

TERMS OF REFERENCE FOR ASSISTANT DATABASE ADMINISTRATOR

Contract: NP-DOCR-24932-CS-INDV			
Project	SSSPCR - Strengthening Systems for Social Protection and Civil Registration Project		
Expertise/Position: ASSISTANT DATABASE ADMINISTRATOR			
Source	National	Category	Individual

1. Background:

The DONIDCR is the agency charged with the responsibility of managing CR and administering the SSAs in Nepal. The SSA is the largest of the social assistance programs in Nepal. The five SSA schemes on old-age pension, single woman's pension, the child grant, disability grant, and endangered ethnicity grant together reach more than 2.2 million individual beneficiaries. For the SSA program, MOHA has relied on manual recording of beneficiary information and benefit payments by local officials. The manual and decentralized record keeping of beneficiary information is a major hurdle for addressing issues of duplication, under-coverage, and weak oversight facing the administration of the SSA program.

Nepal's CR system started operating in the late 1970s and captures five vital events—birth, death, marriage, divorce, and migration. Besides its linkages to the SSA program, the CR system would also be a foundation for people's legal identities and their access to a range of public and private services. However, Nepal's CR system is under developed. The decentralized and paper-based recording of documents collected during registrations limits the potential usage of the information to generate vital statistics for planning and other purposes. Limited awareness among the population and difficulty in accessing local body offices have led to low registration rates and coverage. Transitioning to a digital CR system that is linked to a population register and the SSA Beneficiary Register would facilitate improved coverage and delivery of both CR and SSA.

SYSTEMS FOR SOCIAL PROTECTION AND CIVIL REGISTRATION (SSSPCR) is a national project implemented by the Department of National ID and Civil Registration (DONIDCR) under the Ministry of Home Affairs (MoHA) and supported by the World Bank. The project supports the DONIDCR's Civil Registration (CR) and the Social Security Allowance (SSA) program and aims to improve the coverage of SSA and CR, and the delivery of SSA. Over a five-year period, the project is expected to support: (a) the establishment of a comprehensive National Population Register and expanded coverage of CR and SSA; and, (b) improved delivery of SSA via transition to e-payments in selected districts and improved overall business process for SSA service delivery. These will be supplemented by institutional strengthening at both central and local levels to ensure sustainability of the gains of the first two objectives. The closing date of project is November 30, 2021.

The project would contribute to the Government's long-term plan to strengthen administrative capacities to manage its most fundamental service delivery responsibilities, CR and SSA. Improved delivery is an essential, if not sufficient, condition to strengthen the impact of Nepal's social programs in protecting the vulnerable from adverse risks and shocks. Furthermore, comprehensive and up-to-date CR would facilitate people's access to legal identity and public services beyond SP (for example, primary education)

2. Objective/Purpose of the Assignment:

The Assistant Database Administrator will assist the Senior Database Administrator and responsible for DONIDCR computer engineer, SSSPCR project manager in all technical matters relating to development and implementation of MIS system

during project tenure. S/he will be responsible for overall MIS design, development, up gradation, and implementation: including analyzing the existing system and new requirements, design and development of MIS system, database Structure, mentoring subordinates, providing implementation training and other technical activities as per required by DoNIDCR. S/he will report directly to the MIS Team Leader.

3. Scope of Work:

The Assistant Database Administrator will work closely with Project Management Unit (PMU) under the supervision and direction of the MIS team leader of SSSPCR, Senior DBA for the attainment of project's goal.

Assistant Database Administrator's main responsibility is to assist Senior Database Administrator (and through him/her also the PD and PM) on the following:

4. Duties and Responsibilities of ADBA:

- Identify database requirements, evaluating existing systems and designing database physical structure and functional capabilities.
- Develop secure and interoperable databases that meet the regulatory national and international standards.
- Apply different security encryption and decryptions techniques to secure data and apply latest security patches in the database
- Track and resolve database related incidents and requests.
- Fulfill all requests and resolve incidents within Service Level Agreement.
- Assist to review service related reports (e.g: database backups, maintenance, monitoring) daily to ensure service related issues are identified and resolved within established SLAs.
- Assist to monitor performance and manage parameters to provide fast responses to front-end users.
- Assist in mapping out the conceptual design for a planned database and refining the logical design so that it can be translated into a specific data model.
- Considering both back-end organization of data and front-end accessibility for end-users.
- Refine the physical design to meet physical system requirements.
- Maintain data standards and control access permissions and privileges, monitor user access and security as per requirement of user
- Write database documentation including data standards, procedures and definitions for the data dictionary (metadata).
- Develop, implement, manage and test back-up and recovery plan prepared by Senior Database Administrator;
- Install and test new versions of DBMS and ensure whether the storage and archive procedures are functioning correctly.
- Under the supervision of the Sr. DBA, lead and supervise the PL/SQL Development to meet the designed database architecture.
- Assist to design the development plan, flow, algorithms, sequences etc. at any new requirements and compile from the individual developments.
- Assist to develop data models and perform planning of architecture, functions, modules, recovery, standards and implementation.
- Develop Tools and Techniques to migrate the data from heterogeneous database systems (MYSQL, MS-SQLSERVER, MSACCESS etc.) into the Oracle Database.
- Work in coordination with Computer Engineer, Team Leader, System Analysts, Senior Developer and Sr. DBA and other MIS team members.
- Communicate regularly with different technical staffs, application developers and operational staff to ensure database integrity and security

