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Design: Service Layer(s)

November 12, 2023

HomeEasy - Service Layers

Overview –

The HomeEasy application will be broken down into easily manageable service layers.

a) The Front-End layer will serve the user the UI of the application with requirements for managing different device types including mobile devices, different size desktop screens, etc.

b) The Front-End layer would be supplied with data from the next layer ‘deeper’.This would be an API layer that receives structured requests from the UI, communicates with the DB to process the request, and responses with a structured response.

c) Finally there would be the database layer that actually persists the data in a structured database.

Below, I have listed the endpoints needed for my API layer.

API Endpoints –

Login:

URL: demo.hartzlerhome.solutions/login

Method: POST

Purpose: To submit the user credentials to the application layer to verify the user is authorized to continue.

Example Request:

```
curl --request POST
     --url ‘http://demo.hartzlerhome.solutions/login’
     --header {‘content-type: application/json’}
     --data ‘{‘username’: ‘admin’, ‘passhash':
‘5e884898da28047151d0e56f8dc6292773603d0d6aabbdd62a11ef721d1542d8’}’
```

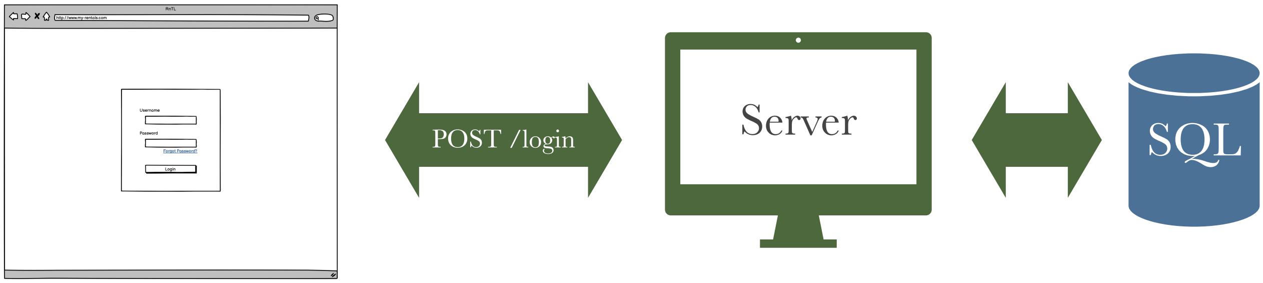
Success response:

```
{
     ‘UserSessionID’: ‘A2289581028CF29B20D’,
     ‘username’: ‘admin’,
}
```

Error Response:

```
        {     ‘status’: 401
              ‘message’: ‘Unauthorized: Incorrect password’,
              ‘goTo’: ‘passwordBox’
              ‘tryNum’: 2
        }
```

Visual:



Admin User:

A. Find properties and display their lease / payment status

Method: GET

URL: demo.hartzlerhome.solutions/admin/rent/roll

Purpose: When the admin user logs in, the main page will show all the properties managed and their rent status. This API will return data so the page will show the rent payment status as well as the property lease information. For the MVP, the data received would only be fixed to the year the request was made. STRETCH GOAL: The API should be setup to allow a date range to be considered when making the request.

Example request:

```
curl --request GET
     --url ‘http://demo.hartzlerhome.solutions/admin/rent/roll’
     --header ‘userSessionID’: ‘A2289581028CF29B20D’
```

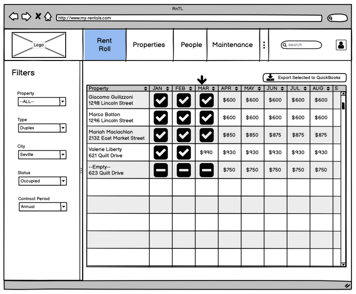
Success Response:

```
{
      {‘propertyID’: ‘142’,
      ‘renter’: {
            ‘firstName’: ‘Harry’,
            ‘lastName’; ‘Example’
      },
      ‘address’: ‘928 great street, any town, us 23456’
      ‘monthlyDue’: ‘675’,
      ‘paymentStatus’: {
```

