GROUP-C

BIKE-RENTAL DATABASE MANAGEMENT SYSTEM

PURPOSE & SCOPE OF OUR SYSTEM (Database Planning and System definition):

1. Purpose:

The purpose of our system is to effectively manage the operations of a bike rental business. This will include:

- Facilitating the rental and return of bicycles.
- Tracking the availability and location of all bikes in the inventory.
- Managing customer information, including rental history and payment details.
- Providing reporting for management to monitor business performance.

2. Main Users:

The system will be used by three main groups of people, each with a different set of needs and permissions.

- **Customers:** The end-users who interact with the system primarily to rent bikes, make payments, view availability, and check their rental history. They will need to be able to:
  - View available bikes and their locations.
  - Register for an account.
  - Rent for bikes.
  - View their rental history and current rental status.
  - Make Payments.

- **Staff:** Employees responsible for the day-to-day operations of the business. This category is specialized into three functional roles; Generally, they will need to be able to:
  - Assist customers with rentals and returns.
  - Add, update, and remove bike information in the inventory.
  - Check bike availability and condition.
  - Process payments and issue receipts.
  - Manage customer accounts.
  - Indicate another staff member if needed to log bike transfers between locations.
  - Be available whenever finalizing of a rental process is required.

- **Specific Roles:**
  - **Agent/Operator:** Handles core transactional duties like processing rentals, and payments at a location. Also responsible for logging bike transfers between locations. Also assists in customer management tasks like registering new customers and updating their accounts.
  - **Mechanic:** Responsible for bike maintenance; performs service, updates the bike's status in the inventory, and logs repairs in the Maintenance logs.
  - **Manager:** Focuses on operational oversight and mid-level reporting. They manage staff accounts and can likely manage locations and generate specific business reports.

- **Administrator:** The owner or manager of this business will require:
  - Full access to all system data.
  - The ability to generate comprehension reports on rentals, revenue, and bike usage.
  - Permissions to manage staff accounts and system settings.
  - The ability to add or remove rental locations.

3. Key Functions of the System:

The system will be able to support the following core processes:

- **Bike Management:**
  - Adding new bikes to the inventory.
  - Removing bikes that are damaged or sold.
  - Updating bike status (e.g., "Available", "Rented", Under Maintenance").
  - Tracking the location of each bike.

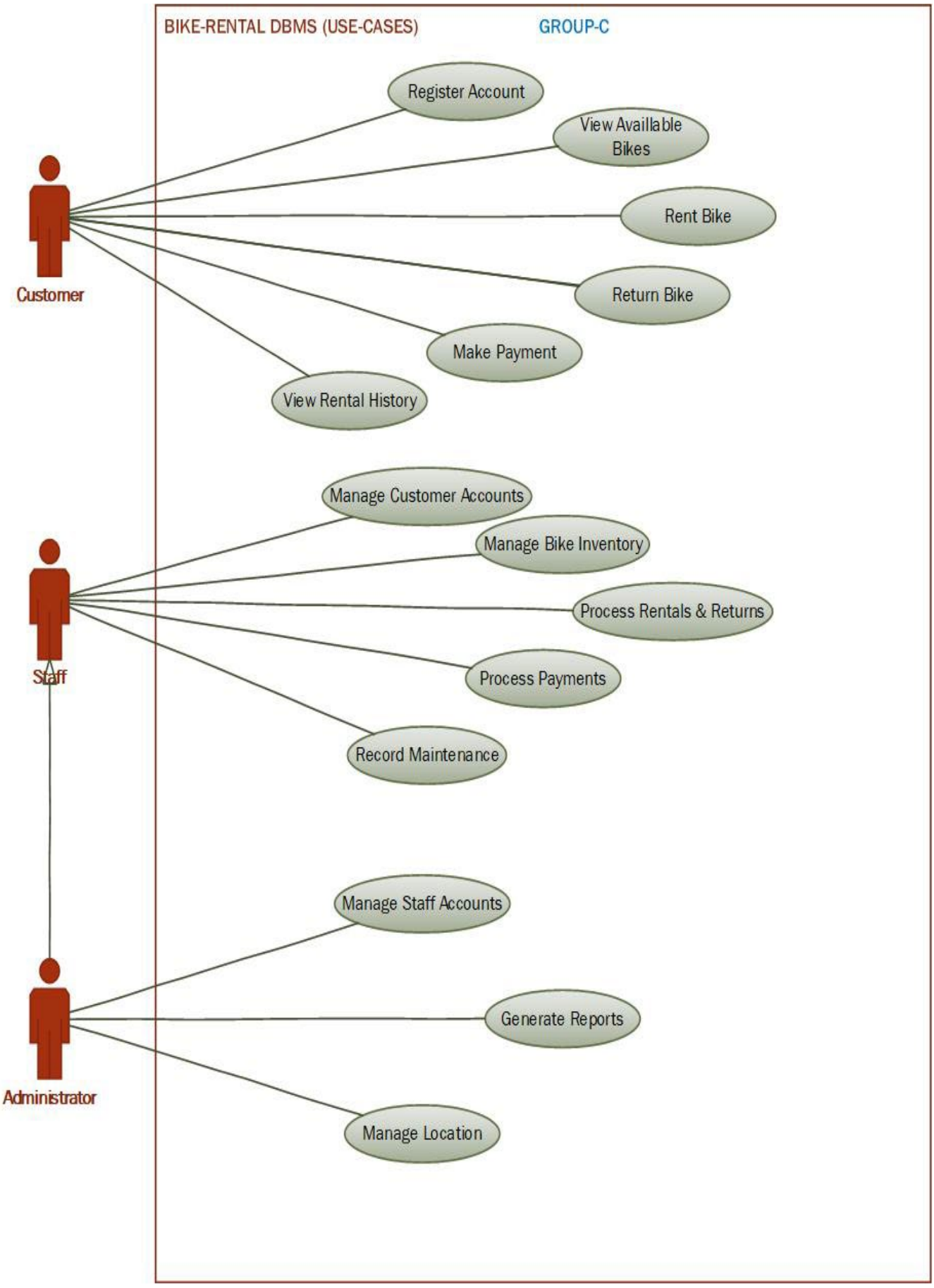
- **Customer Management:**
  - Registering new customers and creating their profiles.
  - Updating customer information.
  - Storing customer rental history.

