use APEX debug tools and logs to identify and resolve problems. **Oracle ERP** : - Explore the fundamentals of ERP systems and their significance in - financial management. - Explore the Financials Business Process Model and its components. - Navigate and utilize Oracle ERP for financial operations. - Hands-on experience with financial processes using Excel and other - tools. - Develop skills to analyse and interpret financial data for business decision-making.

Course Outcomes	**Oracle Cloud Infrastructure Architect** ● Deploy and Manage OCI Resources - Deploy, configure, and manage OCI resources and infrastructure effectively. ● Develop Machine Learning Models- Acquire the skills to develop and fine-tune machine learning models using Python and OML4Py. ● Automate Machine Learning Tasks- Implement automated machine learning processes to streamline model development and deployment. ● Embed Python in OCI- Develop proficiency in using embedded Python execution for advanced data analysis and model building within OCI. ● Implement MLOps Practices- Apply MLOps best practices for managing the machine learning lifecycle, including version control, continuous integration, and continuous deployment (CI/CD) within OCI **Oracle Cloud Infrastructure Data Science Professional** ● Setup and Configure OCI for Data Science- set up and configure OCI for data science projects, including workspace design and necessary configurations. ● Develop and Deploy Machine Learning Models- Build, train, and deploy machine learning models using OML4Py and other OCI tools. ● Utilize cx_Oracle for Data Handling - Efficiently use the cx_Oracle library to connect and interact with Oracle databases within your Python applications. ● Automate Machine Learning Workflows - Leverage OML4Py's automated machine learning capabilities to streamline model development and deployment processes. ● Implement Effective MLOps Practices- Apply MLOps best practices to manage the end-to-end machine learning lifecycle, from data preparation and model building to deployment and monitoring. **Oracle Apex:** ● Develop database applications on Oracle APEX using the Oracle Autonomous Database. ● Utilize SQL Workshop to create and manage database objects.

	● Build interactive reports, grids, and application page controls. ● Enhance applications with computations, processes, validations, and dynamic actions. ● Implement search filtering, form creation, navigation, and theming. **ERP:** ● Explore ERP fundamentals and benefits. ● Describe Financials Business Process Model components. ● Navigate Oracle ERP for financial tasks. ● Perform financial operations using Excel. ● Analyse financial data effectively.

Course Duration: 45 Hours

Course Content:

Training Partner: Oracle (M/s. Adroit Technologies Innovative Solutions PVT LTD)

Stream 1: Oracle Cloud Infrastructure Architect

COURSE CURRICULUM	1. Getting Started with Oracle Cloud Infrastructure (OCI) 2. Oracle Cloud Infrastructure (OCI) Introduction 3. Identity and Access Management 4. Networking - Virtual Cloud Network 5. Networking – Connectivity 6. Networking - Load Balancer 7. Networking - DNS Management 8. Networking Command Center Services - Other Networking Services 9. Compute – Basics 10. Storage – Object 11. Storage – Block 12. Storage – File 13. Security- Operations 14. Security- Platform 15. Security- Data 16. Observability and Management – Introduction

SL.NO	MODULE NAME	MODULE CONTENT
		17. Observability and Management – Monitoring
		18. Observability and Management - Logging

Stream 2: Oracle Cloud Infrastructure Data Science Professional

COURSE CURRICULUM	● Getting Started with Oracle Cloud Infrastructure (OCI) ● Introduction to Machine Learning for Python ● OML4Py Transparency Layer ● Working with Machine Learning Models ● Data Store for Python Objects ● OML4Py Automated Machine Learning ● Embedded Python Execution ● Working with cx_Oracle ● OCI Data Science Introduction and Configuration ● Workspace Design and Setup ● Machine Learning Lifecycle ● MLOps Practices ● Related OCI Services

Stream 3: Oracle Apex

SL.NO	MODULE NAME	MODULE CONTENT
01	Getting Started with Oracle APEX on the Oracle Autonomous Database	1. "Setup": Provision Autonomous Database. 2. "Access": Connect to Oracle APEX. 3. "Develop": Create apps with APEX. 4. "Deploy": Publish apps online. 5. "Manage": Monitor and maintain apps.
02	Using SQL Workshop	1. Getting started and using SQL workshop components 2. Use SQL commands and SQL scripts 3. Generate SQL by using quick SQL
03	Creating a Database Application	1. App builder concepts 2. App builder and the create app wizard 3. Application based on existing tables

		4. Progressive Web App(PWA)
04	Working with pages and regions	1. Creating application pages and exploring page components 2. Managing pages and adding page components
05	Developing reports, managing and customizing interactive reports, grids	1. Learning to create various reports 2. Creating faceted search, cards and smart filters 3. Customising interactive reports as end users and developers 4. Customising an interactive grid
06	Advanced Application Development Techniques	1. Design Patterns 2. Modular Development 3. Test-Driven Development 4. Performance Optimization 5. Continuous Integration/Deployment