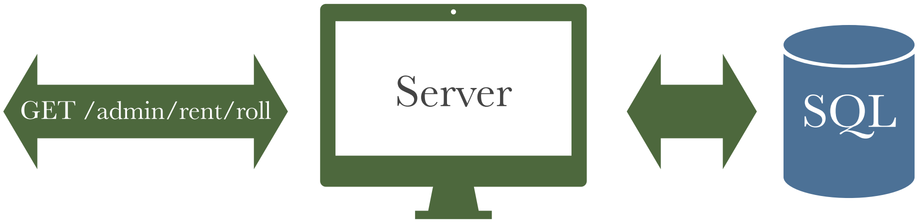
```
                    'January': {
                            'paymentID': '22938',
                            'Status': 'Paid'
                    }, 'February': '{
                            'paymentID': '24583',
                            'Status': 'Paid'
                    }, 'March': {
                            'paymentID': '26948',
                            'Status': 'Paid'
                    },
                    …
                    'December': {
                            'Status': 'unpaid'
                    }
            },
            'nickname': 'Unit2'
            },
            …
    }

    Error Response:
    {
            'status': 401,
            'message': 'Unauthorized: You must be logged in'
    }
```

Visual:



Property	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	S
Giacomo Guilizzoni 1298 Lincoln Street	✓	✓	✓	$600	$600	$600	$600	$600	
Marco Botton 1296 Lincoln Street	✓	✓	✓	$600	$600	$600	$600	$600	
Mariah Maclachlan 2132 East Market Street	✓	✓	✓	$850	$850	$875	$875	$875	
Valerie Liberty 621 Quilt Drive	✓	✓	$990	$930	$930	$930	$930	$930	
--Empty-- 623 Quilt Drive	—	—	—	$750	$750	$750	$750	$750	



B. Find / view payment details

Method: GET

URL: demo.hartzlerhome.solutions/admin/rent/payment

Purpose: When the admin user views payment details, this API will fetch and return data so the page shows the rent payment details.

Example request:

```
curl --request GET
```

```
     --url 'http://demo.hartzlerhome.solutions/admin/rent/payment'
     --header {'userSessionID': 'A2289581028CF29B20D', 'content-type':
'application/json'}
     --data {'paymentID': '246809'}
```

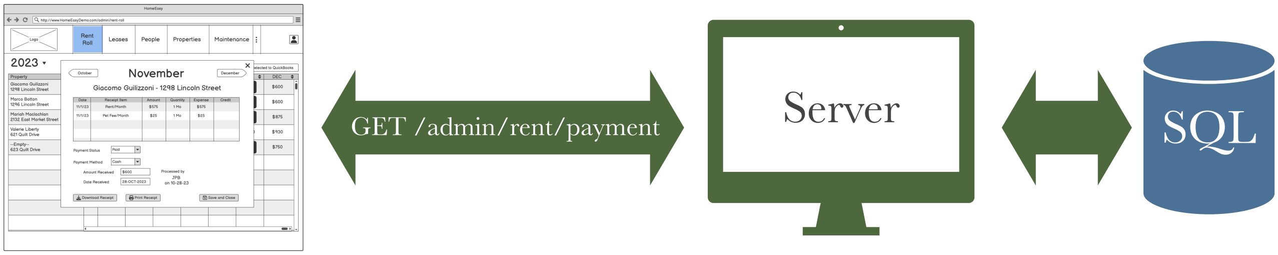
Success Response:

```
{
     {'paymentID': '246809',
     'renter': {
          'firstName': 'Harry',
          'lastName'; 'Example'
     },
     'address': '1298 Lincoln Street, any town, us 23456'
     'monthlyDue': {
          'monthly Rent': '675',
          'pet Fee': '15',
          'late Fee': {
               'daysLate': 3,
               'dailyFee': '5'
          }
     }
     'paymentStatus': 'Paid',
     'paymentMethod': 'Cash',
     'paymentDate': '2022-02-28',
     'processedBy': 'JPB',
     'processedDate': '03-01-22',
}
```

Error Response:

```
{
     'status': 404,
     'message': 'no payment found'
}
```

Visual:



HomeEasy

http://www.HomeEasyDemo.com/admin/rent-roll

2023

Property	DEC
Giacomo Guilizzoni 1298 Lincoln Street	$600
Marco Botton 1296 Lincoln Street	$600
Mariah Maclachlan 2132 East Market Street	$875
Valerie Liberty 621 Quilt Drive	$930
--Empty-- 623 Quilt Drive	$750

November

Giacomo Guilizzoni - 1298 Lincoln Street

Date	Receipt Item	Amount	Quantity	Expense	Credit
11/1/23	Rent/Month	$575	1 Mo	$575	
11/1/23	Pet Fee/Month	$25	1 Mo	$25	

Payment Status: Paid

Payment Method: Cash

Amount Received: $600

Date Received: 28-OCT-2023

Processed by JPB on 10-28-23

C. Entering / creating a payment

Method: POST

URL: demo.hartzlerhome.solutions/admin/rent/payment

Purpose: When the admin receives the payment from the tenant, they will need to present the data to the application so it can be persisted in the database.