- **Rental/Return Process:**
  - Taking Record whenever a bike is rented, including the start time, location, and customer.

- Taking Record whenever a bike is returned, including the end time, return location, and final cost.
- Calculating the rental fee based on duration.

- **Payment and Billing:**
  - Processing payments for rentals.
  - Handling different payment methods (e.g., credit card, mobile money).
  - Generating and storing transaction records.

- **Reporting:**
  - Generating reports on daily/monthly revenue.
  - Tracking the most popular bikes and rental locations.
  - Monitoring bike usage to identify high-traffic areas.


BIKE-RENTAL DBMS (USE-CASES)
GROUP-C
Register Account
View Availlable Bikes
Rent Bike
Return Bike
Make Payment
View Rental History
Customer
Manage Customer Accounts
Manage Bike Inventory
Process Rentals & Returns
Process Payments
Record Maintenance
Staff
Manage Staff Accounts
Generate Reports
Manage Location
Administrator

REQUIREMENT GATHERING & ANALYSIS:

Entities & Attributes: Based on our project requirements, we can say that below are our expanded and critically considered list of entities and their attributes for the BIKE-RENTAL DATABASE MANAGEMENT SYSTEM.

1) **Customer:** This entity represents the individuals who rent the bikes.
    - **CustomerID (PK, INT):** A unique identifier for each customer.
    - **FirstName (VARCHAR (50)):** The customer's first name.
    - **LastName (VARCHAR (50)):** The customer's Last name.
    - **Email (VARCHAR (100), UNIQUE):** The customer's email address, used for communication and as a unique identifier for user accounts.
    - **PhoneNumber (VARCHAR (20)):** The customer's contact number.
    - **DateOfBirth (DATE):** The customer's date of birth (useful for age-based restrictions or promotions).
    - **RegistrationDate (DATETIME):** The date and time the customer registered in the system.
    - **PasswordHash (VARCHAR (255)):** A secure, hashed version of the customer's password.

