**Assignment-Courier Management System**

**Entities**

 **User**: Manages the users sending couriers.

* Attributes: UserID (PK), Name, Email, Password, ContactNumber, Address

 **Courier**: Tracks courier details.

* Attributes: CourierID (PK), SenderName, SenderAddress, ReceiverName, ReceiverAddress, Weight, Status, TrackingNumber, DeliveryDate, UserID (FK)

 **CourierServices**: Manages the types of delivery services.

* Attributes: ServiceID (PK), ServiceName, Cost

 **Employee**: Records employee details.

* Attributes: EmployeeID (PK), Name, Email, ContactNumber, Role, Salary

 **Location**: Stores location information.

* Attributes: LocationID (PK), LocationName, Address

 **Payment**: Records payments made for couriers.

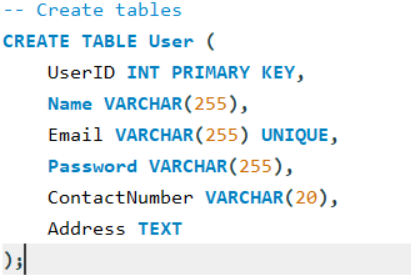
* Attributes: PaymentID (PK), CourierID (FK), LocationID (FK), Amount, PaymentDate

**Relationships**

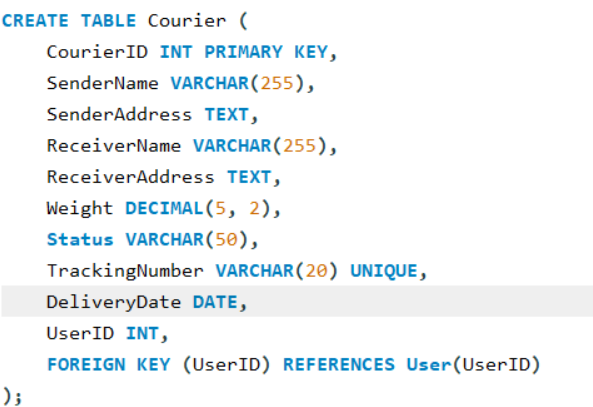
* **User ↔ Courier (1-to-Many)**: One user can send multiple couriers; each courier belongs to one user.
* **Courier ↔ Payment (1-to-1)**: Each courier has one payment, and each payment is for one courier.
* **Location ↔ Payment (1-to-Many)**: One location handles multiple payments, but each payment is linked to one location.
* **CourierServices ↔ Courier (Many-to-Many)**: A courier can use multiple services, and services can apply to multiple couriers (requires a junction table, not yet defined).



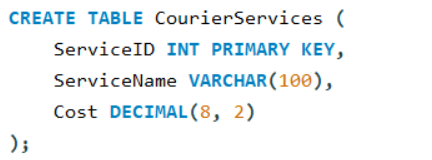
This command creates a new database named CourierManagementSystem within the database management system.



Creates a User table with columns for user details including an integer primary key UserID, and fields for name, email (unique), password, contact number, and address.



Creates a Courier table with columns for courier details, including an integer primary key CourierID, sender and receiver names and addresses, weight, status, unique tracking number, delivery date, and a foreign key referencing the User table.



Creates a CourierServices table with columns for service details, including an integer primary key ServiceID, service name, and cost.

A screenshot of a computer code

Description automatically generated

Creates an Employee table with columns for employee details, including an integer primary key EmployeeID, name, unique email, contact number, role, and salary.

A close-up of a computer code

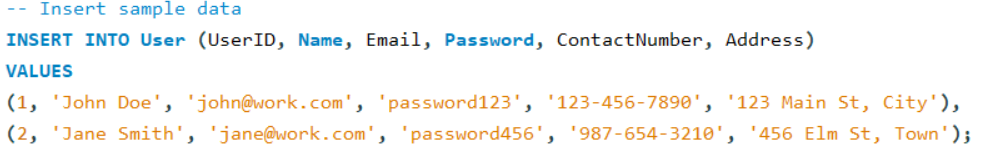
Description automatically generated

Creates a Location table with columns for location details, including an integer primary key LocationID, location name, and address.

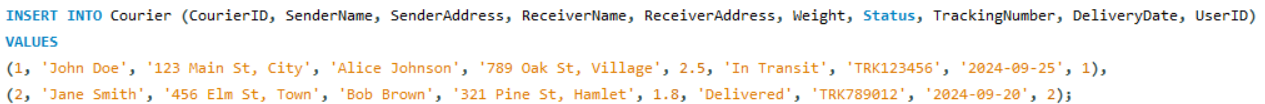
A computer code with blue text

Description automatically generated

Creates a Payment table with columns for payment details, including an integer primary key PaymentID, foreign keys for CourierID and LocationID, payment amount, and payment date.



