



ORACLE PROGRAMMING

USING

PL/SQL

Oracle Programming Using PL/SQL Course Overview

This course introduces students to PL/SQL, Oracle's procedural extension language for SQL and the Oracle relational database. Participants explore the differences between SQL and PL/SQL. They also examine the characteristics of PL/SQL and how it is used to extend and automate SQL to administer the Oracle database. This course culminates with a project that challenges students to program, implement, and demonstrate a database solution for a business or organization.

Pre-Requisites

 Previous experience with at least one programming Language.

Course Outline

The contents of this course are designed to support the course objectives. The following focus areas are included in this course:

- Module 1: Fundamentals
- Module 2: Defining Variables and Datatypes
- Module 3: Using SQL in PL/SQL
- Module 4: Program Structures to Control Execution Flow
- Module 5: Using Cursors and Parameters
- Module 6: Using Composite Datatypes
- Module 7: Exception Handling
- Module 8: Using and Managing Procedures
- Module 9: Using and Managing Functions & Packages
- Module 10: Getting the Best out of Packages
- Module 11: Improving PL/SQL Performance
- Module 12: Using and Managing Triggers
- Module 13: Recognizing and Managing Dependencies
- Module 14: Using the PL/SQL Compiler

We request you to nominate 1 or 2 faculty members from your institution.

Programme Details:

- > Duration: 5 Days
- > Program Date 24th to 28st February 2020
- > Timings: 09:00 AM - 04:30 PM
- Venue: Velagapudi Ramakrishna Siddhartha Engineering College
- > To know more, contact:

 Dr D Rajeswara Rao,
 +91 7358666163
 - $\underline{\mathsf{hodcse@vrsiddhartha.ac.in}}$
- > Training Fee
 Free

REGISTER NOW

- Resource person will be deputed from Oracle.
- Attendance is mandatory for the entire duration of FDP.
- Working lunch will be provided to the registered participants.

Register@ http://www.ictacademy.in/pages/login.aspx?ReturnUrl=%2fPages%2f Userlogin%2fFDPRegistration.aspx%3fsno%3d1763



Velagapudi Ramakrishna Siddhartha Engineering College

Autonomous, Affiliated to JNTU Kakinada Kanuru, Vijayawada 520007

Department of Computer Science and Engineering

REPORT ON ONE WEEK Faculty Development Program on

Oracle Programming using PL/SQL

24th - 28h FEBRUARY, 2020

collaboration with and ICT Academy and ORACLE



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

One Week Faculty Development Program on

ORACLE PROGRAMMING USING PL/SQL



From 24th to 28th February, 2020





VELAGAPUDI RAMAKRISHNA SIDDHARTHA ENGINEERING COLLEGE

(AUTONOMOUS) SPONSORED BY SIDDHARTHA ACADEMY OF GENERAL & TECHNICAL EDUCATION, VIJAYAWADA-520007, A.P.

The Department of Computer Science and Engineering, V R Siddhartha Engineering College has successfully organized a One week FDP on "Oracle Programming using PL/SQL" during 24th - 28th February 2020 in collaboration with ICT Academy and ORACLE. The aim of this FDP is to promote research and academic aspects in Oracle data base like PL/SQL and SQL etc.

Mr. Bhimal kr jain Trainer deputed from Oracle acted as the resource person for this program. He has many technical certifications and organized numerous training programs in the domain of Databases.



The following objectives:

- ➤ Compare and contrast between PL/SQL, SQL, other programming languages and Oracle products.
- ➤ Demonstrate and configure the SQL Lite for implementing PL/SQL programs like Pl/SQL blocks, variables in PL/SQL, scalar and composite data types and implicit and explicit conversion of data types.
- List and Define the different types of lexical units, valid and invalid identifiers, reserve words, delimiters and literals.
- ➤ Create PL/SQL code that follows formatting guidelines to produce readable code i.e insert, Update, Delete, Merge data into database table.
- Construct and execute an INTO clause to hold the values returned by a single-row SQL SELECT statement, PL/SQL statements that manipulate data with DML statements and case statements in PL/SQL
- > Create PL/SQL containing a basic loop and an EXIT statement with conditional termination