Stream 4: ERP

Unit Wise Syllabus		
Unit No	Contents	Duration
1	**Unit 1: Introduction to ERP and Oracle Financials** Overview of ERP Systems - Importance of ERP in Financial Management - Introduction to Oracle Financials - Core Modules of Oracle Financials - Navigating the Oracle Financials Interface - Setting Up Oracle Financials Environment - Basic Financial Terminology and Concepts	9
2	**Unit 2: Financials Business Process Model** Introduction to Financials Business Process Model - Components of Financials Business Process Model - Invoice to Cash Overview - Procure to Pay Overview - Asset to Retirement Overview - Accounting Transformation Overview - Budget to Report Overview	9
3	**Unit 3: Invoice to Cash Process** Detailed Invoice to Cash Process - Creating and Managing Customer Invoices - Recording and Applying Customer Payments - Managing Accounts Receivable - Handling Customer Disputes and Adjustments - Generating Invoice to Cash Reports - Practical Exercises Using Excel for Invoice to	9

	Cash	
4	**Unit 4: Procure to Pay Process** Detailed Procure to Pay Process - Creating and Managing Purchase Orders - Vendor Management and Payment Processing - Managing Accounts Payable - Handling Supplier Disputes and Adjustments - Generating Procure to Pay Reports - Practical Exercises Using Excel for Procure to Pay	9
5	**Unit 5: Budget to Report and Financial Analysis** Overview of Budget to Report Process - Creating and Managing Budgets - Financial Reporting and Analysis - Using Oracle Financials for Budgeting - Integrating Financial Data with Excel - Generating Financial Reports and Dashboards - Practical Exercises on Financial Reporting and Analysis	9

USE CASES:

Stream 1: Oracle Cloud Infrastructure Architect

S.NO	TEST PROJECTS	TASKS
1	Global Enterprise Efficiency Journey: Financial Process Optimization	• Assess financial processes for global enterprise efficiency. • Implement efficiency enhancement strategies in financial operations. • Integrate technology for streamlined financial processes. • Utilize data analytics for actionable insights in financial management. • Implement continuous improvement and monitoring for sustained efficiency gains.
2	Modernizing HR Operations: Oracle Cloud HCM Implementation	• Plan and implement Oracle Cloud HCM for modernizing HR operations. • Execute data migration and integration processes seamlessly. • Conduct user training and promote adoption for effective HCM utilization. • Enhance performance management within the Oracle Cloud HCM framework. • Continuously optimize and provide support for • sustained HR operational excellence.

3	Strategic Supply Chain Excellence: Leveraging Oracle SCM Cloud	- Conduct supply chain analysis and planning for strategic excellence. - Implement and integrate Oracle SCM Cloud with effective strategies. - Enhance collaboration and visibility across the supply chain. - Monitor performance and leverage analytics for informed decision-making. - Drive continuous innovation and adaptation for supply chain excellence.
4	Revolutionizing Customer Engagement: Oracle CX Cloud Transformation	- Plan and execute Oracle CX Cloud transformation for revolutionizing customer engagement. - Implement data migration and integration strategies seamlessly. - Enhance customer journeys within the Oracle CX Cloud framework. - Utilize analytics for actionable insights and improved customer experiences. - Drive continuous optimization and innovation for sustained customer engagement excellence.
5	OCI Architecture Spotlight: Revamping Data Storage for Modern Needs	- Assess and plan data storage for modern needs within OCI architecture. - Develop strategies for revamping architecture to meet evolving storage requirements. - Implement integration and migration techniques for seamless data transition. - Ensure data security and compliance in the revamped storage architecture. - Continuously optimize and scale data storage solutions for ongoing efficiency.
6	Secure User Management: Navigating RBAC Implementation in OCI	- Plan and implement RBAC for secure user management in OCI. - Define user roles and permissions systematically. - Configure access control policies for precise user access management. - Integrate RBAC and conduct thorough testing for effectiveness. - Continuously monitor and ensure

		compliance with RBAC implementation in OCI.
7	Scientific Research Unleashed: High-Performance Computing in OCI Architecture	- Assess and implement high-performance computing for scientific research within OCI architecture. - Integrate OCI architecture with effective strategies for enhanced computing capabilities. - Allocate and configure resources for optimal performance in high-performance computing. - Manage and analyze data efficiently within the high-performance computing environment. - Continuously optimize and scale for sustained - efficiency in scientific research endeavors.
8	Enterprise Integration: Federated Identity for Seamless User Management	- Plan and strategize federated identity implementation for seamless enterprise integration. - Configure identity federation for effective user management across platforms. - Implement user authentication and authorization within the federated identity framework. - Conduct integration testing and validation to ensure seamless functionality. - Continuously monitor and enhance the federated - identity system for ongoing efficiency.
9	Enhanced Network Isolation: Crafting VCNs for Robust Connectivity	- Design and plan VCNs for enhanced network isolation and robust connectivity. - Configure subnets and implement segmentation for optimized network architecture. - Establish security rules and implement Network Security Groups (NSGs) for heightened protection. - Conduct integration testing and validation to ensure seamless network