Example request:

```
curl --request POST
     --url ‘http://demo.hartzlerhome.solutions/admin/rent/payment’
     --header {‘userSessionID’: ‘A2289581028CF29B20D’, ‘content-type’:
‘application/json’}
     --data {
           ‘leaseID’: ‘91542’,
           ‘PaymentDate’: 2023-10-28,
           ‘PaymentAmount’: 600.00,
           ‘PaymentMethod’: 2,
           ‘PaymentItems’: {
                ‘MonthlyRent’: 575.00,
                ‘PetFee’: 25.00,
                },
           ‘PaymentStatus’: 1,
     }
```

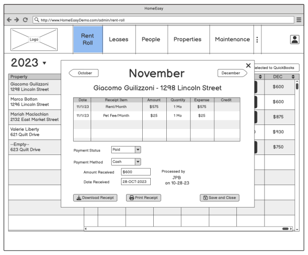
Success Response:

```
{
     ‘status’: 200,
     ‘message’: ‘The Payment has been recorded’,
     ‘paymentID’: 95472
}
```

Error Response:

```
{
     ‘error’: 400,
     ‘message’: ‘Bad Request: payment amount required’
}
```

Visual:



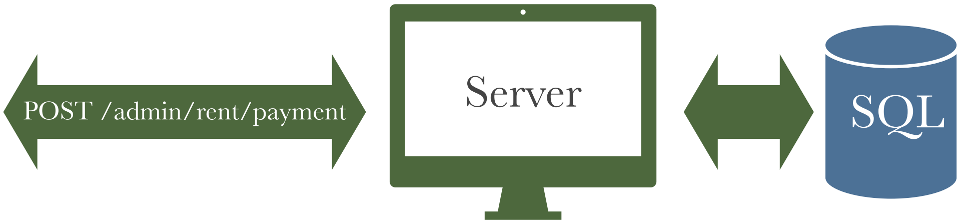
November

Giacomo Guilizzoni - 1298 Lincoln Street

Date	Receipt Item	Amount	Quantity	Expense	Credit
11/1/23	Rent/Month	$575	1 Mo	$575	
11/1/23	Pet Fee/Month	$25	1 Mo	$25	

Payment Status: Paid
Payment Method: Cash
Amount Received: $600
Date Received: 28-OCT-2023
Processed by JPB on 10-28-23

Property	DEC
Giacomo Guilizzoni 1298 Lincoln Street	$600
Marco Botton 1296 Lincoln Street	$600
Mariah Maclachlan 2132 East Market Street	$875
Valerie Liberty 621 Quilt Drive	$930
--Empty-- 623 Quilt Drive	$750



D. Editing / Updating details of a payment

Method: PUT

URL: demo.hartzlerhome.solutions/admin/rent/payment

Purpose: When the admin receives additional information about the payment from the tenant, they will need to update the data in the application so it can be persisted in the database. (Things such as if the check bounced, if the amount was incorrect, etc.)

Example request:

```
curl --request PUT
     --url ‘http://demo.hartzlerhome.solutions/admin/rent/payment’
     --header {‘userSessionID’: ‘A2289581028CF29B20D’, ‘content-type’:
‘application/json’}
     --data {
            ‘paymentID’: ‘425710’,
            ‘PaymentAmount’: 600.00,
            ‘PaymentMethod’: 1,
            ‘PaymentStatus’: 2,
     }
```

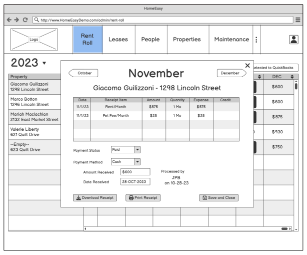
Success Response:

```
{
     ‘status’: 200,
     ‘message’: ‘The Payment has been updated’
}
```

