

DBMS PROJECT

ON

THE INDIAN BUDGET AND FINANCE



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PROBLEM STATEMENT

#This Indian Budget and Financial Database is modelled such a way such that:

- The Indian government wants to manage and track its budget and finance operations efficiently to ensure transparency, accountability, and optimal allocation of resources.
- They need a system that can capture and analyze data related to budget estimates, actual expenditure, revenue collections, and other financial transactions to generate timely and accurate reports for decision-making.
- The system should also provide various stakeholders with access to relevant information and enable them to monitor the financial performance of different departments and programs.

Hence, The Indian government needs a system that can:

- **Capture data related to budget estimates:** The system should allow the government to create, revise, and approve budget estimates for various departments and programs. It should also capture information related to the sources of revenue and the expected expenditure for each department.
- **Track actual expenditure:** The system should allow the government to record actual expenditure incurred by each department and program. It should also enable the government to compare actual expenditure against budget estimates to identify any discrepancies and take corrective measures.
- **Monitor revenue collections:** The system should capture data related to revenue collections from various sources such as taxes, fees, and other receipts. It should also provide reports that show the trends in revenue collections over time.
- **Generate reports:** The system should be able to generate various types of reports such as budget vs actual expenditure reports, revenue collection reports, expenditure reports by department, and program, etc. These reports should be customizable to meet the specific needs of different stakeholders.
- **Provide access to stakeholders:** The system should provide access to various stakeholders such as government officials, auditors, and citizens to relevant financial information. It should also have adequate security measures to ensure that only authorized individuals can access sensitive information.
- **Support decision-making:** The system should provide insights that can help the government make informed decisions related to budget allocation, revenue generation, and expenditure management. It should also allow the government to perform "what-if" scenarios to evaluate the impact of different policy decisions on

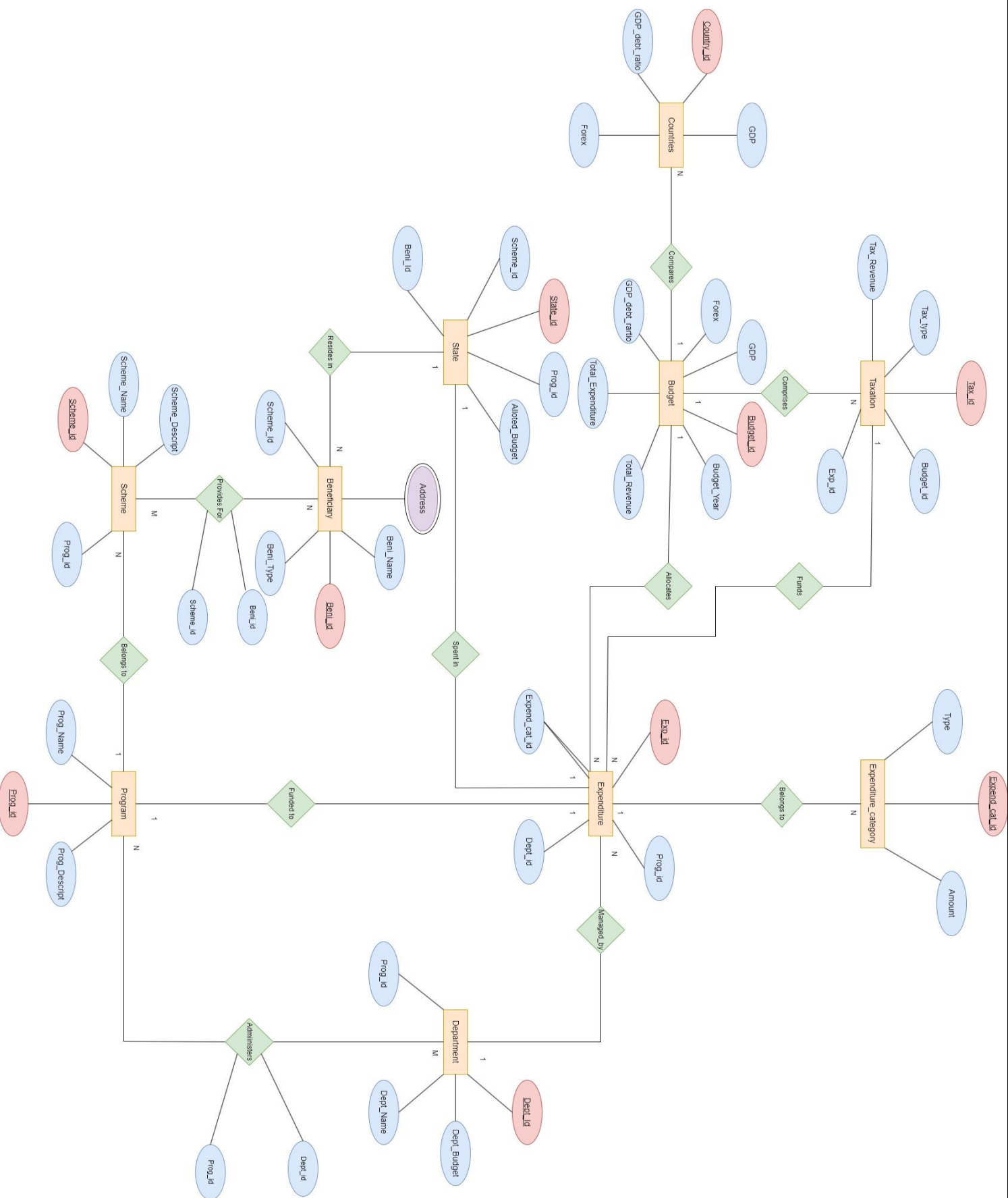
the budget and finance operations.