		functionality.
		● Continuously monitor and optimize VCNs for ongoing network efficiency and security.
10	Resource Segmentation Precision: Subnet Configuration Strategies	● Plan and design subnets for resource segmentation precision.
		● Configure and allocate subnets strategically for optimized resource utilization.
		● Implement security measures and access control within each subnet.
		● Conduct integration testing and validation to ensure seamless subnet functionality.
		● Continuously monitor and optimize subnet configurations for ongoing efficiency.
11	Network Security Mastery: Rules and NSGs in OCI	● Design and plan security rules for mastery in network security within OCI.
		● Configure NSGs (Network Security Groups) to enhance network security measures.
		● Perform integration testing to validate the effectiveness of network security rules.
		● Monitor and ensure compliance with established security rules.
		● Continuously optimize and enhance NSGs for ongoing network security mastery in OCI.
12	Seamless Hybrid Cloud: Navigating Integration Challenges	● Plan seamless hybrid cloud integration for efficient cross-platform functionality.
		● Develop data synchronization and migration strategies for smooth hybrid cloud operation.
		● Integrate applications and infrastructure seamlessly within the hybrid cloud environment.
		● Conduct integration testing and validation to ensure the effectiveness of hybrid cloud integration.
		● Continuously monitor and optimize hybrid cloud integration for ongoing

		efficiency.
13	Load Balancer Essentials: Understanding the Basics	● Learn load balancer introduction and fundamentals for foundational understanding. ● Explore load balancer types and architecture to grasp diverse deployment scenarios. ● Configure and set up load balancers for optimal performance. ● Perform testing and validation to ensure seamless load balancer functionality. ● Continuously monitor and optimize load balancers for ongoing efficiency and reliability.
14	Algorithmic Precision: Decoding Load Balancer Strategies	● Plan and select algorithmic load balancers for precision in load balancing strategies. ● Configure load balancer algorithms to align with specific performance requirements. ● Test and validate algorithmic load balancers for effectiveness in real-world scenarios. ● Monitor and optimize algorithmic load balancers for ongoing efficiency. ● Continuously enhance load balancer algorithmic precision for improved performance.
15	Weighted Load Balancing Tactics: Mastering Traffic Management	● Plan and strategize weighted load balancing for masterful traffic management. ● Configure weighted load balancing tactics for optimal distribution of traffic. ● Test and validate weighted load balancing techniques for real-world effectiveness. ● Monitor and optimize traffic management for ongoing efficiency. ● Continuously enhance weighted load balancing tactics for improved traffic distribution.

16	Health Checks and Failover Strategies: Ensuring System Resilience	- Plan and implement system health checks for comprehensive monitoring. - Configure failover strategies to ensure system resilience during disruptions. - Test and validate health checks and failover mechanisms for reliability. - Monitor and optimize system resilience for ongoing operational efficiency. - Continuously enhance health checks and failover strategies for improved system robustness.
17	Web Application Hosting Brilliance: Resources Provisioning Insights	- Outline and strategize resources provisioning for optimal web application hosting. - Configure hosting resources to align with specific application requirements. - Test and validate resources provisioning for effective deployment and scalability. - Monitor and optimize hosting brilliance for ongoing efficiency and performance. - Continuously enhance resources provisioning insights for improved web application hosting.
18	Network and Security Dynamics: Crafting Robust Web Hosting Ecosystems	- Plan network and security dynamics for robust web hosting ecosystems. - Configure and set up the hosting ecosystem for seamless functionality. - Test and validate network and security dynamics for effective protection. - Monitor and optimize web hosting ecosystems for ongoing efficiency. - Continuously enhance network and security strategies for improved hosting resilience.
19	Efficient Application Handling: Web Server Configuration for Success	- Plan and develop a strategy on web server configuration for efficient application handling. - Deploy applications optimally on web

		servers for streamlined performance.
		• Test and validate web server configuration to ensure effective application deployment.
		• Monitor and optimize application handling for ongoing efficiency.
		• Continuously enhance web server configuration for improved application efficiency.
20	Code Deployment Efficiency: Navigating Web Application Deployment	• Design and strategize code deployment for efficient web application deployment.
		• Implement efficient deployment techniques for streamlined web applications.
		• Test and validate code deployment processes to ensure effectiveness.
		• Monitor and optimize deployment efficiency for ongoing operational excellence.
		• Continuously enhance code deployment strategies for improved efficiency and performance.
21	Data Archiving Mastery: Efficient Strategies with Object Storage	• Organize and strategize data archiving for mastery with efficient object storage.
		• Configure object storage for optimal data archiving strategies.
		• Test and validate data archiving strategies for reliability and effectiveness.
		• Monitor and optimize object storage for ongoing efficiency in data archiving.
		• Continuously enhance data archiving mastery for improved storage performance.
22	Database Performance Excellence: Optimization with Block Volume	• Assess and plan for database performance excellence with a focus on block volume optimization.
		• Integrate and configure block volume for optimal database performance.
		• Test and validate database performance optimization strategies for effectiveness.

