

## Online assessment management system for Sri Lankan local authorities

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### Introduction

Digital government is a worldwide sensation and government staff takes up the innovative fashions of IT used to serve better to the citizens. The local government is encouraged to take on the digital government to deliver rapid, efficient and perfect amenities. This guarantees the public fulfill the degree of quality-of-service delivery, ease of the re-engineered organizational structure, decrease the expenses and upsurge the democracy of services via public involvement [1]. Local governments are classified as “Municipal Councils”, “Urban Councils”, and “Pradesiya Sabha”. Local governments deliver the amenities include roads, drains, parks, libraries, housing, waste collection, public conveniences, markets and recreational facilities [5]. The ability to deliver the quality-of-services by the local government is highly reliant on the capacity to bill and amass the revenues from the taxpayers who own the properties within the local government region.

Local government in Sri Lanka supports the regional development via improving basic needs such as roads, sanitation, drains, housing, libraries, public parks and recreational facilities along with the central government policy. The maintenance of all these needs comes under the regional preview of the local government. The quality of delivery of such services is highly dependent on the ability to bill and collect revenues by the local authority. One of the prime duties of the local government is to manage the assessments which are located under their boundaries and handle the taxes. Most of the local government authorities in Sri Lanka maintain those details in hand

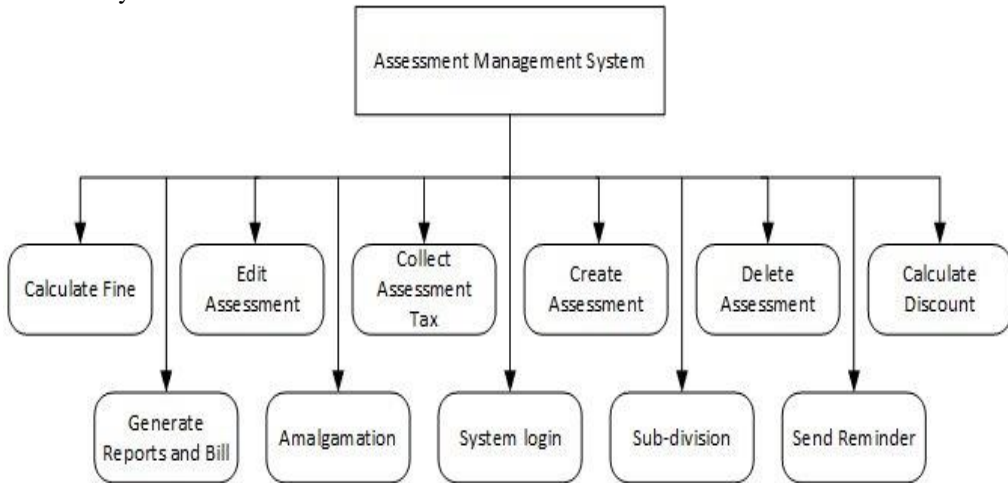
written ledgers and need to be rewritten every year. The tax has to be computed by looking at the previous year’s analog mode data and spending more time to complete a single task at the Sri Lankan local government authorities. To get this service a huge crowd formulates in the local government and the outcome of this, the public is disappointed and demotivated. Previous researches highlighted that local government practices the analog mode data handling and the outcome of this situation significantly reduces the participation of citizens in the local government authorities and emphasizes the importance to accommodate the practice of the digital government [2, 3].

The success of the digital government is the creation and maintenance of ICT tools and running those tools to provide the services and knowledge to the staff and public. Furthermore, governmental agencies / departments encourage to select the appropriate ICT facilities to put forward the long-term better, efficient and reliable model to serve their citizens [4]. The digitalization of the local government process starts from handling the tax management. However, such a common tool has not been employed in the local government of Sri Lanka so far to the knowledge of the researcher for tax computation and to minimize resource waste. Hence, this research carried out with the objective of developing an online assessment management system for all the local authorities in Sri Lanka which could be an effective and efficient mechanism to minimize the problems in traditional mode of assessment management.

**Methodology**

The stakeholders of the proposed system were finalized with the discussion of the Head of the local authorities. The requirements were gathered from the stakeholders such as taxpayers (public), tax collectors, clerical staff and officers via the interview and the operation of the analog system analyzed via the observational method. Gathered requirements were analyzed in-depth and the process was identified with their functionality.