2) **Bike:** This entity represents each individual bicycle available for rent.
    - **BikeID (PK, INT):** A unique identifier for each bike.
    - **BikeSerialNumber (VARCHAR (50), UNIQUE):** The unique manufacturer-assigned serial number of the bike.
    - **Model (VARCHAR (100)):** The bike's model name (e.g., "Trek Verve 2").
    - **BikeType (VARCHAR (50)):** The type of the bike (e.g., "Mountain Bike," "Road Bike," "Electric Bike").
    - **CurrentStatus (VARCHAR (20)):** The current condition and availability of the bike (e.g., "Available," "Rented," "Under Maintenance," "Retired").
    - **LastMaintenanceDate (DATE):** The date of the last service performed on the bike.
    - **RentalRatePerMinute (DECIMAL (5,2)):** The cost to rent this specific bike per minute.
    - **LocationID (FK, INT):** The current location of the bike, referencing the **Location** entity.

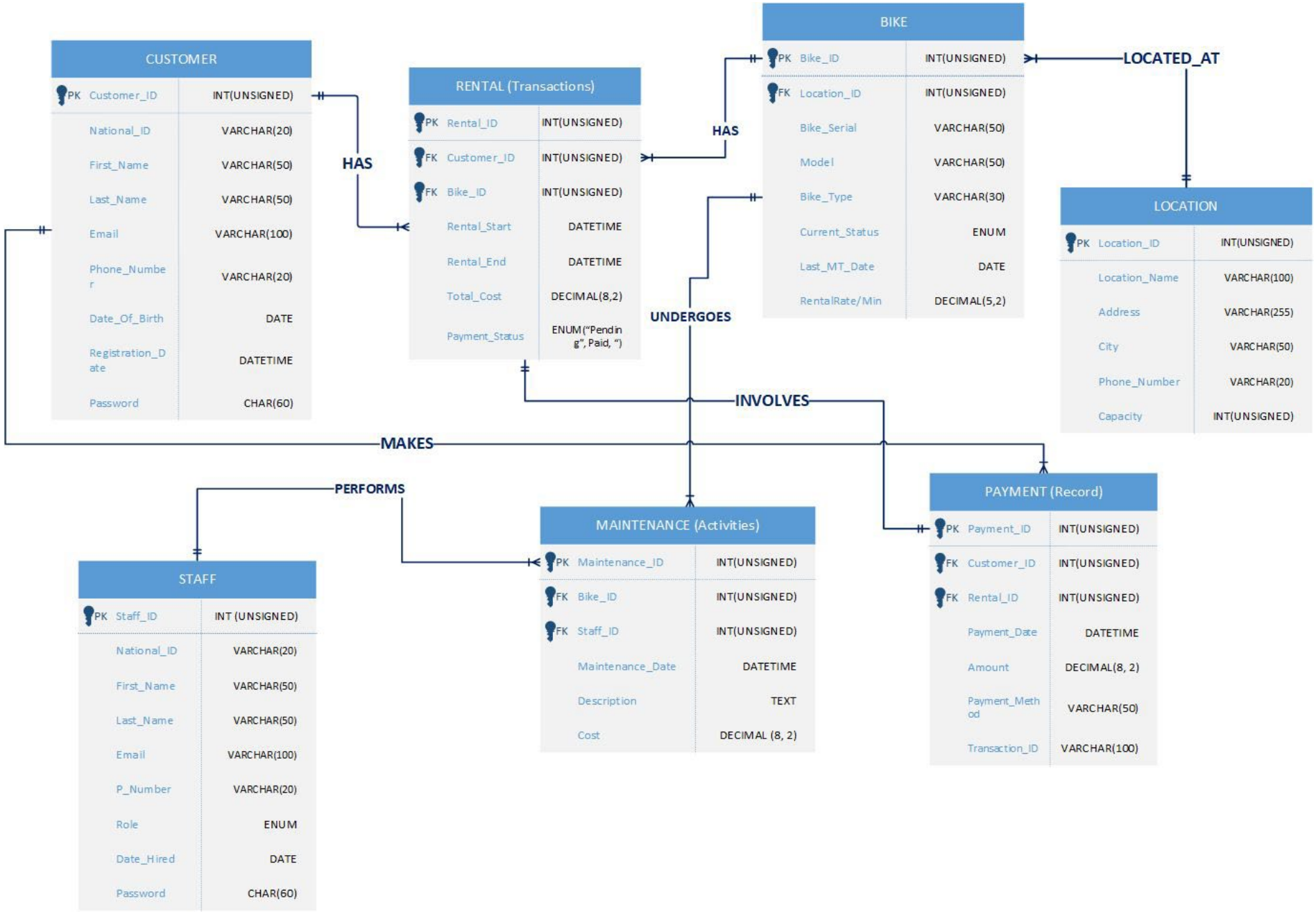
3) **Rental:** This entity records each instance of a bike being rented by a customer. This is a core transactional entity.
    - **RentalID (PK, INT):** A unique identifier for each rental transaction.
    - **CustomerID (FK, INT):** The customer who initiated the rental.
    - **BikeID (FK, INT):** The bike that was rented.
    - **RentalStartDate (DATETIME):** The date and time the rental began.
    - **RentalEndDate (DATETIME):** The date and time the rental ended.
    - **StartLocationID (FK, INT):** The location where the bike was picked up.
    - **EndLocationID (FK, INT):** The location where the bike was returned.
    - **TotalCost (DECIMAL (10, 2)):** The final calculated cost of the rental.
    - **PaymentStatus (VARCHAR (20)):** The status of the payment (e.g., "Paid," "Pending," "Failed").