		• Monitor and optimize block volume strategies for ongoing performance excellence.
		• Continuously enhance database performance excellence through iterative improvements.
23	File Storage Harmony: Building Collaborative Workspaces	• Plan and strategize file storage for collaborative workspaces to ensure harmony.
		• Configure collaborative workspaces with optimized file storage solutions.
		• Test and validate file storage for seamless functionality in collaborative workspaces.
		• Monitor and optimize collaborative workspaces for ongoing efficiency.
		• Continuously enhance file storage strategies to improve collaborative workspace performance.
24	Data Preservation Excellence: Long-Term Storage with Archive Storage	• Plan and strategize for long-term data preservation with a focus on archive storage.
		• Configure archive storage for optimal long-term data preservation strategies.
		• Test and validate long-term storage strategies for reliability and effectiveness.
		• Monitor and optimize archive storage for ongoing efficiency in data preservation.
		• Continuously enhance data preservation excellence through iterative improvements
25	Strategic Web Application Scaling Tactics	• Plan and strategize for web application scaling with a focus on scalability.
		• Implement scalability techniques and configurations for optimal performance.
		• Test and validate web application scaling for reliability and effectiveness.
		• Monitor and optimize scalability tactics for ongoing efficiency.
		• Continuously enhance web application scaling strategies through iterative

		improvements.
26	Efficient Batch Processing: Navigating Crucial Workloads	● Plan and strategize for efficient batch processing with a focus on crucial workloads. ● Configure for optimal efficiency in batch processing workloads. ● Test and validate batch processing efficiency for reliability. ● Monitor and optimize crucial workloads for ongoing efficiency. ● Continuously enhance batch processing strategies through iterative improvements.
27	User Access Control Precision: Strategies for Seamless Navigation	● Plan and strategize for user access control with a focus on seamless navigation. ● Configure user permissions for precise access control. ● Test and validate access control strategies for reliability and effectiveness. ● Monitor and optimize for seamless navigation through access control. ● Continuously enhance user access control precision through iterative improvements.
28	Performance Monitoring Brilliance: Insights for Optimal Efficiency	● Plan and strategize for performance monitoring with a focus on optimal efficiency. ● Configure and set up performance monitoring for insightful data collection. ● Test and validate monitoring insights to ensure reliability and effectiveness. ● Implement optimization strategies for achieving optimal performance efficiency. ● Continuously enhance performance monitoring brilliance through iterative improvements.
29	DDoS Protection Strategies: Shielding Web Applications	● Draft and plot DDoS protection for shielding web applications. ● Configure and set up DDoS protection measures to enhance security.

		• Test and validate DDoS protection strategies for reliability and effectiveness. • Implement monitoring and response strategies for web applications. • Continuously enhance DDoS protection measures through iterative improvements.
30	Layer 7 Filtering: Elevating Application Security	• Develop and strategize Layer 7 filtering for elevating application security. • Configure and implement Layer 7 filtering strategies for robust security measures. • Test and validate Layer 7 filtering for reliability and effectiveness. • Implement monitoring and response strategies for comprehensive application security. • Continuously enhance Layer 7 filtering measures through iterative improvements.
31	Compliance and Data Protection Strategies Unveiled	• Organize and device a strategy compliance for unveiling data protection strategies. • Configure and implement data protection measures for regulatory adherence. • Test and validate compliance and data protection strategies for reliability. • Monitor and report on compliance and data protection for comprehensive oversight. • Continuously enhance strategies for compliance and data protection through iterative improvements.
32	Bot Protection and Automated Threats: Navigating Real-World Scenarios	• Plan and strategize bot protection for navigating real-world scenarios. • Configure and set up bot protection measures to enhance security. • Experiment and verify bot protection strategies for reliability and effectiveness. • Implement monitoring and response strategies for handling real-world

		threats.
		● Enhance bot protection measures through iterative improvements.
33	Disaster Recovery Dynamics: Crafting Business Continuity in OCI Architecture	● Plan and chart a course on disaster recovery for crafting business continuity in OCI architecture. ● Implement business continuity measures within OCI architecture for resilience. ● Configure and set up disaster recovery systems for efficient recovery. ● Assess and validate disaster recovery strategies for reliability and effectiveness. ● Continuously enhance business continuity measures through iterative improvements
34	Scientific Research Pinnacle: High- Performance Computing in OCI Architecture	● Plan and strategize high-performance computing for scientific research. ● Integrate OCI architecture for optimal performance in scientific research. ● Allocate resources and configure settings for efficient computation. ● Implement data management and analysis strategies for research optimization. ● Optimize and scale for ongoing efficiency in scientific research.
35	Layer 7 Filtering Strategies: Elevating Application Security	● Formulate and devise a strategy on Layer 7 filtering for elevating application security. ● Configure and implement Layer 7 filtering strategies for robust security measures. ● Test and Verify Layer 7 filtering for reliability and effectiveness. ● Implement monitoring and response strategies for comprehensive application security. ● Enhance Layer 7 filtering measures through iterative improvements.
36	Archive Storage Long- Term Data Preservation Mastery	● Map out and strategize for long-term data preservation with a focus on Archive Storage.

