

# First Draft for Database Development Project

## Organization:

Name: GreenGenius

Type: SME (Small to Medium Enterprise)

Industry: Renewable Energy

Location: Johannesburg, South Africa

Year founded: 2015

## Business Overview:

GreenGenius is a renewable energy company that specializes in the design, installation, and maintenance of solar panels and other sustainable energy solutions for residential and commercial clients. The company is committed to helping South Africa reduce its dependence on fossil fuels and combat climate change by promoting the use of clean and sustainable energy sources.

## Business Rules

1. Clients can have multiple projects, but each project must belong to only one client.
2. Each project must have a unique project ID, and each client must have a unique client ID.
3. A project must have at least one employee assigned to it, but an employee can work on multiple projects.
4. Each transaction must have a unique transaction ID, and it must be associated with one client and one employee.
5. An employee must have a unique employee ID, and each employee can only have one position within the company.
6. Suppliers can provide multiple products or services, but each product or service must belong to only one supplier.
7. Each supplier must have a unique supplier ID.
8. A client can have multiple transactions, but each transaction must belong to only one client.
9. A transaction can have only one type (e.g. invoice, payment, expense).
10. Each project must have a start date and an end date, and the end date cannot be earlier than the start date.
11. Each project must have a total cost, which is the sum of all the expenses associated with that project.
12. Each transaction must have a date, an amount, and a description.

These business rules should help guide you in creating the necessary tables, fields, and relationships in your database for GreenGenius.

## Business Logic:

To create a database for GreenGenius, you would need to capture data related to their clients, suppliers, employees, projects, and financial transactions. Here are some examples of tables and fields that you might include in the database:

### 1. Clients table:

- Client ID (primary key)
- Name
- Contact person
- Phone number
- Email
- Address

### 2. Suppliers table:

- Supplier ID (primary key)
- Name
- Contact person
- Phone number
- Email
- Address

### 3. Employees table:

- Employee ID (primary key)
- Name
- Position
- Phone number
- Email
- Address

### 4. Projects table:

- Project ID (primary key)

- Client ID (foreign key)
- Description
- Start date
- End date
- Status (e.g. in progress, completed, cancelled)
- Total cost

#### **5. Financial transactions table:**

- Transaction ID (primary key)
- Date
- Type (e.g. invoice, payment, expense)
- Amount
- Description
- Client ID (foreign key)
- Employee ID (foreign key)

By capturing data related to clients, suppliers, employees, projects, and financial transactions, you can help GreenGenius manage their operations more efficiently, make informed decisions, and optimize their business processes. The database can also be used to generate reports, track performance metrics, and analyze trends over time, which can help the company identify areas for improvement and growth.