4) **Location:** This entity represents the physical stations or hubs where bikes can be rented and returned.
    - **LocationID (PK, INT):** A unique identifier for each rental station.
    - **LocationName (VARCHAR (100)):** The name of the location (e.g., "Makerere Main Gate Station").
    - **Address (VARCHAR (255)):** The physical address of the location.
    - **Longitude (DECIMAL (9, 6)):** The geographical longitude of the location.
    - **Capacity (INT):** The total number of the bikes the location can hold.

5) **Staff:** This entity represents the employees who manage the rental locations and operations.
    - **StaffID (PK, INT):** A unique identifier for each staff member.
    - **FirstName (VARCHAR (50)):** The staff member's first name.
    - **Lastname (VARCHAR (50)):** The staff member's Last name.
    - **Role (VARCHAR (50)):** The role of the staff member (e.g., "Manager," "Operator," "Administrator").
    - **LocationID (FK, INT):** The primary location where the staff member works.
    - **Email (VARCHAR (100), UNIQUE):** The staff member's email address.

6) **Payment:** This entity records all payment transactions, providing a detailed history for billing and reporting.
    - **PaymentID (PK, INT):** A unique identifier for each payment transaction.
    - **RentalID (FK, INT):** The rental transaction this payment corresponds to.
    - **Amount (DECIMAL (10, 2)):** The amount paid
    - **PaymentDate (DATETIME):** The date and time the payment was made.
    - **PaymentMethod (VARCHAR (50)):** The method of payment (e.g., "Credit Card," "Mobile Money," "Cash").
    - **TransactionID (VARCHAR (100), UNIQUE):** The unique transaction identifier from the payment gateway.

7) **Maintenance Log:** This entity tracks the maintenance and repair history of each bike.
    - **LogID (PK, INT)):** A unique identifier for each maintenance entry.
    - **BikeID (FK, INT):** The bike that was serviced.
    - **MaintenanceDate (DATETIME):** The date and time of the service.
    - **Description (TEXT):** A detailed description of the maintenance performed (e.g., "Replaced front tire," "Brake adjustment").
    - **Cost (DECIMAL (10, 2)):** The cost of the maintenance.
    - **StaffID (FK, INT):** The staff member who performed the maintenance.


CUSTOMER
PK Customer_ID INT(UNSIGNED)
National_ID VARCHAR(20)
First_Name VARCHAR(50)
Last_Name VARCHAR(50)
Email VARCHAR(100)
Phone_Number VARCHAR(20)
Date_Of_Birth DATE
Registration_Date DATETIME
Password CHAR(60)
HAS
RENTAL (Transactions)
PK Rental_ID INT(UNSIGNED)
FK Customer_ID INT(UNSIGNED)
FK Bike_ID INT(UNSIGNED)
Rental_Start DATETIME
Rental_End DATETIME
Total_Cost DECIMAL(8,2)
Payment_Status ENUM("Pending", Paid, ")
HAS
BIKE
PK Bike_ID INT(UNSIGNED)
FK Location_ID INT(UNSIGNED)
Bike_Serial VARCHAR(50)
Model VARCHAR(50)
Bike_Type VARCHAR(30)
Current_Status ENUM
Last_MT_Date DATE
RentalRate/Min DECIMAL(5,2)
LOCATED_AT
LOCATION
PK Location_ID INT(UNSIGNED)
Location_Name VARCHAR(100)
Address VARCHAR(255)
City VARCHAR(50)
Phone_Number VARCHAR(20)
Capacity INT(UNSIGNED)
UNDERGOES
INVOLVES
MAKES
PERFORMS
STAFF
PK Staff_ID INT (UNSIGNED)
National_ID VARCHAR(20)
First_Name VARCHAR(50)
Last_Name VARCHAR(50)
Email VARCHAR(100)
P_Number VARCHAR(20)
Role ENUM
Date_Hired DATE
Password CHAR(60)
MAINTENANCE (Activities)
PK Maintenance_ID INT(UNSIGNED)
FK Bike_ID INT(UNSIGNED)
FK Staff_ID INT(UNSIGNED)
Maintenance_Date DATETIME
Description TEXT
Cost DECIMAL (8, 2)
PAYMENT (Record)
PK Payment_ID INT(UNSIGNED)
FK Customer_ID INT(UNSIGNED)
FK Rental_ID INT(UNSIGNED)
Payment_Date DATETIME
Amount DECIMAL(8, 2)
Payment_Method VARCHAR(50)
Transaction_ID VARCHAR(100)