Inserts two sample user records into the User table with specified values for UserID, name, email, password, contact number, and address.



Inserts two sample courier records into the Courier table with specified values for CourierID, sender and receiver names and addresses, weight, status, tracking number, delivery date, and UserID.

A close-up of a service

Description automatically generated

Inserts two sample courier service records into the CourierServices table with specified values for ServiceID, service name, and cost.

A close-up of a phone number

Description automatically generated

Inserts two sample employee records into the Employee table with specified values for EmployeeID, name, email, contact number, role, and salary.

A close up of a sign

Description automatically generated

Inserts two sample location records into the Location table with specified values for LocationID, location name, and address.

A close-up of a computer screen

Description automatically generated

Inserts two sample payment records into the Payment table with specified values for PaymentID, CourierID, LocationID, amount, and payment date.

A white background with blue text

Description automatically generated

Lists all records from the User table.

A close up of words

Description automatically generated

Retrieves all courier records for the user with UserID 1

A close up of a text

Description automatically generated

Lists all records from the Courier table.



Retrieves all details of the courier with CourierID 1.

A close up of a sign

Description automatically generated

Lists all deliveries associated with the courier having CourierID 1.

Blue text on a white background

Description automatically generated

Retrieves all packages that have not been delivered.



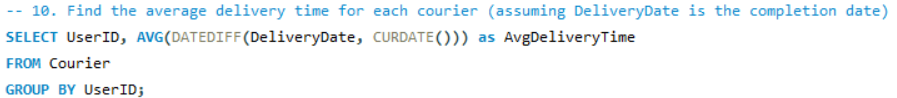
Lists all packages scheduled for delivery today.



Retrieves all packages that are currently marked as 'In Transit'.



Calculates the total number of packages for each courier grouped by UserID.



Finds the average delivery time for each courier based on the difference between the delivery date and the current date.



Lists all packages from the Courier table with a weight between 1.0 and 3.0.

Blue text on a white background

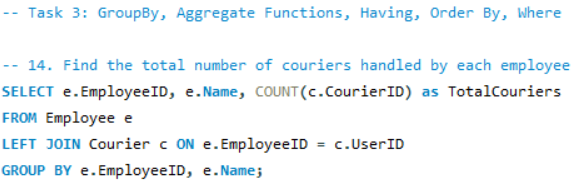
Description automatically generated

Retrieves all employee records whose names contain 'John'.

A close-up of a computer screen

Description automatically generated

Retrieves courier records with associated payments greater than $50 by joining the Courier and Payment tables.



Finds the total number of couriers handled by each employee, grouped by EmployeeID and name.

A close-up of a computer screen

Description automatically generated

Calculates the total revenue generated by each location, grouped by LocationID and location name.

A computer screen shot of a computer code

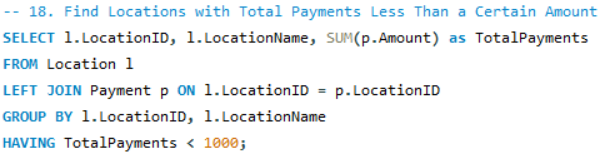
Description automatically generated

Finds the total number of couriers delivered to each location, grouped by LocationID and location name.

A screenshot of a computer

Description automatically generated

Retrieves the courier with the highest average delivery time, ordered by average delivery time in descending order.



Finds locations with total payments less than $1000, grouped by LocationID and location name.

A close up of a computer screen

Description automatically generated

Calculates total payments per location, grouped by LocationID and location name.

A screenshot of a computer

Description automatically generated

Retrieves couriers who have received payments totaling more than $1000 in a specific location, grouped by CourierID and sender name.

A screenshot of a computer

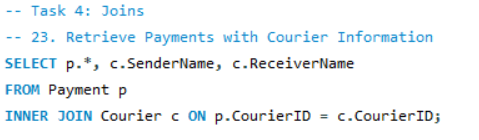
Description automatically generated

Retrieves couriers who have received payments totaling more than $1000 after a specified date, grouped by CourierID and sender name.

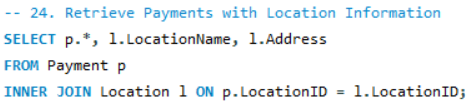
A screenshot of a computer

Description automatically generated

Retrieves locations where the total amount received is more than $5000 before a specified date, grouped by LocationID and location name.



Retrieves payment records along with corresponding courier information, including sender and receiver names.



Retrieves payment records along with corresponding location information, including location name and address.