To achieve these objectives, the system should have entities such as Department, Budget, Taxation, Expenditure, Expenditure Category, Revenue, Program, Scheme, Beneficiary, State and Countries that can capture data related to budget estimates, actual expenditure, and revenue collections. The system should also have entities such as Budget and Expenditure that can help the government track expenditure at a more granular level, and entities such as Program, Scheme, and Beneficiary that can help the government monitor the financial performance of different programs.

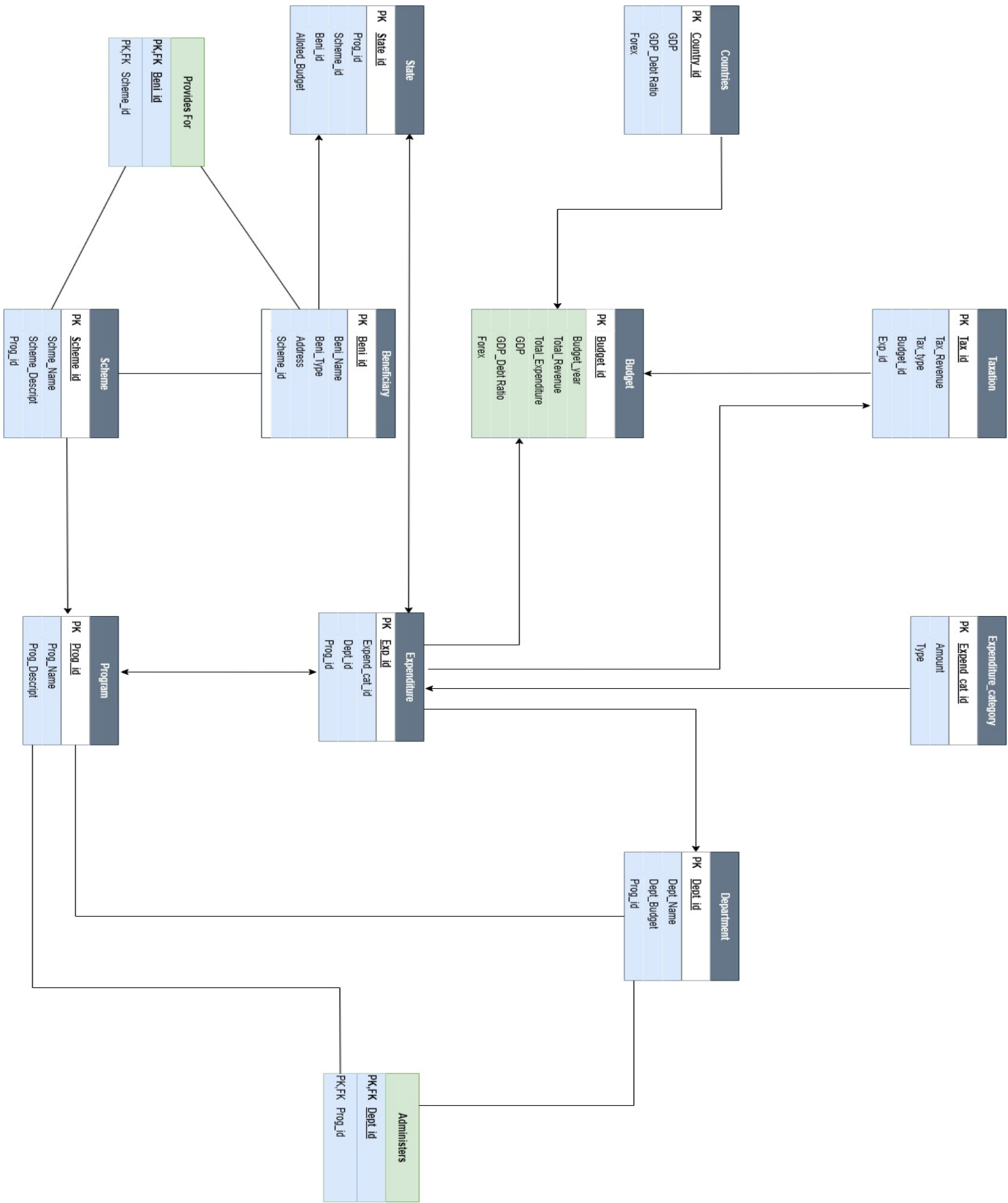
To ensure the security and confidentiality of financial information, the system should have entities such as Customer, Role, and Customer Role that can manage user access and permissions. The system should also have entities such as Report and Report Parameter that can generate customized reports for different stakeholders such as government officials, auditors, and citizens.