bike-rental-dbms

Data Dictionary

Server: Bike-Rental Connection
Author: Administrator (GROUP-C)
Date: 2025-09-19 12:17:11
Initialized at: MAKERERE UNIVERSITY
Version: 1.0

Generated with Navicat

Table of Contents

1. Introduction 1
2. Server: Bike-Rental Connection (MySQL) 2
    2.1. Database: bike-rental-dbms 2
        2.1.1. Tables 2
            2.1.1.1. Table: audit_logs 2
            2.1.1.2. Table: bike_models 2
            2.1.1.3. Table: bike_transfers 3
            2.1.1.4. Table: bikes 4
            2.1.1.5. Table: customers 5
            2.1.1.6. Table: damage_reports 5
            2.1.1.7. Table: locations 6
            2.1.1.8. Table: maintenance_logs 7
            2.1.1.9. Table: payments 8
            2.1.1.10. Table: penalties 9
            2.1.1.11. Table: rentals 9
            2.1.1.12. Table: reservations 11
            2.1.1.13. Table: staff 12
            2.1.1.14. Table: users 12

1. Introduction

A data dictionary is a collection of metadata such as object name, data type, size, classification, and relationships with other data assets. It is used by data administrators, analysts, and engineers to understand and trust data assets. It helps in the creation of authentic, transparent, and consistent data throughout the organization.

In this data dictionary, following servers are chosen for documentation:
Bike-Rental Connection (MySQL)

For each server, definitions of tables (entities/collections), views, functions are listed in order. Detailed properties of data elements (data type, size, nullability, optionality, indexes, foreign keys, constraints) are organized in tabular format.

2. Server: Bike-Rental Connection (MySQL)

Version: 5.7.14

1 database is listed below.

2.1. Database: bike-rental-dbms

Database objects to be listed: 14 tables

2.1.1. Tables

2.1.1.1. Table: audit_logs

Fields

Pos	Name	Type	Not Null	Others
1	audit_id 🔑	bigint(20) Auto Increment	√	
2	entity	varchar(50)	√	
3	entity_id	int(10)	√	
4	action	varchar(50)	√	
5	action_detail	json		
6	performed_by	int(10)		Index: performed_by
7	performed_at	datetime	√	Default: CURRENT_TIMESTAMP

Indexes

Name	Type	Method	Fields
performed_by	NORMAL	BTREE	performed_by

Foreign Keys

Name	Fields	Referenced Table	Referenced Fields	On Delete	On Update
audit_logs_ibfk_1	performed_by	bike-rental-dbms.users	user_id	RESTRICT	RESTRICT

2.1.1.2. Table: bike_models

Fields

Pos	Name	Type	Not Null	Others
1	bike_model_id	int(10) Auto Increment	√	
2	manufacturer	varchar(100)		
3	model_name	varchar(100)		
4	bike_type	enum		
5	default_rate_per_min	decimal(8, 2)	√	Default: 0.00

2.1.1.3. Table: bike_transfers

Fields

Pos	Name	Type	Not Null	Others
1	transfer_id	int(10) Auto Increment	√	
2	bike_id	int(10)	√	Index: bike_id
3	from_location_id	int(10)		Index: from_location_id
4	to_location_id	int(10)	√	Index: to_location_id
5	performed_by	int(10)		Index: performed_by
6	transfer_date	datetime	√	Default: CURRENT_TIMESTAMP
7	notes	text		