		● Configure Archive Storage for optimal data preservation strategies.
		● Experiment and validate long-term storage strategies for reliability and effectiveness.
		● Monitor and optimize Archive Storage for ongoing efficiency in data preservation.
		● Continuously enhance data preservation mastery through iterative improvements.

Stream 2: Oracle Cloud Infrastructure Data Science Professional:

S.NO	TEST PROJECTS	TASKS
1	Navigating Global Financial Risks in the Cloud Era: A Scenario-Driven Approach for Institutions.	1. Conduct Risk Assessment Process 2. Implement Cloud Security Measures 3. Execute a Real-Time Market Monitoring and Forecasting 4. Design Disaster Recovery Plan 5. Implement a Machine Learning- Driven Fraud Detection
2	Scaling Up E-commerce Platforms: A Scenario-Centric Web Hosting Strategy for Seamless Growth.	1. Evaluate Current Infrastructure: 2. Design Scalable Hosting Architecture 3. Implement High Availability Measures 4. Design an Optimized Performance Model 5. Deploy a Secured E-commerce Platform

3	Healthcare Data in the Cloud: A Scenario-Based Journey to Optimal Electronic Health Record Management.	1. Assess Data Migration Requirements 2. Architect and build a Cloud-Based EHR Infrastructure: 3. Implement Interoperability Standards 4. Enhance Data Analytics Capabilities 5. Ensure Regulatory Compliance
4	Temperature Analysis and Prediction for Chennai City	1. Perform the Data Collection and Integration 2. Execute the Exploratory Data Analysis (EDA) for Temperature patterns 3. Feature Engineering and Selection 4. Develop Time-Series Forecasting Models for Temperature 5. Design a real-time temperature Monitoring and Alerting
5	Telecom Dilemmas: Anticipating Customer Churn through Real-Life Scenarios and Predictive Analytics.	1. Discover the Customer Behavior Analysis and Segmentation 2. Implement Predictive Analytics Models 3. Create Churn Risk Thresholds 4. Implement Proactive Retention Strategies 5. Evaluate and Adjust Strategies
6	Ensuring Manufacturing Stability: Anomaly Detection Scenarios for Equipment Reliability.	1. Identify Critical Equipment Parameters 2. Collect and Preprocess Data 3. Develop Anomaly Detection Models 4. Implement Real-time

		Monitoring and Alerts 5. Scenario-Driven Testing and Optimization
7	Financial Transactions under Scrutiny: Scenario-Driven Fraud Detection for Enhanced Security	1. Identify Fraud Scenarios 2. Implement Predictive Fraud Models 3. Set Dynamic Fraud Risk Thresholds 4. Implement Real-time Monitoring and Alerts 5. Scenario-Driven Testing and Continuous Improvement
8	Healthcare Insights Unveiled: A Scenario-Driven Exploration of Predictive Analytics in Patient Care.	1. Define Patient Care Scenarios 2. Implement Predictive Analytics Models 3. Create Dynamic Patient Risk Profiles 4. Implement Real-time Monitoring and Alerts 5. Test Using Scenario-Driven results and Optimization
9	E-commerce Personalization: Navigating Sales Landscapes with Scenario-Optimized Recommendation Systems.	1. Identify User Segments and Preferences 2. Develop Predictive Recommendation Models 3. Implement Real-time Recommendation Engine 4. Personalized Scenario-Driven Recommendations 5. Evaluate and Optimize Recommendation Performance

10	Manufacturing Efficiency Unleashed: A Scenario-Based Guide to Predictive Maintenance Excellence.	1. Identify Critical Machinery 2. Analyse the scenarios for Failure Modes 3. Develop Predictive Maintenance Models: 4. Implement Real-time Monitoring and Alerts 5. Optimize Maintenance Scheduling
11	Medical Diagnostics Revolution: Scenario-Driven AI Assistance for Healthcare Professionals	1. Define Diagnostic Scenarios: 2. Develop AI Diagnostic Models 3. Implement Real-time AI Assistance 4. Scenario-Driven Testing and Optimization 5. Evaluate and Optimize Recommendation Performance
12	Visualizing E-commerce: Scenarios Explored in Image Recognition for Enhanced Shopping Experiences.	1. Identify Key Visual Elements: 2. Develop Image Recognition Models 3. Implement Visual Search Functionality 4. Enhance Product Recommendations 5. Improve User Experience with Collected data
13	E-commerce Evolution: Dynamic Pricing Strategies Explored in Real- Life Scenarios.	1. Identify Pricing Variables 2. Develop Dynamic Pricing Models 3. Implement Real-time Price Adjustments 4. Implement and Monitor Competitor Pricing 5. Optimize Pricing Strategies
14	Enrollment Forecasting and Resource Optimization for Educational Institutions	1. Perform data Collection and Integration 2. Implement the Exploratory Data Analysis (EDA) for Enrolment Patterns