The training program for this Faculty Development Program has been divided into the following modules:

Module 1: Fundamentals

Module 2: Defining Variables and Datatypes

Module 3: Using SQL in PL/SQL

Module 4: Program Structures to Control Execution Flow

Module 5: Using Cursors and Parameters

Module 6: Using Composite Datatypes

Module 7: Exception Handling

Module 8: Using and Managing Procedures

Module 9: Using and Managing Functions & Packages

Module 10: Getting the Best out of Packages

Module 11: Improving PL/SQL Performance

Module 12: Using and Managing Triggers

Module 13: Recognizing and Managing Dependencies

Module 14: Using the PL/SQL Compiler







A total of 29 faculty members from both the host college and other external colleges of Andhra Pradesh have attended this program. The training schedule covered a total of 8 hours of training per day starting at 10 AM till 6 PM every day on the training days.

The faculty have been trained on concepts related to how to install, configure, and implement Pl/SQL programs. They will learn to use the iLearning resources for semester and end exams conducted by Oracle.





On the final day of the program, valedictory session was conducted where the faculty gave their feedback about the program and then followed by award of certificates to the faculty members.









Bimal Kr. Jain



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E-mail: bimalkj@gmail.com

Professional Certification

- 1. RHCE
- 2. SCA SuSE certified Administrator
- 3. SCE SuSE certified Engineer
- 4. SCI SuSE certified Instructor
- 5. Lineo Embedix
- 6. Microsoft certified (C# Programming)
- 7. OCP Oracle database 11g administration
- 8. OCP Java SE6 Programmer



Work Experience 23 Yrs

1. Real life configurations and deployments

- Little Flower School, Narbheram hansraj school Jamshedpur (Linux, thin client on linux)
- Loyola School Jamshedpur (Novell 3.12, Windows NT, Linux, Samba 4 AD)
- Sacred Heart Convent School Jamshedpur (PXE diskless boot with Linux server)
- Narbheram Motors Jamshedpur (Intranet and Dialup networking using NT and Linux)
- IIIM, IICT, CMC, Adityapur Polytechnic, AL-Kabir polytechnic (Novell 3.12 with Linux)
- XLRI Jamshedpur (Mail/DNS/Web/DHCP/FTP/Firewall Linux)
- Patna women's College (Linux, Oracle10g database, Developersuite and AS on linux platform)
- NAZARETH HOSPITAL, Tripolia Hospital Patna (RedHat Linux)
- Tata Limited Jamshedpur (RedHat Linux with Internet and firewall, MS SQL replication)
- SparX Technologies Pvt Ltd Jamshedpur (SuSE Linux, IPSec VPN)
- Safal Solution Pvt Ltd , Secunderabad (MySQL Cluster, Asterisk VoIP exchange)
- CMPDI Ranchi (SuSE Linux cluster with Firewall, Proxy, Mailing on SCALIX/LDAP and Oracle DB 10g, Database and application migration from MS SQL server/ASP to Oracle DB/PHP)
- SMPL Jamshedpur (RedHat Linux with ZIMBRA, LDAP, Proxy, Samba 4 AD, Fetchmail)
- SAIL RDCIS Ranchi (HP Blades with HP SAN, Oracle RAC on Linux)
- Anteras Bengaluru (Postgres EDB with HA on Linux, Mulitipath)
- Kyocera CTC Jamshedpur (Zimbra mail server/Gateway/Firewall on linux, Oracle Database 11qR2 on Linux, Oracle Weblogic server with forms and report service on linux)
- BRLP Patna (Zimbra mail server on linux with archiving)
- Maha Bodhi Hotel Bodhgaya (Hotspot server with authentication server on Linux)
- TATA METALIKS Kharagpur (Zimbra mail server on Linux)
- TATA STEEL Jamshedpur (Automatic Barriers programmed with PLC and Infrared sensors)
- TRF Jamshedpur (Intranet server using Joomla CMS with Linux)
- IISCO Steel plant Burnpur (Oracle Database 11g database and Oracle 11g Weblogic server with Forms and reports services on linux)