Indexes

Name	Type	Method	Fields
bike_id	NORMAL	BTREE	bike_id
from_location_id	NORMAL	BTREE	from_location_id
to_location_id	NORMAL	BTREE	to_location_id
performed_by	NORMAL	BTREE	performed_by

Foreign Keys

Name	Fields	Referenced Table	Referenced Fields	On Delete	On Update

bike_transfers_ibfk_1	bike_id	bike-rental-dbms.bikes	bike_id	RESTRICT	RESTRICT
bike_transfers_ibfk_2	from_location_id	bike-rental-dbms.locations	location_id	RESTRICT	RESTRICT
bike_transfers_ibfk_3	to_location_id	bike-rental-dbms.locations	location_id	RESTRICT	RESTRICT
bike_transfers_ibfk_4	performed_by	bike-rental-dbms.staff	staff_id	RESTRICT	RESTRICT

2.1.1.4. Table: bikes

Fields

Pos	Name	Type	Not Null	Others
1	bike_id 🔑	int(10) Auto Increment	√	
2	bike_serial	varchar(100)	√	Index: bike_serial
3	bike_model_id	int(10)		Index: bike_model_id
4	custom_model	varchar(100)		
5	current_status	enum		
6	rental_rate_per_min	decimal(8, 2)	√	
7	current_location_id	int(10)		Index: current_location_id
8	last_maintenance_at	datetime		
9	km_or_mileage	decimal(9, 2)		
10	added_at	datetime	√	Default: CURRENT_TIMESTAMP

Indexes

Name	Type	Method	Fields
bike_serial	UNIQUE	BTREE	bike_serial
bike_model_id	NORMAL	BTREE	bike_model_id
current_location_id	NORMAL	BTREE	current_location_id

Foreign Keys

Name	Fields	Referenced Table	Referenced Fields	On Delete	On Update
bikes_ibfk_1	bike_model_id	bike-rental-dbms.bike_models	bike_model_id	RESTRICT	RESTRICT
bikes_ibfk_2	current_location_id	bike-rental-dbms.locations	location_id	RESTRICT	RESTRICT

2.1.1.5. Table: customers

Fields

Pos	Name	Type	Not Null	Others
1	customer_id 🔑	int(10) Auto Increment	√	
2	user_id	int(10)	√	Index: user_id
3	preferred_payment_method	varchar(50)		
4	created_by	int(10)		Index: created_by

Indexes

Name	Type	Method	Fields
user_id	NORMAL	BTREE	user_id
created_by	NORMAL	BTREE	created_by

Foreign Keys

Name	Fields	Referenced Table	Referenced Fields	On Delete	On Update
customers_ibfk_1	user_id	bike-rental-dbms.users	user_id	RESTRICT	RESTRICT
customers_ibfk_2	created_by	bike-rental-dbms.staff	staff_id	RESTRICT	RESTRICT

2.1.1.6. Table: damage_reports

Fields

Pos	Name	Type	Not Null	Others
1	damage_id 🔑	int(10) Auto Increment	√	

2	rental_id	int(10)		Index: rental_id
3	bike_id	int(10)	√	Index: bike_id
4	reported_by_customer_id	int(10)		Index: reported_by_customer_id
5	reported_by_staff_id	int(10)		Index: reported_by_staff_id
6	reported_at	datetime	√	Default: CURRENT_TIMESTAMP
7	description	text	√	
8	estimated_repair_cost	decimal(10, 2)		
9	status	enum		

Indexes

Name	Type	Method	Fields
rental_id	NORMAL	BTREE	rental_id
bike_id	NORMAL	BTREE	bike_id
reported_by_customer_id	NORMAL	BTREE	reported_by_customer_id
reported_by_staff_id	NORMAL	BTREE	reported_by_staff_id

Foreign Keys

Name	Fields	Referenced Table	Referenced Fields	On Delete	On Update
damage_reports_ibfk_1	rental_id	bike-rental-dbms.rentals	rental_id	RESTRICT	RESTRICT
damage_reports_ibfk_2	bike_id	bike-rental-dbms.bikes	bike_id	RESTRICT	RESTRICT
damage_reports_ibfk_3	reported_by_customer_id	bike-rental-dbms.customers	customer_id	RESTRICT	RESTRICT
damage_reports_ibfk_4	reported_by_staff_id	bike-rental-dbms.staff	staff_id	RESTRICT	RESTRICT