Error Response:

```
{
     ‘error’: 400,
     ‘message’: ‘Bad Request: paymentID required’
}
```

Visual:



November

Giacomo Guilizzoni - 1298 Lincoln Street

Date	Receipt Item	Amount	Quantity	Expense	Credit
11/1/23	Rent/Month	$575	1 Mo	$575	
11/1/23	Pet Fee/Month	$25	1 Mo	$25	

Payment Status: Paid

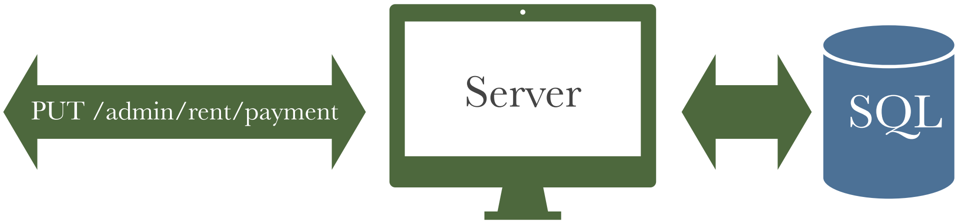
Payment Method: Cash

Amount Received: $600

Date Received: 28-OCT-2023

Processed by JPB on 10-28-23

Property	DEC
Giacomo Guilizzoni 1298 Lincoln Street	$600
Marco Botton 1296 Lincoln Street	$600
Mariah Maclachlan 2132 East Market Street	$875
Valerie Liberty 621 Quilt Drive	$930
--Empty-- 623 Quilt Drive	$750



E. Deleting a payment

Method: DELETE

URL: demo.hartzlerhome.solutions/admin/rent/payment

Purpose: When the admin needs to remove the payment due to a processing error, bounced check, etc., they will need to request the data to be removed.

Example request:

```
curl --request DELETE
     --url ‘http://demo.hartzlerhome.solutions/admin/rent/payment’
     --header {‘userSessionID’: ‘A2289581028CF29B20D’, ‘content-type’:
‘application/json’}
     --data {‘paymentID’: ‘91542’}
```

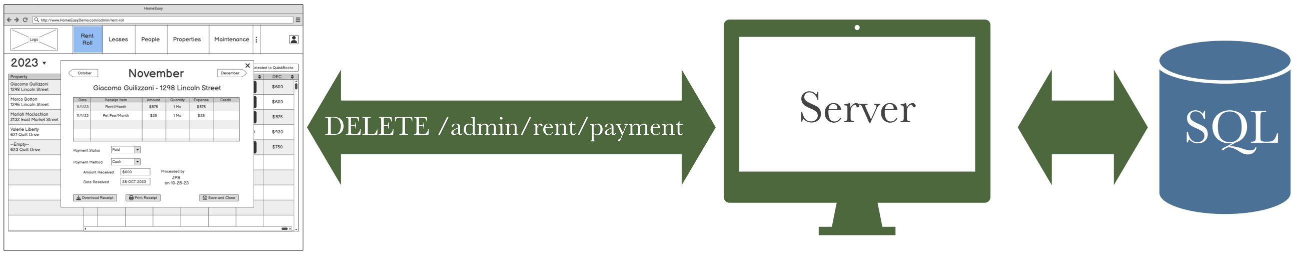
Success Response:

```
{
     ‘status’: 200,
     ‘message’: ‘The Payment has been deleted’
}
```

Error Response:

```
{
     ‘error’: 403,
     ‘message’: ‘Forbidden: You are not authorized to delete payments’
}
```

Visual:



F. Viewing the leases

Method: GET

URL: demo.hartzlerhome.solutions/admin/leases

Purpose: When the admin views the Leases section, the list of managed properties with leases needs listed. This endpoint will return a list of the properties for the given user and can be used to populate the table.