2. Technology Consultant

- SAFAL Solutions Pvt Ltd. (Embedded system, Smartcard, Linux)
- SPARX Technologies Pvt Ltd (Linux, Networking, Development)
- Eastern Compunet Jamshedpur (Linux, Electronics, Embedded systems)
- PRADAN Delhi (Linux, PHP, MySQL)
- Intrahealth Lucknow (Android, Linux)
- Anteras Bengaluru (Postgres, Tomcat)
- Sigma computers Ranchi (Linux)
- WATR Bengaluru (Android, PHP)

Work Experience 23 Yrs

3. Research and development in Integration of technologies (Software, Electronics)

• Wire fault detection system

System to detect cracks in wire production and log the fault data with timestamp <code>Software used</code> : Pyhton, C, Sqlite , LABVIEW

Hardware used: Raspberry Pi, ATMEGA168, LCD, ADC, Buzzer

• Coach Guidance System (Currently running at Rly Stn of TATANAGAR)

LEDs matrix based Coach guidance system for Rlys for displaying Coach nos. All the matrix are connected in RS-488 bus for long distance communication.

Hardware used: Microcontroller (AT89c52), Shift register, RS-488 decoder Software used: Assembly Language, embedded C, MySQL

• Online digital audio mixer with PFL (ALL India Radio, Jamshedpur)

Digital audio mixer which has software interface to control.

Hardware used: Microcontroller (AT89c52), Relays, DAC, RS-232/RS-488 decoder Software used: Assembly Language

• **GPS navigation with RTC** (Railway)

GPS navigator with real time clock. (18ns accuracy)

Hardware used: AVR atmega162, Garmin OEM GPS module, RS-232/RS-488 decoder Software used: Assembly Language, embedded C, MySQL

Water pump controller with real time level monitoring and logging

Water level sensing with automatic stop and start of motor. Real time display of water level with 0.5 cm accuracy. Data logging for water usage and filling. Web based dashboard for controlling the motor and displaying current water level.

Hardware used: Raspberry Pi 2, Ultrasonic sensor, Solid stat relay

Software used: Python, C, PHP

• Bell ringer with RTC (School)

PC and GPS synchronized real time clock. 7 day different schedules up to 20 times/day can be stored (140 schedules). School can configure different timing for bell for weekdays and can run standalone.

Hardware used: Microcontroller (AVR atmega162), Garmin OEM GPS module, USB-serial module, LCD, Solid state relay

Software used: Assembly Language, embedded C, Delphi (PC interface)

• Industrial OCR for production plant

Automatic detection of engraved writing on produced items. OCR data logged to database with timing and compared against existing listing to find duplicates.

Hardware used: Industrial camera, Light strip

Software used: Tesseract API, C, PHP (Web interface)

• Scheduled imaging/processing to database

User can define the schedules for every day for automatic image capture. Images are stored in Oracle database BLOB fields. With image processing system finds out volume of material. Hardware used: Industrial camera

Software used: Visual C++ with camera API, Oracle Database API

• Smart Annunciator panel

48 channel for fault input with centralized monitoring and logging. Apart from LED panel big LCD screen is also programmed for better viewing.

Hardware used: AT MEAGA168, Raspberry Pi with HDMI

Software used: Embedded C, Python, PHP

• Smart power controller

16 channel power module with Bluetooth connectivity. Any electrical gadgets like AC, lights, fans etc. can be connected to these channels and can be controlled by mobile app or website.

Hardware used: Raspberry Pi 3, Solid state relay, RTC

Software used: Python, Delphi (PC interfacing)

• Engine RPM counter and logger

Real time Alternator RPM counter with logging of data to sdcard (time and RPM)

Hardware used: Teensy 3.1, SD Card writer, RTC

Software used: Embedded C, Delphi (PC interfacing)

• 16 digital + 2 Analog channel Wireless controller

16 digital data and 2 analog data can be transmitted to remote module without any wire (2Km range).