		3. Execute the Feature Engineering and Selection model
		4. Develop Time-Series Forecasting Models for Enrolment
		5. Implement and Optimize Resource Allocation Methodologies
15	Integrated Wellness Insights: A Journey through Patient Health Data Integration, Diagnostic Predictive Modeling, and Treatment Optimization Algorithms."	1. Integrate Patient Health Data 2. Develop Predictive Diagnostic Models 3. Implement Treatment Recommendations 4. Enable Patient-Centric Insights 5. Continuous Monitoring and Optimization
16	Guardians of Integrity: Unveiling Real-Time Transaction Monitoring, Behavioral Analytics, and Machine Learning-Driven Anomaly Detection for Automated Fraud Prevention and Regulatory Compliance.	1. Implement Real-Time Transaction Monitoring 2. Integrate Behavioral Analytics Model 3. Utilize Machine Learning-Driven Anomaly Detection 4. Device Automated Fraud Prevention Strategies 5. Ensure Regulatory Compliance
17	Telecom Survival Guide: Scenario- Driven Customer Churn Prediction for Sustained Success.	1. Define Churn Scenarios 2. Implement Predictive Churn Models 3. Set Dynamic Churn Risk Thresholds 4. Implement Proactive Retention Strategies 5. Scenario-Driven Testing and Continuous Improvement
18	Student Performance Prediction and Intervention	1. Implement the Data Collection and Integration process 2. Perform the exploratory

		Data Analysis (EDA) for Academic Patterns
		3. Perform the feature Engineering and Selection process
		4. Develop Predictive Models for Student Performance
		5. Implement Intervention Strategies
19	Health Data Sharing Revolution: Federated Learning Scenarios for Secure Healthcare Collaboration.	1. Identify Federated Learning Use Cases
		2. Establish Secure Federated Learning Infrastructure
		3. Develop Federated Learning Models
		4. Implement Scenario-Driven Data Sharing Policies
		5. Evaluate Performance and Optimize Federated Learning
20	Manufacturing Excellence: Supply Chain Optimization Explored in Real-World Scenarios.	1. Identify Critical Supply Chain Nodes
		2. Implement Predictive Analytics for Demand Forecasting
		3. Optimize Inventory Management
		4. Scenario-Driven Supplier Relationship Management
		5. Real-Time Supply Chain Monitoring and Alerts

Stream 3: Oracle Apex

LEARNING OUTCOME	ASSESSMENT CRITERIA	USE CASES
1. Develop database applications on Oracle APEX using the Oracle	1. Evaluate the intuitiveness and responsiveness of the application's interface on different devices. 2. Assess the efficiency	**Use Case 1**: Online Retail Management System Scenario: A company wants to develop an online retail management system to handle product inventory, customer

| Autonomous Database. | of data storage, retrieval, and manipulation within the Oracle Autonomous Database.
3. Ensure protection against common vulnerabilities like SQL injection and cross-site scripting.
4. Measure the application's speed and responsiveness, particularly during heavy usage or data processing.
5. Evaluate the application's ability to handle increasing data volumes and user loads. | orders, and shipping logistics efficiently. They decide to use Oracle APEX with the Oracle Autonomous Database for its scalability and reliability.
Tasks: Database Design: Create tables for product inventory, customer information, orders, and shipping details using Oracle APEX's intuitive interface. Define appropriate relationships between tables to ensure data integrity. Customize the interface to meet the specific needs of the retail company.
Use Case 2: Healthcare Patient Management System
Scenario: A healthcare provider needs a robust patient management system to store patient records, schedule appointments, and manage medical history securely. They opt for Oracle APEX with the Oracle Autonomous Database to ensure compliance with regulatory requirements and data security standards.
Tasks: Develop custom forms and reports in Oracle APEX to capture patient demographics, medical history, and appointment scheduling. Integrate validation rules to ensure data accuracy and consistency throughout the application. |