Example request:

```
curl --request GET
     --url 'http://demo.hartzlerhome.solutions/admin/leases'
     --header 'userSessionID': 'A2289581028CF29B20D'
```

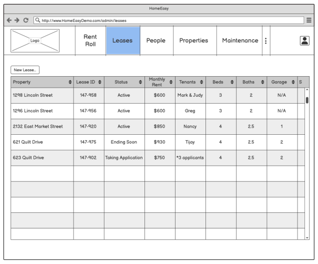
Success Response:

```
{
     {'leaseID': '147-958',
     'nickname': 'Unit2',
     'address': '1298 Lincoln Street',
     'status': 'Active',
     'monthlyRent': '600.00',
     'tenants': 'Mark & Judy',
     'beds': 3,
     'baths': 2,
     'garage': 'N/A',
     …
}
```

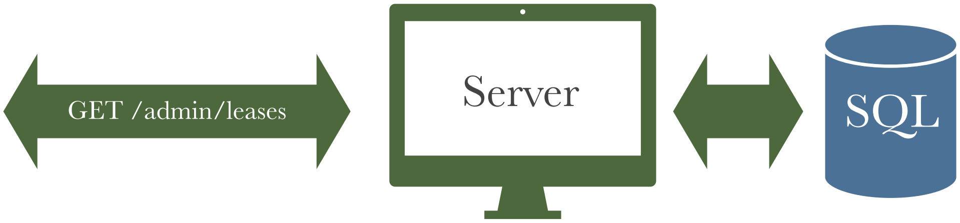
Error Response:

```
{
     'status': 404,
     'message': 'Not Found: no properties found'
}
```

Visual:



Property	Lease ID	Status	Monthly Rent	Tenants	Beds	Baths	Garage	S
1298 Lincoln Street	147-958	Active	$600	Mark & Judy	3	2	N/A	
1296 Lincoln Street	147-956	Active	$600	Greg	3	2	N/A	
2132 East Market Street	147-920	Active	$850	Nancy	4	2.5	1	
621 Quilt Drive	147-975	Ending Soon	$930	Tijay	4	2.5	2	
623 Quilt Drive	147-902	Taking Application	$750	*3 applicants	4	2.5	2	



G. Creating a new lease

Method: POST

URL: demo.hartzlerhome.solutions/admin/leases

Purpose: When the landlord creates a new lease this endpoint will be responsible for receiving the data from the webpage and saving it to the database.

Example request:

```
curl --request POST
     --url ‘http://demo.hartzlerhome.solutions/admin/leases’
     --header {‘userSessionID’: ‘A2289581028CF29B20D’, ‘content-type’:
‘application/json’}
     --data {
     ‘propertyID’: ‘192’,
     ‘openDate’: ‘1298 Lincoln Street’,
     ‘availableDate’: ‘Montville’,
     ‘fees’: [
           ‘Pet Fee’: {
                 ‘amount’: ‘35.00’,
                 ‘occurrence’: 4
           },
           ‘Late Fee’: {
                 ‘amount’: ‘5.00’,
                 ‘occurrence’: 2,
           }
     ],
     ‘files’: [
           {‘filename’: ‘lease agreement’,
           ‘link’: ‘http://fileserver.com/file?=1249917d0a977F',
           },{
           …
           }
     ],
     ‘leaseTerm’: ‘1 year’,
     ‘leaseSuccession’: ‘Month-to-Month’,
     ‘contractBegin’: ‘2023-12-01’,
     ‘leaseStatus’: 2,
     ‘tenant’: [
           {
                 ‘personID’: 246,
                 ‘role’: ‘renter’
           },{
                 ‘personID’: 247,
                 ‘role’: ‘dependant’
           }
     }
}
```

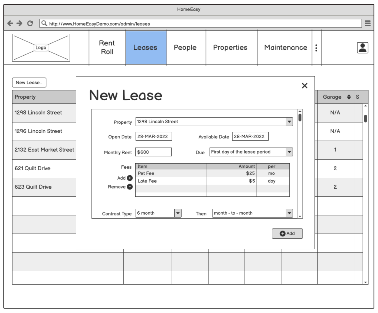
Success Response:

```
{
     ‘status’: 200,
     ‘message’: ‘Success: Lease created’,
     ‘leaseID’: ‘266818293’
}
```

Error Response:

```
{
     ‘status’: 403,
     ‘message’: ‘Forbidden: you have no authority to create a lease.’
}
```

Visual:



HomeEasy

http://www.HomeEasyDemo.com/admin/leases

New Lease

Property: 1298 Lincoln Street

Open Date: 28-MAR-2022 Available Date: 28-MAR-2022

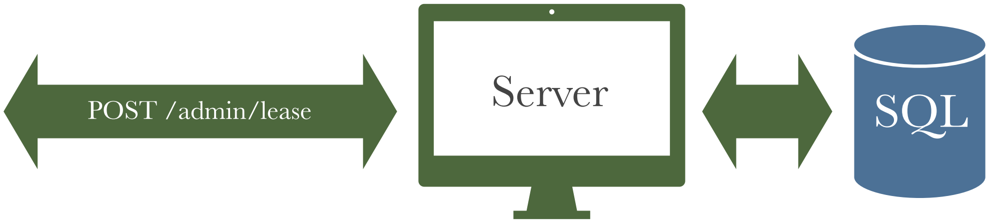
Monthly Rent: $600 Due: First day of the lease period

Fees

Item	Amount	per
Pet Fee	$25	mo
Late Fee	$5	day

Contract Type: 6 month Then: month - to - month

Property	Garage
1298 Lincoln Street	N/A
1296 Lincoln Street	N/A
2132 East Market Street	1
621 Quilt Drive	2
623 Quilt Drive	2



H. Editing a lease

Method: PUT

URL: demo.hartzlerhome.solutions/admin/leases

Purpose: When the lease ends or rent/fee amounts change, the property manager needs to edit some details. This endpoint will be responsible for putting the changed data into the database.

Example request:

```
curl --request PUT
     --url ‘http://demo.hartzlerhome.solutions/admin/leases’
     --header {‘userSessionID’: ‘A2289581028CF29B20D’, ‘content-type’:
‘application/json’}
     --data {
     ‘propertyID’: ‘192’,
     ‘openDate’: ‘1298 Lincoln Street’,
     ‘availableDate’: ‘Montville’,
     ‘fees’: [
          ‘Pet Fee’: {
               ‘amount’: ‘35.00’,
               ‘occurrence’: 4
          },
                ‘Late Fee’: {
                        ‘amount’: ‘5.00’,
                        ‘occurrence’: 2,
                }
        ],
        ‘files’: [
                {‘filename’: ‘lease agreement’,
                ‘link’: ‘http://fileserver.com/file?=1249917d0a977F',
                }
        ],
        ‘leaseTerm’: ‘1 year’,
        ‘leaseSuccession’: ‘Month-to-Month’,
        ‘contractBegin’: ‘2023-12-01’,
        ‘leaseStatus’: 2,
        ‘tenant’: [
                {
                        ‘personID’: 246,
                        ‘role’: ‘renter’
                }
        }
}
```

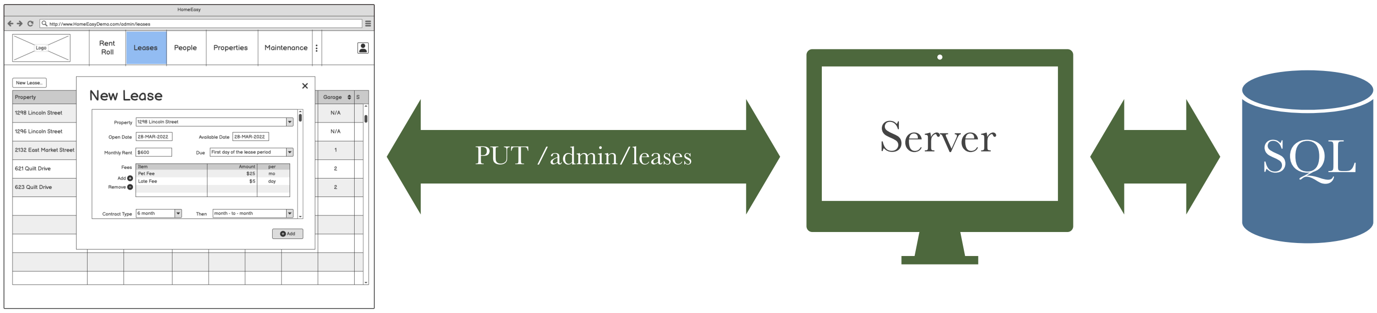
Success Response:

```
{
        ‘status’: 200,
        ‘message’: ‘Success: Lease updated’,
}
```

Error Response:

```
{
        ‘status’: 403,
        ‘message’: ‘Forbidden: you have no authority to edit a lease.’
}
```

Visual:



Property	Garage
1298 Lincoln Street	N/A
1296 Lincoln Street	N/A
2132 East Market Street	1
621 Quilt Drive	2
623 Quilt Drive	2

Property: 1298 Lincoln Street
Open Date: 28-MAR-2022 Available Date: 28-MAR-2022
Monthly Rent: $600 Due: First day of the lease period
Fees

Item	Amount	per
Pet Fee	$25	mo
Late Fee	$5	day

Contract Type: 6 month Then: month - to - month

I. Ending a lease

Method: DELETE

URL: demo.hartzlerhome.solutions/admin/leases

Purpose: When the landlord needs to mark the end of a lease due to selling it, breaking the lease, end of the lease, etc, they will need to request the data to be removed with this endpoint.

Example request:

```
curl --request DELETE
     --url ‘http://demo.hartzlerhome.solutions/admin/lease’
     --header {‘userSessionID’: ‘A2289581028CF29B20D’, ‘content-type’:
‘application/json’}
     --data {
           ‘leaseID’: ‘91542’,
           ‘terminationDate’: ‘2023.10.19’
}
```

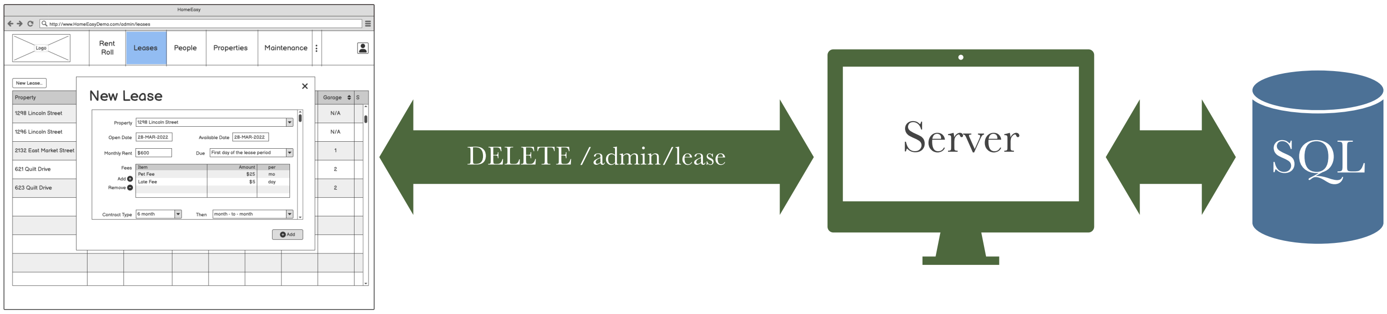
Success Response:

```
{
     ‘status’: 200,
     ‘message’: ‘Success: the lease has been deleted’
}
```

Error Response:

```
{
     ‘error’: 403,
     ‘message’: ‘Forbidden: You are not authorized to delete these
items’
}
```

Visual:



J. Adding a person

Method: POST

URL: demo.hartzlerhome.solutions/admin/people

Purpose: The property manager needs to be able to store contact information and general information about the people who are/were/will be leasing their properties. This endpoint takes care of storing such data in the database.

Example request:

```
curl --request POST
     --url ‘http://demo.hartzlerhome.solutions/admin/people’
     --header {‘userSessionID’: ‘A2289581028CF29B20D’, ‘content-type’:
‘application/json’}
     --data {
          ‘firstName’: ‘Matt’,
          ‘lastName’: ‘Koel’,
          ‘email’: ‘matt.koel@aol.com’,
          ‘phoneNumber’: ‘714.249.4723’,
          ‘additionalDetails’: {
               ’cellPhoneNumber’: ‘688.224.4743’,
               ‘DOB’: ‘1990-12-01’,
               ‘SSN’: ‘123-45-6789’,
               },
          …}
```

