Database Specification and Analysis Report

**Selected DBMS:** MYSQL

**Database Tables:**

**Table 1:** Landlords.

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Data Type** | **Description** |
| Landlord ID | INT (Primary key) | Unique ID for each landlord |
| First name | VARCHAR(50) | Landlord’s first name |
| Last name | VARCHAR(50) | Landlord’s last name |
| Email | VARCHAR(100) | Email address for communication |
| Phone number | VARCHAR(15) | Landlord’s phone number |
| Verified status | BOOLEAN | Whether the landlord is verified |
| Government ID | BLOB | Uploaded document for verification(ID proof) |

**Table 2:** Students

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Data Type** | **Description** |
| Student ID | INT (Primary Key) | Unique ID for each student |
| First name | VARCHAR(50) | Student’s first name |
| Last name | VARCHAR(50) | Student’s last name |
| Email | VARCHAR(100) | Student’s email |
| Phone number | VARCHAR(15) | Student’s contact number |
| University ID | VARCHAR(20) | Student’s University ID (Towson University) |
| Housing preferences | TEXT | Student’s preferences for housing and roommates |
| Roommate status | BOOLEAN | Whether the student is seeking a roommate |

**Table 3:** Listings

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Data Type** | **Description** |
| Listing id | INT (Primary Key) | Unique ID for each property listing |
| Landlord id | INT (Foreign Key) | The landlord who posted the listing |
| Location | VARCHAR(200) | Property’s location (City, Street, ZIP code) |
| Property type | VARCHAR(50) | Type of property (Apartment, House, etc.) |
| Price | DECIMAL(10,2) | Rent price |
| Num bedrooms | INT | Number of bedrooms |
| Num bathrooms | INT | Number of bathrooms |
| Amenities | TEXT | List of amenities (parking, laundry, etc.) |
| Is active | BOOLEAN | Whether the listing is active or deactivated |
| Date available | DATE | The availability date for the property |

**Table 4:** Applications

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Data Type** | **Description** |
| Application ID | INT (Primary Key) | Unique ID for each application |
| Student ID | INT (Foreign Key) | Student who applied |
| Listing ID | INT (Foreign Key) | The listing applied to |
| Application date | DATE | Date of application |
| Status | VARCHAR(50) | Application status (Pending, Approved, Rejected) |
| Income proof | BLOB | Uploaded proof of income |
| Guarantor information | TEXT | Information about guarantor |

**Table 5:** Roommate Matches

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Data Type** | **Description** |
| Match ID | INT (Primary Key) | Unique ID for each roommate match |
| Student ID | INT (Foreign Key) | The student initiating the search |
| Matched student ID | INT (Foreign Key) | The student matched as a potential roommate |
| Match score | DECIMAL(5,2) | Compatibility score based on lifestyle preferences |