A screen shot of a computer code

Description automatically generated

Retrieves payment records with both courier and location information, including sender and receiver names, as well as location details.

A white background with blue text

Description automatically generated

Lists all payments with corresponding courier details using a left join.

A close-up of a computer code

Description automatically generated

Calculates the total payments received for each courier, grouped by CourierID and sender name.



Lists all payment records made on a specific date.

A close-up of a computer screen

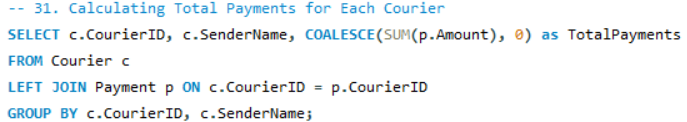
Description automatically generated

Retrieves payment records along with courier information, including sender name, receiver name, and status

A close up of a computer screen

Description automatically generated.

Retrieves payment records with corresponding location details, including location name and address.



Calculates the total payments for each courier, returning 0 for couriers with no payments, grouped by CourierID and sender name.

A close up of text

Description automatically generated

Lists all payment records made within a specified date range.

A screenshot of a computer program

Description automatically generated

Retrieves a complete list of users along with their corresponding courier records, including users without couriers.

A screenshot of a computer program

Description automatically generated

Retrieves a complete list of couriers and their corresponding services, including services without associated couriers.

A screen shot of a computer

Description automatically generated

Retrieves a complete list of employees and their corresponding payments, including payments without associated employees.

A close-up of a website

Description automatically generated

Lists all users and all courier services, showing all possible combinations using a cross join.

A white background with blue text

Description automatically generated

Lists all employees and all locations, showing all possible combinations using a cross join.

A close-up of a computer screen

Description automatically generated

Retrieves a list of couriers along with the corresponding sender information from the User table.

A close up of a white background

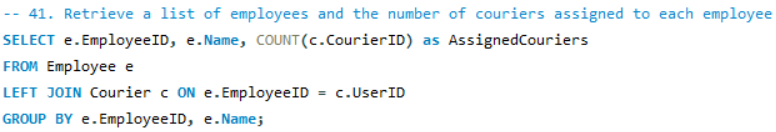
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Retrieves a list of couriers along with the corresponding receiver information from the User table.

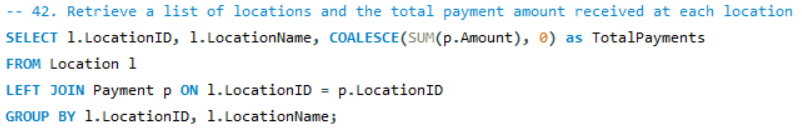
A computer screen shot of a computer

Description automatically generated

Retrieves a list of couriers along with their corresponding courier service details, including service name and cost.



Retrieves a list of employees along with the count of couriers assigned to each, grouped by EmployeeID and name.



Retrieves a list of locations and the total payment amount received at each, returning 0 for locations with no payments.

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Description automatically generated

Retrieves all couriers sent by the same sender, excluding the courier itself.

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Description automatically generated

Lists all employees who share the same role, excluding themselves from the results.

A white background with blue text

Description automatically generated

Retrieves all payments made for couriers sent from the same location, excluding the payment itself.

A close up of a computer screen

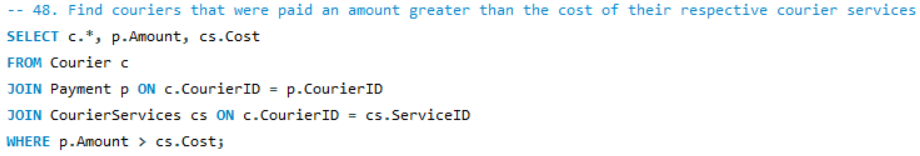
Description automatically generated

Retrieves all couriers sent from the same location, excluding the courier itself.

A computer screen shot of a number of words

Description automatically generated

Lists employees along with the count of couriers they have delivered, specifically those with a status of 'Delivered'.



Finds couriers that were paid an amount greater than the cost of their respective courier services.

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Description automatically generated

Finds couriers that have a weight greater than the average weight of all couriers.

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Description automatically generated

Retrieves the names of all employees who have a salary greater than the average salary of all employees.

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Description automatically generated

Calculates the total cost of all courier services where the cost is less than the maximum cost of any service.

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Description automatically generated

Retrieves all couriers that have been paid for, determined by the existence of corresponding payment records

A screenshot of a computer screen

Description automatically generated

Finds locations where the maximum payment amount was made, identified by the existence of a payment with that maximum amount.

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Description automatically generated

Retrieves all couriers whose weight is greater than the average weight of all couriers sent by a specified sender.