Hardware used: ATMEGA48, XBee PRo

Software used: Embedded C

Education

MCA

Experience in Corporate Training

- Linux RHCE/RHCS, Administration, Clustering, Performance tuning, Virtualization, Docker, Kubernates, OpenStack, OpenShift - Atos - Mumbai, ONGC - Mumbai, Indian AirForce - Delhi, Cognizant (Kolkata), Nokia Siemens Network NSN (Delhi, Bangkok), HCL -Noida, Microsoft - (Hyderabad, Bengaluru), continuum mumbai
- Unix Shell scripting Allianz Cornhill (Trivandrum), IBM Chennai, Delhi, Cap Gemini Kolkata
- 3. LAMP, AJAX, Open Source CMS (Joomla, PHP-Nuke) Symbiosis PUNE, SAFAL Solutions (Secunderabad), Wipro Delhi, IICM Ranchi, TechMahindra Bengaluru, Parthivi Engineering College Bhilai
- 4. C API for MySQL SAFAL Solutions Pvt Ltd. Secunderabad
- 5. Smalltalk using VisualWorks IBM, Accenture, Honeywell Bengaluru, CGI
- 6. JAVA Satyam Chennai, IICM Ranchi, CMPDI Ranchi, EMC Bengaluru
- 7. Advance JAVA SAIL MTI Ranchi, SAIL Bhilai Steel Plant
- 8. .NET training SAIL MTI Ranchi, CMPDI Ranchi, SATYAM Chennai, IICM Ranchi
- VoIP platform with Asterisk (Open source Telephony) Safal Solutions Hyderabad
- 10. TCL/TK Training SAFAL Solutions Pvt Ltd Secunderabad, CGI
- 11. Linux Device Driver, Advanced .NET, Core JAVA & J2EE Satyam Chennai, Hyderabad
- 12. Ruby, Ruby on Rails Wipro Chennai, xchanging banglore
- Mariadb/Galera/Percona/MySQL with Cluster SAFAL Solutions Pvt Ltd Secunderabad, Netmagic Solutions Pvt. Ltd.- Mumbai, RPS – Hyderabad, ORACLE – Bengaluru, Cognizant – (Pune, Chennai, Bengaluru), Qualcomm – Bengaluru
- 14. MySQL Stored Procedure and triggers SARAL Services (Secunderabad)
- 15. Oracle to MySQL Migration (Data and code) ciena Delhi
- 16. MSSQL to MySQL Migration Honeywell banglore, CMPDI Ranchi
- 17. Oracle DBA 10g/11g IICM Ranchi, SAIL MTI Ranchi, SAIL Bhilai
- 18. DB2 developer IBM Kolkata
- 19. Delphi Wipro Kolkata, Infosys Hyderabad, CSC Hyderabad, IBM Chennai
- Python Nomura Mumbai, Cognizant Kolkata, Safal Solutions Hyderabad, HP Bengaluru, GenPact Kolkata
- 21. Solaris administration Accenture Kolkata
- 22. LAMP training with YII MVC framework, Android Ministry of agriculture Ethiopia
- 23. PERL Accenture Kolkata
- 24. Advance LAMP Tech Mahindra Bengaluru
- 25. BigData NoSQL (Hbase, Cassandra) EMC Bengaluru, BMC Software Pune
- 26. SuSE Linux clustering HP Bengaluru, NTTDATA
- 27. ArcGIS server on linux CyberTech Mumbai
- 28. Cache Database and Delphi Cognizant Chennai
- 29. Linux and NAGIOS ActTV Bengaluru
- 30. RedHat Enterprise Linux performance tuning HCL Noida
- 31. Postgres DBA and developer training Anteras, Infosys, Siemens Benguluru, TCS Chennai
- 32. Advance Linux implementation (Zimbra, Hadoop) Eclerx Mumbai
- 33. iOS App development and deployment Tata Steel Jamshedpur
- 34. Android IICM Ranchi, Safal solutions Hyderabad, CMPDI Ranchi
- 35. IOT CMPDI Ranchi