2.1.1.7. Table: locations

Fields

Pos	Name	Type	Not Null	Others
1	location_id 🔑	int(10) Auto Increment	√	
2	location_name	varchar(150)	√	
3	address	varchar(255)		
4	city	varchar(100)		
5	longitude	decimal(10, 7)		
6	latitude	decimal(10, 7)		
7	capacity	int(10)		Default: 0
8	created_at	datetime	√	Default: CURRENT_TIMESTAMP

2.1.1.8. Table: maintenance_logs

Fields

Pos	Name	Type	Not Null	Others
1	maintenance_id 🔑	int(10) Auto Increment	√	
2	bike_id	int(10)	√	Index: bike_id
3	staff_id	int(10)		Index: staff_id
4	maintenance_date	datetime	√	Default: CURRENT_TIMESTAMP
5	description	text	√	
6	cost	decimal(10, 2)	√	Default: 0.00
7	next_due_date	date		

Indexes

Name	Type	Method	Fields
bike_id	NORMAL	BTREE	bike_id
staff_id	NORMAL	BTREE	staff_id

Foreign Keys

Name	Fields	Referenced Table	Referenced Fields	On Delete	On Update

maintenance_logs_ibfk_1	bike_id	bike-rental-dbms.bikes	bike_id	RESTRICT	RESTRICT
maintenance_logs_ibfk_2	staff_id	bike-rental-dbms.staff	staff_id	RESTRICT	RESTRICT

2.1.1.9. Table: payments

Fields

Pos	Name	Type	Not Null	Others
1	payment_id 🔑	int(10) Auto Increment	√	
2	rental_id	int(10)		Index: rental_id
3	customer_id	int(10)		Index: customer_id
4	payment_date	datetime	√	Default: CURRENT_TIMESTAMP
5	amount	decimal(12, 2)	√	
6	currency	char(3)	√	Default: 'UGX'
7	method	enum		
8	processor_transaction_id	varchar(255)		Index: processor_transaction_id
9	status	enum		
10	receipt_url	varchar(255)		

Indexes

Name	Type	Method	Fields
processor_transaction_id	UNIQUE	BTREE	processor_transaction_id
rental_id	NORMAL	BTREE	rental_id
customer_id	NORMAL	BTREE	customer_id

Foreign Keys

Name	Fields	Referenced Table	Referenced Fields	On Delete	On Update
payments_ibfk_1	rental_id	bike-rental-dbms.rentals	rental_id	RESTRICT	RESTRICT
payments_ibfk_2	customer_id	bike-rental-dbms.customers	customer_id	RESTRICT	RESTRICT

2.1.1.10. Table: penalties

Fields

Pos	Name	Type	Not Null	Others
1	penalty_id 🔑	int(10) Auto Increment	√	
2	customer_id	int(10)	√	Index: customer_id
3	rental_id	int(10)		Index: rental_id
4	amount	decimal(10, 2)	√	
5	reason	varchar(255)	√	
6	issued_by	int(10)		Index: issued_by
7	issued_at	datetime	√	Default: CURRENT_TIMESTAMP
8	paid	tinyint(1)	√	Default: 0

Indexes

Name	Type	Method	Fields
customer_id	NORMAL	BTREE	customer_id
rental_id	NORMAL	BTREE	rental_id
issued_by	NORMAL	BTREE	issued_by

Foreign Keys

Name	Fields	Referenced Table	Referenced Fields	On Delete	On Update
penalties_ibfk_1	customer_id	bike-rental-dbms.customers	customer_id	RESTRICT	RESTRICT
penalties_ibfk_2	rental_id	bike-rental-dbms.rentals	rental_id	RESTRICT	RESTRICT
penalties_ibfk_3	issued_by	bike-rental-dbms.staff	staff_id	RESTRICT	RESTRICT