- Respond to database related alerts and escalations and come up with strategic solutions to recurring problems.
- Write scheduled job, procedures, packages, triggers, sequences, etc. for MIS system
- Customize database for electronic data exchange between other stakeholders like NID, Election Commission etc.; and banks for Social Security allowance distribution
- Assist to prepare database documentation monthly and submit to MIS Team Leader.
- Report all the major new activities and edits in the database that is to be made and after completion to Sr. DBA
- Assist in other assigned IT related activities

5. Required Qualifications

A. Academic qualifications and training

- Minimum Bachelor's Degree in Information Technology or the related field from recognized University/College.

B. Experience

- Minimum 1 years of experience in Database Administrator, Development and Support in Oracle Database.
- Must have working experience in Web Based Software
- Knowledge of Oracle Business Intelligence (OBIEE)
- Knowledge of Test-driven development and unit testing.
- Oracle OCA/OCP certificate would be an advantage.

C. Skills

- Solid Knowledge of Oracle 10g/11g (or above).
- Proficient in Performance Tuning, Query Optimization, using Performance Monitor, SQL Profiler and other related monitoring and troubleshooting tools.
- Strong Knowledge of PL/SQL Development, Design and Support (Stored Procedures, Functions, Tables, Views, Triggers, Indexes, Constraints, Table Partition, DB Links etc.).
- Sound knowledge of High Availability, Backup and Recovery using Recovery Manager (RMAN), Clustering, Security and Maintenance Issues.
- Sound knowledge of Linux Operating System (Shell Scripting).
- Strong inter-personal and communication skills
- Ability to understand and apply analytical and statistics tools. Results oriented with strong process and execution skills. Understand SDLC standards.
- Strong verbal and written good research skills (Implementation of new ideas). Ability to learn business processes quickly and provides technical solutions.
- Knowledge in other database like (MSSQL, MYSQL) will be advantage.

6. Duration of Service:

The consultant will be assigned for full time basis for period during project period and the contract will be renewed annually before the beginning of each new fiscal year of the GoN and possibility of extension during project period in case of satisfactory performance. The consultant is expected to work full time office hours within Kathmandu valley, except otherwise situation demands travel outside Kathmandu valley within Nepal on project related matters.

7. Selection Criteria:

Assistant Database Administrator will be selected in accordance with the procedures set out in the World Bank's 'Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers', published by the World Bank in January 2011, revised July 2014."

8. Duty Station: Kathmandu (SSSPCR-PMU/DoNIDCR), Nepal with field visit as per requirement.

9. Financial Conditions:

- a) The Assistant Database Administrator's salary is negotiable but will not be more than the estimated value per month. A monthly lump sum amount of remuneration per month will include all overheads, social charges and other associated costs including local transportation within Kathmandu valley and insurance premium costs.
- b) The Assistant Database Administrator shall be responsible for all taxes and duties including income tax applicable as per Government of Nepal rules and regulations.
- c) In case of travel requirement outside Kathmandu valley and within Nepal for project related assignments, consultant shall be paid travel expenses as per actual and DSA will be paid equal to section officer, Government of Nepal.

10. Output/Reporting Requirements:

The consultant will report to the Team Leader. In addition to the regular tasks, the consultant should be responsible for senior DBA to providing /preparing following documents and reports during assigned period.

- a) Daily, Monthly and Yearly Progress report against task as assigned by MIS Team Leader;
- b) Technical document of overall MIS system.

All reports should be in English or Nepali as directed.

11. Facilities to be Provided by SSSPCR-PMU/DoNIDCR:

PMU shall provide following facilities to consultant during his tenure of service:

- a) Office space with computer and furniture
- b) Email and internet access
- c) Required office stationary
- d) Photocopying facilities
- e) Access to project documents, on a need basis.