

SYSTEM ANALYSIS AND DATABASE DESIGN

Lab Exercise 1-2 identifying a Real-World Problem

1. 5 REAL-WORLD PROBLEMS IN BUSINESSES, ORGANIZATIONS, OR COMMUNITIES.

- a. Manual Business Process In Payment Of Grants Of Social Pension's Beneficiaries
- b. Web- App Server overloading due to vast number of users and limited server resources
- c. Manual tracking of payment of real property taxes
- d. Indemnification of flood-prone areas
- e. Cyber Security Threats in governments data centers

SELECTED PROBLEM:

Manual Business Process in Payment of Grants of Social Pension's Beneficiaries

STATEMENT OF THE PROBLEM:

The social pension is a government unit responsible in granting indigenous senior citizens, the problem is that the entire process currently used is manual. The possibility of discrepancies in the profiling of the beneficiaries is too high. These discrepancies includes possible duplicates; outdated beneficiary information, and misrepresentation that results to increased in grievances such as lower no or lower-entitlement and disbursement delay.

The most affected in the manual processing of grants are the beneficiaries (indigent senior citizens), the delay in the process and inappropriate grants received hinders their needs and push them to file grievances. Another one are the social worker assigned in the areas, lack of solution from the main office causes dilemma to them on how they will handle grievances. Lastly, are the NGAs including the Social Pension Unit, their struggle in handling government funds results delay in government deliverables and COA findings.

There are several challenges that the program encountered. The manual process of the encoding of potential beneficiaries is susceptible in erroneous data. This is the root-cause of the problem, without data entry validation and field verification indeed causes a lot of problem especially to the disbursement of funds. Another one is that, some of the beneficiaries particularly the senior indigenous people, don't have proper document during validation so the field workers assigned coordinate with the NCIP to verify the identity of the beneficiary. During disbursement, several were identified misrepresentation or fraud but the possibility of these fraudulent passed thru the valuation process that leads to disbursement error.

To Address these problem, there should be a database-driven application system that would serve as a centralized database management system. The system will allow data encoders to encode beneficiary information with integrated data validation that would prevent possible duplicates. Once the data were encoded, data will undergo to a more sophisticated validation process like cross-matching versus the baseline data and deduplication using fuzzy algorithm like jaro-winkler that is capable of finding duplicates by implementing mathematical operations to compute distance between names of beneficiaries. Then, this data, will proceed to proxy-mean- test to check beneficiary eligibility. The result of the mentioned process will be the bases of the preparation of Notice of Approved Payroll Action (NAPA). Lastly, the app should have a payment reconciliation module that will be used in managing disbursement process, from payroll preparation to disbursement to liquidation.

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