Wild Wood Apartments – Business Rules and Requirements

1. *Make a list of issues with the current system.*
   - Reports are hard for managers to fill out and send.
   - Concern about the accuracy of the data in the reports.

2. *Make a list of business rules.*
   These represent rules that were mentioned in the descriptions. Other may apply.
   - Rents are due the first of the month.
   - There is a 5-day grace period.
   - Rents paid after the 5-day period are assessed a $100 penalty.
   - Reports are due to the main office quarterly.

3. *List some major security rules for the database.*
   The private information on tenants should be protected. It should not be generally available. If the database is centralized at the district office, it will be necessary to keep the manager of one building from seeing the information (such as tenant names and addresses) from another building. It will also be necessary to protect the database from malicious attacks.

4. *Make a list of the database requirements for each stakeholder involved in the database.*
   For the Owners
   - The database must generate reports on tenants, rents, and expenditures in each of their buildings.
   - The data must be timely and accurate.

   For the Managers

   - It must allow them to enter new tenants, leases, and deposits.
   - It must allow them to track occupancy and vacancies.
   - It must allow them to enter rent payments.
   - It must allow them to track late payments.
   - It must allow them to track maintenance requests and repairs.

   For the Tenants

   - It must accurately track their lease agreement.
   - It must accurately track their rent payments.
   - It must record their maintenance request.

5. Take a look at each of the forms and make a list of all the nouns in them. Do the same for the interview, the questionnaire, and the job shadow report. Then set up some preliminary entities and attributes.

    Nouns:
    Apartment Number, Lease Number, Lessee Name, Start Date, End Date, Rent Amount, Deposit, Current (means is current with rents), Date, Name, Amount Paid, Problem, Type, Resolution, Resolution Date, BExpense (Building Expense), TExpense (Tenant Expense), Building #, Address, Quarter, Expenses, Utilities, Maintenance, Repairs, Insurance, New Tenant Cleaning, Wages

    Database Entities (this list is preliminary and contains possible attributes as well):
    - Building (building #, address)
    - Apartment (Apartment Number)
    - Lease (Lease Number, Lessee Name, Start Date, End Date, Rent Amount, Deposit)
    - Rent (Lease Number, Date, Name, Amount Paid, Current)
    - Maintenance (Date, Problem Type, Resolution, Resolution Date, BExpense, TExpense)
    - Expenses (Utilities, Maintenance, Repairs, Insurance, New Tenant Cleaning, Wages)

6. *Identify some candidate keys.*
    Building # for building
    Apartment Number for Apartment
    Lease Number for Lease
    Rent is harder - Lease number plus date is a possibility.
    For Maintenance, "Date" could be offered but there is no obvious candidate for a key.
    The same for expenses as configured above.