2. Utilize SQL Workshop to create and manage database objects.	1. SQL Workshop interface for creating and managing database objects 2. SQL Workshop- comprehensive range of tools for database object creation and management, including tables, views, and procedures 3. Performance: Evaluate the speed and responsiveness of SQL Workshop when executing commands and managing large datasets to ensure efficiency. 4. Assess the security measures implemented in SQL Workshop to protect sensitive data and prevent unauthorized access	**Use Case 1**: Creating Tables for an E-commerce Website Scenario: A startup e-commerce company needs to set up its database to store product information, customer details, and order data. Task: Using SQL Workshop, the developer creates tables for storing product information, customer details, and order data. **Use Case 2**: Managing User Authentication for a Web Application Scenario: A web application requires user authentication to access certain features and data. Task: Using SQL Workshop, the developer creates and manages database objects for user authentication.
3. Build interactive reports, grids, and application page controls.	1.Evaluate intuitiveness of controls and check responsiveness to user actions. 2. Functionality: Ensure all features work as intended and Verify reports generate accurate data, test grid sorting and filtering functionality. 3. Assess ability to customize report layouts and check options for adding new controls. 4. Measure speed and efficiency and test loading times for large datasets.	**Use Case 1:** Sales Dashboard Scenario: A sales manager wants to monitor the performance of the sales team and track key metrics in real-time. Task: Develop an interactive sales dashboard that displays metrics such as total revenue, sales growth, and top-selling products.. Implement interactive charts and graphs to visualize trends and comparisons, enabling the manager to make informed decisions quickly. **Use Case 2:** Inventory Management Grid Scenario: A warehouse supervisor needs to efficiently manage inventory levels and

	5. Ensure compatibility across devices and browsers and test functionality on various browsers.	track stock movements. Task: Implement intuitive controls for editing, adding, or removing inventory items directly within the grid, streamlining the inventory management process.
4. Enhance applications with computations, processes, validations, and dynamic actions.	1.Ensure computations and validations produce correct result and verify outputs against expected values, conduct thorough testing with various input scenarios. 2. Analyze algorithms for time and space complexity. Implement caching and algorithmic improvements where possible. 3. Employ robust error-checking mechanisms and monitor system behavior under stress conditions. 4.Evaluate performance metrics under load testing and implement horizontal and vertical scaling strategies.	**Use Case 1:** Financial Calculation Module Scenario: In a banking application, users need to calculate loan repayment schedules based on different interest rates and loan terms. Task: Implement validation checks to ensure user-provided data is within acceptable ranges and perform necessary data sanitization. **Use Case 2:** Real-Time Chat Application Scenario: In a messaging platform, users want to see typing indicators and message delivery statuses in real-time. Task:Implement dynamic actions to display typing indicators when users start typing messages, enhancing the interactive experience.
5. Implement search filtering, form creation, navigation, and theming.	1.Assess the speed and responsiveness of the search filter, ensuring quick retrieval of results even with large datasets. 2.Evaluate the ease of creating forms, including intuitive layout options and clear instructions for input fields. 3. Navigation:Measure how easily users can navigate between different sections or pages of the application,	**Use Case 1:** E-commerce Platform Scenario:A user visits an e-commerce platform and wants to filter products by price range, brand, and availability. Task:Develop a filter sidebar allowing users to refine search results based on various criteria.Design a user-friendly registration form with fields for personal information, address, and account credentials. **Use Case 2:** Content Management System

	assessing the clarity of navigation menus and buttons. 4. Evaluate adherence to accessibility standards (e.g., WCAG), ensuring that all users, including those with disabilities, can access and interact with the application effectively.	Scenario:An admin needs to navigate through different sections of a content management system to manage articles, media, and user permissions. Task: Implement a navigation menu with dropdowns or tabs for easy access to different sections of the CMS.
6. Manage application data, and security, and migrate development between environments.	1. Assess how effectively the application handles data storage, retrieval, and manipulation. 2. Evaluate the organization of data structures, database performance, and data integrity measures. 3. Analyze the ease and efficiency of transferring the application between development, testing, and production environments 4. Evaluate the application's ability to handle increased workload or user base without compromising performance.	**Use Case 1:** Secure Data Migration Scenario: During the development phase, the development team needs to migrate sensitive user data from a local development environment to a staging environment hosted on a cloud platform for testing purposes. Task: 1. Implement secure data transfer protocols such as TLS encryption to ensure data confidentiality during migration. 2. Configure access controls and authentication mechanisms to restrict unauthorized access to the migrated data in the staging environment. **Use Case 2:** Database Backup and Recovery Scenario: In the production environment, the application encounters a critical failure resulting in data loss. The development team needs to restore the application to a previous state using backup data. Task: 1. Regularly schedule automated database backups to capture the

		application's current state at defined intervals. 2. Implement a robust backup and recovery strategy, including offsite storage of backups and testing of restoration procedures, to ensure minimal data loss and downtime in the event of a system failure.

STREAM 4: ERP

List of Use Cases		
S. No	**Use Cases**	**Modules / Tasks**
1	Streamlined Invoice Management and Customer Payment Processing	● Create and Manage Customer Invoices in Oracle Financials ● Record and Apply Customer Payments Using ERP System ● Generate Detailed Accounts Receivable Reports in Excel ● Handle Customer Disputes and Payment Adjustments ● Review and Finalize Invoice to Cash Cycle
2	Efficient Vendor Management and Payment Processing	● Create and Manage Purchase Orders in Oracle Financials ● Vendor Setup and Payment Processing Workflow ● Generate Comprehensive Accounts Payable Reports Using Excel ● Handle Supplier Disputes and Adjustments in Oracle ● Review and Finalize Procure to Pay Cycle
3	Effective Budget Management and Financial Reporting	● Set Up and Manage Budgets in Oracle Financials ● Generate Budget Reports and Analyse Variances Using Excel ● Integrate Financial Data from ERP for Reporting ● Create and Manage Financial Dashboards for Analysis ● Review and Finalize Budget to Report Cycle
4	Asset Management and Retirement Planning	● Track and Manage Assets in Oracle Financials ● Plan and Execute Asset Retirement Procedures Generate Detailed Asset Management Reports Using Excel ● Handle Depreciation and Asset Adjustments ● Review and Finalize Asset to Retirement Cycle
5	Accounting Transformation and Data Integration	● Configure and Implement Accounting Transformation Rules ● Integrate Financial Data from Various Sources ● Generate Consolidated Financial Reports in Excel