Considering the user convenience and requirements, an online system was proposed along with the payment gateway. The online system encourages and motivates the citizen to pay their taxes on time and actively interacts with the local government for their needs. The system was developed using the “Rapid Application Development” approach and the top-level architecture of the proposed system is shown in figure 1.



**Figure 1.** Top level architecture.

Algorithms were developed for the identified process to satisfy the operational requirements of the analog system and the proposed system was designed using the created algorithms. The validity of the system was checked via the feedback from the users.

**Results and Discussion**

The proposed online system was developed using the client scripting and server-side scripting languages as front-end and MySQL employed as backend. The system can be accessed at a convenient time and place by the taxpayers to complete all needs such as calculating the tax, paying the tax amount via online, generating the history reports for a

particular property etc. Furthermore, the system used to send reminder to indicate the dues for each taxpayer. The proposed system motivates the taxpayer to pay their taxes on time to the local authority.

Staff from the local authority can easily create or edit or delete the properties located in the local authority region, calculate the valuation of the property and generate the reports for the requirements such as annual / quarter tax payment, categorized tax payment etc. The proposed system contains major functionalities as property management, area management, payment management, staff management, owner management and report management.

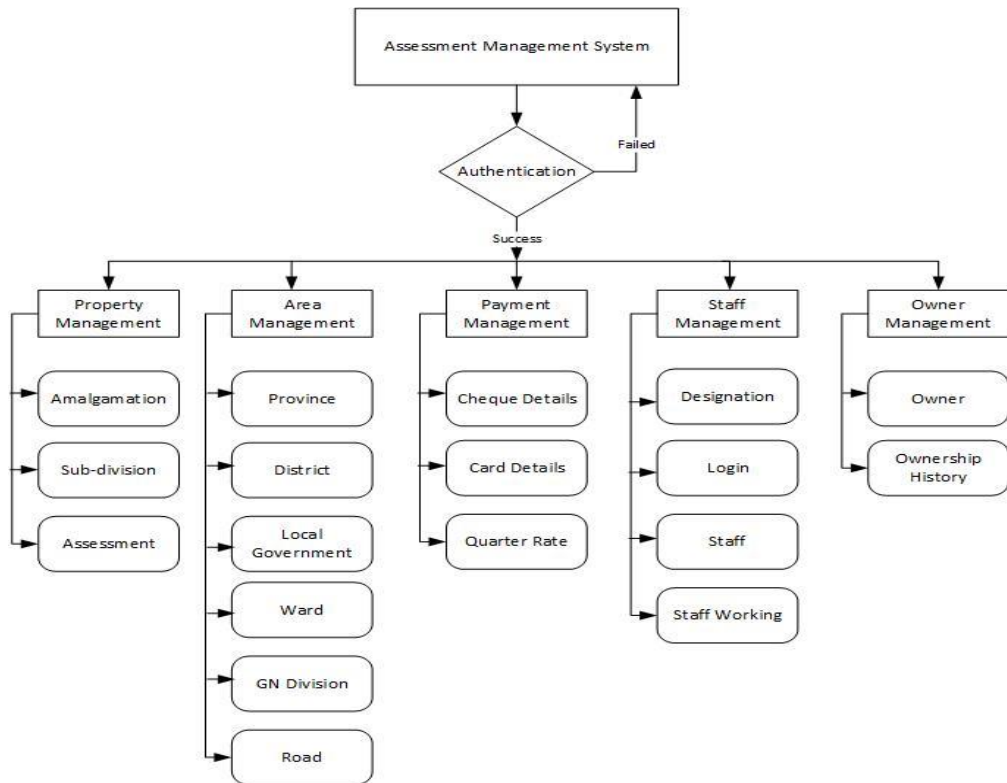


Figure 2. Module structure of the system.

**Conclusion**

According to the study findings, the developed system for Sri Lankan local authorities could be an answer to increase the tax revenue from the public by motivating them via providing easy and efficient service. Accordingly, citizens can pay taxes on time at their convenient place. Taxpayers and relevant government officers could access the system and easily retrieve their property information. The automatically generated report by the system helps local authorities to statistically analyze / compare the progress of the tax payments. The quick movement to such a system could be an urgent matter of fact to not to miss the tax revenue and increase the involvement of citizens.

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