By addressing these requirements, the system can help the Indian government manage its budget and finance operations more efficiently and effectively. An ER model can be designed to represent the data and relationships between different entities in the system, and it can provide a visual representation of the database schema that can be used to implement the system.

ER MODEL



RELATIONAL SCHEMA



EXPLANATION

- **Budget:** This entity represents the overall budget of the government for a given fiscal year. It includes attributes such as the year, total revenue, total expenditure, and any other relevant information related to the budget.
- **Taxation:** This entity represents the various taxes imposed by the government to generate revenue. It includes attributes such as the type of tax, tax rate, tax collection agency, etc.
- **Expenditure:** This entity represents the various expenses incurred by the government in a given fiscal year. It includes attributes such as the amount spent, date of expenditure, purpose of expenditure, etc.
- **Expenditure Category:** This entity represents the different categories or types of expenditures made by the government. Examples of categories could include education, healthcare, defense, infrastructure, etc.
- **Department:** This entity represents the various government departments responsible for managing and executing the budget. Examples of departments could include the Ministry of Finance, Ministry of Health, Ministry of Education, etc.
- **Program:** This entity represents the different programs or initiatives undertaken by the government as part of its budget. Examples of programs could include Swachh Bharat Abhiyan, Ayushman Bharat, Pradhan Mantri Jan Dhan Yojana, etc.
- **Scheme:** This entity represents the various schemes or projects implemented under a given program. Examples of schemes could include construction of schools under the Sarva Shiksha Abhiyan, providing free LPG connections under the Ujjwala Yojana, etc.
- **Beneficiary:** This entity represents the individuals or groups who benefit from the various schemes or programs implemented by the government. Examples of beneficiaries could include farmers, students, women, etc.
- **State:** This entity represents the various states in India. It includes attributes such as the name of the state, allotted budget in different programs and schemes and beneficiary id etc.
- **Countries:** This entity represents different country with their respective GDP, Foreign exchange, and GDP debt ratio for comparing these with India

RELATIONSHIP

- Budget has a **ONE-TO-MANY** relationship with Expenditure.
- Expenditure has a **ONE-TO-MANY** relationship with Expenditure Category.
- Expenditure has a **MANY-TO-ONE** relationship with Department.
- Program has a **MANY-TO-MANY** relationship with Department.
- Scheme has a **MANY-TO-ONE** relationship with Program.
- Beneficiary has a **MANY-TO-MANY** relationship with Scheme.
- State has a **ONE-TO-MANY** relationship with Beneficiary.
- Countries has a **MANY TO ONE** relationship with Budget.

THANKYOU!