36. Oracle University Training

- a) Oracle DataBase 12c/18c
- b) Oracle Database Performance tuning
- c) Oracle Autonomous Database
- d) Oracle Exadata
- e) Oracle Exalogic
- f) Oracle GoldenGate
- g) JAVA Programming
- h) Oracle VM Administration and Implementation
- i) Oracle MySQL Administration, Performance Tuning,
- i) PHP/MySQL
- k) SQL/PLSQL
- I) Solaris
- m) ZFS
- n) Oracle Cloud Data integration
- o) Oracle Commerce/ATG
- p) Oracle Solaris
- q) Oracle Super Cluster
- r) Oracle Private Cloud Appliance
- s) Oracle Linux

Key Strength

- Ability to manage teams effectively
- An analytical approach to problems
- Ability to grasp concepts easily
- Ability to work with New and upcoming Technology

Real Life Projects

• Subscriber management system for cable service providers

Software to automate operations of CSP. Automated billing, Integration with Conditional Access System (CAS of irdeto, NDS), POS handheld

Software used: PHP, Pyhton, MySQL, C

Platform: Server on Linux, Nodes (Browser based)

Implementation site: SAFAL Solutions Pvt Ltd - Hyderabad.

Mobile based new born care

Mobile based application for new born and mother care. Pregnant registration, Birth/Death reporting, Home visit scheduling, Voice/Image based questionnaire, Classification of new born, Remedy, Centralized tracking

Software used: Android SDK, PHP, SQLITE, JAVA

Platform : Android based smartphone

Implementation site: JHANSI

Touch screen based PNR and accommodation availability Railway

Kiosk application for passengers travelling in railway

Software used: JQuery, php, javascript, Python

Platform: Linux

Implementation site: Railway station of TATANAGAR, RANCHI, ROURKELA, JHARSUGDA

EPG Grabber

Collection of Electronic Program Guide(EPG) for all available channels and conversion into various format for integration with CAS.

Software used: JAVA, XSLT, Python Platform: Linux/Windows, DreamBox

Implementation site: SAFAL Solutions PVT. LTD. - Hyderabad

• Real-time asset monitoring system

Software to automate the monitoring and controlling the assets remotely. It also gives you geo-position of your device in Google-map

Software used: PHP MySQL, Python, Google-map API Platform: Linux/Windows, Garmin GPS Receiver

Implementation site: Many sites of Tata steel mines and Airtel

• GMI Measurement System

LABVIEW based system for plotting graph for data integration of Gauss meter,

Impedance analyzer and power supply

Software used: NI LABVIEW

Platform: Windows

Implementation site: NML Jamshedpur

Industrial Dashboard for production monitoring

Dashboard taking live feed from fields and updating based on logic.

Software used: Python, MySQL

Platform: Raspberry PI

Implementation site: Tata Tubes Division

Internet access control

For controlling internet access to predefined users using prepaid coupons.

Software used: Python, Mysql, PHP, iptables

Platform: Linux

Call Centre for Agro Advisory Information System

Call centre for the agriculture information via mobile phones and Voice channels of Normal phones. Facility for Conference, Call logging, Authentication, Voice menu Software used: Pyhton, C, Asterisk Open source PBX, MySQL

Platform: Linux, Symbian 9.1

Implementation site: Safal Solutions (Secunderabad)

SMS Gateway (Currently running at KGP, Ranchi RlyStation)

Automation of GSM and CDMA messaging through computer. PC interfacing of any GSM phone for automatic SMS sending and receiving.

Hardware used: GSM Nokia mobile phone, USB Serial data interface for Nokia phone

Software used: Assembly Language, Delphi, MySQL

Network equipment monitoring

Dashboard to show usage and failure of critical network equipment by taking SNMP traps into reading.

Software used: TCL/TK,Python (Raspberry pi)

Platform: Linux

Power controller based on global schedule

System to control and monitor power hungry equipment based centralized schedule which can be given per day basis given by user.