2.1.1.11. Table: rentals

Fields

Pos	Name	Type	Not Null	Others
1	rental_id 🔑	int(10) Auto Increment	√	

2	rental_reference_no	varchar(50)	√	Index: rental_reference_no
3	customer_id	int(10)	√	Index: customer_id
4	bike_id	int(10)	√	Index: bike_id
5	start_location_id	int(10)	√	Index: start_location_id
6	end_location_id	int(10)		Index: end_location_id
7	rental_start	datetime	√	
8	rental_end	datetime		
9	minutes_used	int(10)		
10	base_cost	decimal(10, 2)	√	Default: 0.00
11	late_fee	decimal(10, 2)	√	Default: 0.00
12	damage_fee	decimal(10, 2)	√	Default: 0.00
13	total_cost	decimal(12, 2)	√	Default: 0.00
14	payment_status	enum		
15	status	enum		
16	created_at	datetime	√	Default: CURRENT_TIMESTAMP
17	completed_by	int(10)		Index: completed_by

Indexes

Name	Type	Method	Fields
rental_reference_no	UNIQUE	BTREE	rental_reference_no
customer_id	NORMAL	BTREE	customer_id
bike_id	NORMAL	BTREE	bike_id
start_location_id	NORMAL	BTREE	start_location_id
end_location_id	NORMAL	BTREE	end_location_id
completed_by	NORMAL	BTREE	completed_by

Foreign Keys

Name	Fields	Referenced Table	Referenced Fields	On Delete	On Update
rentals_ibfk_1	customer_id	bike-rental-dbms.customers	customer_id	RESTRICT	RESTRICT

rentals_ibfk_2	bike_id	bike-rental-dbms.bikes	bike_id	RESTRICT	RESTRICT
rentals_ibfk_3	start_location_id	bike-rental-dbms.locations	location_id	RESTRICT	RESTRICT
rentals_ibfk_4	end_location_id	bike-rental-dbms.locations	location_id	RESTRICT	RESTRICT
rentals_ibfk_5	completed_by	bike-rental-dbms.staff	staff_id	RESTRICT	RESTRICT

2.1.1.12. Table: reservations

Fields

Pos	Name	Type	Not Null	Others
1	reservation_id 🔑	int(10) Auto Increment	√	
2	customer_id	int(10)		Index: customer_id
3	bike_id	int(10)		Index: bike_id
4	location_id	int(10)		Index: location_id
5	start_datetime	datetime	√	
6	end_datetime	datetime		
7	status	enum		
8	created_at	datetime	√	Default: CURRENT_TIMESTAMP

Indexes

Name	Type	Method	Fields
customer_id	NORMAL	BTREE	customer_id
bike_id	NORMAL	BTREE	bike_id
location_id	NORMAL	BTREE	location_id

Foreign Keys

Name	Fields	Referenced Table	Referenced Fields	On Delete	On Update
reservations_ibfk_1	customer_id	bike-rental-dbms.customers	customer_id	RESTRICT	RESTRICT

reservations_ibfk_2	bike_id	bike-rental-dbms.bikes	bike_id	RESTRICT	RESTRICT
reservations_ibfk_3	location_id	bike-rental-dbms.locations	location_id	RESTRICT	RESTRICT

2.1.1.13. Table: staff

Fields

Pos	Name	Type	Not Null	Others
1	staff_id 🔑	int(10) Auto Increment	√	
2	user_id	int(10)	√	Index: user_id
3	role	enum		Default: 'agent'
4	date_hired	date		
5	location_id	int(10)		Index: location_id

Indexes

Name	Type	Method	Fields
user_id	NORMAL	BTREE	user_id
location_id	NORMAL	BTREE	location_id

Foreign Keys

Name	Fields	Referenced Table	Referenced Fields	On Delete	On Update
staff_ibfk_1	user_id	bike-rental-dbms.users	user_id	RESTRICT	RESTRICT
staff_ibfk_2	location_id	bike-rental-dbms.locations	location_id	RESTRICT	RESTRICT

2.1.1.14. Table: users

Fields

Pos	Name	Type	Not Null	Others
1	user_id 🔑	int(10) Auto Increment	√	

2	user_type	enum	√	
3	national_id	varchar(50)		Index: national_id
4	first_name	varchar(100)	√	
5	last_name	varchar(100)	√	
6	email	varchar(255)	√	Index: email
7	phone	varchar(30)	√	
8	date_of_birth	date		
9	password	varchar(255)	√	
10	password_reset_token	varchar(255)		
11	status	enum	√	Default: 'active'
12	registered_at	datetime	√	Default: CURRENT_TIMESTAMP
13	updated_at	datetime		
14	deleted_at	datetime		

Indexes

Name	Type	Method	Fields
email	UNIQUE	BTREE	email
national_id	UNIQUE	BTREE	national_id