		● Handle Data Validation and Error Resolution ● Review and Finalize Accounting Transformation Cycle
6	Comprehensive Financial Analysis and Reporting	● Conduct Financial Analysis Using Oracle Financials Data ● Generate Custom Financial Reports in Excel ● Analyse Financial Trends and Forecasting ● Create Interactive Financial Dashboards ● Review and Finalize Financial Analysis Reports
7	Customer Relationship Management and Financial Integration	● Integrate Customer Data with Financial Systems ● Manage Customer Accounts and Transactions ● Generate Customer Financial Reports Using Excel ● Analyse Customer Financial Trends and Patterns ● Review and Finalize Customer Financial Integration
8	Procurement Planning and Supplier Collaboration	● Develop Procurement Plans Using Oracle Financials ● Collaborate with Suppliers and Manage Contracts ● Generate Procurement Reports and Analyse Data ● Manage Supplier Performance and Compliance ● Review and Finalize Procurement Plans
9	Advanced Cash Flow Management and Forecasting	● Monitor and Manage Cash Flow Using Oracle Financials ● Generate Cash Flow Reports and Forecasts in Excel ● Analyse Cash Flow Trends and Patterns ● Implement Cash Flow Optimization Strategies ● Review and Finalize Cash Flow Management
10	Integrated Financial Risk Management and Compliance	● Identify and Assess Financial Risks Using Oracle ● Develop Risk Mitigation Strategies and Plans Generate Risk Management Reports in Excel ● Ensure Compliance with Financial Regulations ● Review and Finalize Risk Management Strategies
11	Revenue Recognition and Financial Reporting	● Implement Revenue Recognition Rules in Oracle ● Generate Revenue Reports and Analyse Trends ● Integrate Revenue Data with Financial Systems ● Handle Revenue Adjustments and Disputes ● Review and Finalize Revenue Recognition Cycle
12	Financial Performance Monitoring and Reporting	● Monitor Financial Performance Using Oracle Financials ● Generate Performance Reports and Analyse Data ● Develop Key Performance Indicators (KPIs) ● Create Performance Dashboards for Management ● Review and Finalize Performance Reports
13	Expense Management and Cost Control	● Track and Manage Expenses Using Oracle Financials ● Generate Expense Reports and Analyse Data ● Implement Cost Control Strategies and Measures ● Handle Expense Adjustments and Disputes ● Review and Finalize Expense Management Cycle

14	Integrated Financial Planning and Analysis	- Develop Financial Plans Using Oracle Financials - Generate Financial Planning Reports in Excel - Analyse Financial Data for Planning and Forecasting - Create Interactive Planning Dashboards - Review and Finalize Financial Plans
15	Supplier Performance and Contract Management	- Manage Supplier Contracts Using Oracle Financials - Track and Evaluate Supplier Performance - Generate Supplier Performance Reports in Excel - Handle Supplier Compliance and Issues - Review and Finalize Supplier Management
16	Project Accounting and Financial Integration	- Implement Project Accounting Rules in Oracle - Integrate Project Data with Financial Systems - Generate Project Financial Reports in Excel - Analyse Project Financial Performance - Review and Finalize Project Accounting Cycle
17	Regulatory Compliance and Financial Reporting	- Ensure Compliance with Financial Regulations Using Oracle - Generate Compliance Reports and Audit Data - Handle Regulatory Changes and Updates - Integrate Compliance Data with Financial Systems - Review and Finalize Compliance Reports
18	Financial Data Security and Privacy Management	- Implement Financial Data Security Measures Using Oracle - Monitor and Manage Data Access and Permissions - Generate Security Reports and Analyse Data - Handle Data Breaches and Security Incidents - Review and Finalize Data Security Measures
19	Integrated Financial Systems and Data Management	- Integrate Financial Systems Using Oracle Financials - Manage Financial Data Across Systems - Generate Consolidated Financial Reports in Excel - Ensure Data Accuracy and Consistency - Review and Finalize Data Integration
20	Advanced Financial Reporting and Data Visualization	- Develop Advanced Financial Reports Using Oracle - Create Data Visualizations for Financial Analysis - Generate Interactive Financial Dashboards - Analyse Financial Data for Insights - Review and Finalize Financial Reports