Software used: PHP, Python

Technical Proficiency	OS Platforms	FreeBSD, SCO Unix, Linux, AIX, Solaris, QNX , OS/2 , Mac OS X	
	Programming Languages	C/C++, Java, Perl, Assembly, TCL/TK, smalltalk, Python, PHP, Ruby	
	SCM, Version control	svn, cvs, git	
	Linux skills	Distributions Slackware, Mandrake, Caldera, RedHat EL, Oracle unbreakable linux, CentOS, Engard, miniLinux, Fedora core, SuSE, Debian, UBUNTU Projects Linux router, LTSP, Oracle 8/9i/10g/11g on Linux, Firewalls, FAX, Intranet (Apache, PHP, MySql, Bind, DHCPd, Sendmail, IMAP etc), Bandwidth management, Cluster, RAID, Smart Card readers, Netware Emulation, Samba with AD, Backup Server, Thin client, ,SuSE Linux Open exchange Server, IDS, Application development for Linux Handhelds, ASTERISK (VoIP + POTS) Implementation, OCFS2, GFS, GPFS, Redhat Directory Service (RHDS), Zimbra, Scalix Programming Device drivers, Kernel Threads, IPC, Serial Port, Socket, Network, Interactive Voice Response System (IVRS), CORBA, X-windows, QT for GUI of embedded linux box Scripting bash, korn, sh, csh, perl, sed, awk, python	
	Database	MySQL, PosgreSQL, ORACLE Database , Oracle Exadata	
	Big Data/NOSQL/Misc.	Hadoop, Apache Cassandra, MongoDB, HBase, Spark	
	Cloud infrastructure/Service	OpenStack, OpenShift, Oracle Exalogic	
	Content Management System, e- commerce	Joomla, Wordpress, Drupal, magento, osCommerce, xCart, openCMS	
	Programming for Web	Java script, PHP, JSP, ASP.Net, Perl, CGI, WAP, AJAX, RUBY on Rails, JQuery, JQuery-UI, JQ-Grid, Angular JS, NodeJS, groovy, Coldfusion, Elasticsearch, Logstash, Google API (MAP, Translation), Symfony, Laravel, YII, Selenium, Zend framework, Scala, ArcGIS, Django	
	Application server	JBOSS, TOMCAT, Geronimo, Oracle 10/11gAS , Weblogic	
	Markup Language	HTML, DHTML, WML, XML(XSLT,XPATH,XQUERY,DTD, VoiceXML)	

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	Development Environment	Eclipse, Solaris Studio, JDeveloper, NetBeans, Oracle Developer suite (Forms and Report), AVR Studio, Android studio, Xcode, Visual studio Xamarian studio (mono), Delphi, Embarcadero RAD Studio, Powerbuilder			
	UNIX System Programming	C, C++, xWindows/MOTIF, Device drivers, Serial Port, Socket programming, Network Programming			
	Data Base Programming	Legacy (DBase, FoxBase, FoxPro, Clipper), SQL, PI/SQL, TSQL			
	Industrial Automation/AI/ML	LabView, Matlab, SCADA, Scikit-learn, Tensorflow, Pandas, Matplot			
	Mobile programming	Android, iOS, Symbian Programming of HandHelds, PDAs (Simputer, PALM III, Pocket PC), Programming of SMART Card (Memory card and Processor card), Microcontroller based development (8051/AVR and PIC from Philips/ATMEL/Texas Instruments/MICRO CHIP), RTOS, PLC Programming, Wind River Linux, Raspberry PI, FreeSOC, CubieBoard, Arduino, Teensy, BananaPi ,BeagleBone, Cypress PSoC 5LP Development Kit, ESP8266 board, RDK-B/V with Raspberry PI Microcontroller (8051, AVR, PIC, STM), ARM Cortex, Circuit designing, PCB designing with PROTEL and Eagle, LCD Interfacing, RS232 and RS488 interfacing, PLC Programming, I2c/SPI interfacing, Custom design with Verilog VHDL, RFID, GPS receiver, RTC, Xbee Pro, Ultrasonic sensor, Time of Flight sensor			
	Embedded System/Internet of Things(IOT)				
	Electronics				
Hobbies	Music, Photography, Cognitive Science, Study of New subjects				
Personal Data	Birth Date : June 20, 1978		Marital Status : Married		
	Gender : Male Updated on : Jan 19		Nationality : Indian		