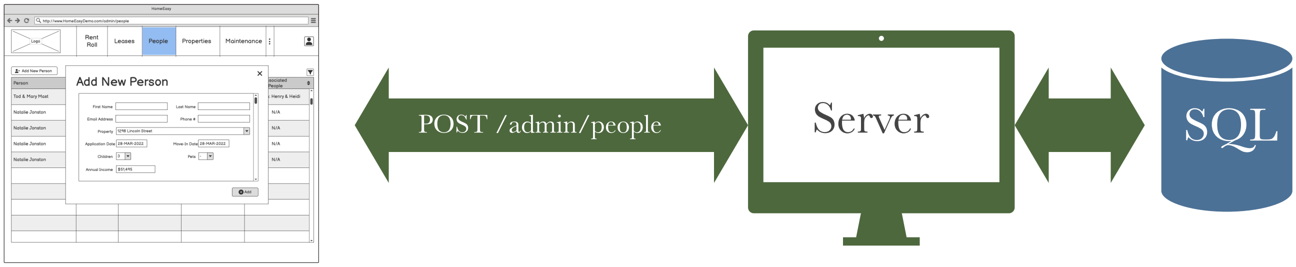
Success Response:

```
{
     ‘status’: 200,
     ‘message’: ‘Success: Person details saved’,
     ‘personID’: 246
}
```

Error Response:

```
{
     ‘status’: 400,
     ‘message’: ‘Bad Request: all fields must be provided.’
}
```

Visual:



Tod & Mary Mast — Henry & Heidi
Natalie Jonston — N/A
Natalie Jonston — N/A
Natalie Jonston — N/A
Natalie Jonston — N/A

First Name
Last Name
Email Address
Phone #
Property: 1298 Lincoln Street
Application Date: 28-MAR-2022
Move-In Date: 28-MAR-2022
Children: 3
Pets: -
Annual Income: $51,495

K. Viewing the people

Method: GET

URL: demo.hartzlerhome.solutions/admin/people

Purpose: This endpoint is meant to get the people data from the database to display to the property manager.

Example request

```
Curl --request GET
     --url ‘http://demo.hartzlerhome.solutions/admin/people’
     --header ‘userSessionID’: ‘A2289581028CF29B20D’
```

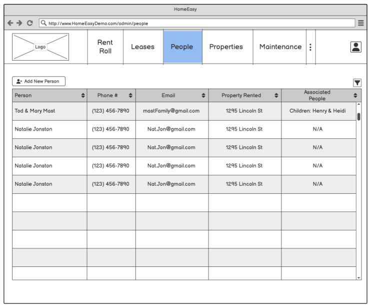
Success Response:

```
{
     {
          ‘personID’: 246
          ‘firstName’: ‘Matt’,
          ‘lastName’: ‘Koel’,
          ‘email’: ‘matt.koel@aol.com’,
          ‘phoneNumber’: ‘714.249.4723’,
          ‘additionalDetails’: {
               ’cellPhoneNumber’: ‘688.224.4743’,
               ‘DOB’: ‘1990-12-01’,
               ‘previousAddress’: ‘123 Any-ole Street, Carolyne, KY
23552’,
          },
     },{…}
}
```

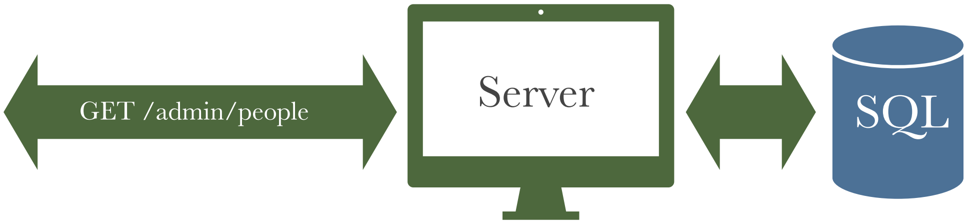
Error Response:

```
{
     ‘status’: 404,
     ‘message’: ‘Not Found: no resources are available.’
}
```

Visual:



Person	Phone #	Email	Property Rented	Associated People
Tod & Mary Mast	(123) 456-7890	mastFamily@gmail.com	1295 Lincoln St	Children: Henry & Heidi
Natalie Jonston	(123) 456-7890	Nat.Jon@gmail.com	1295 Lincoln St	N/A
Natalie Jonston	(123) 456-7890	Nat.Jon@gmail.com	1295 Lincoln St	N/A
Natalie Jonston	(123) 456-7890	Nat.Jon@gmail.com	1295 Lincoln St	N/A
Natalie Jonston	(123) 456-7890	Nat.Jon@gmail.com	1295 Lincoln St	N/A



L. Editing a person’s details

Method: PUT

URL: demo.hartzlerhome.solutions/admin/people

Purpose: When the person details change, the property manager needs to change the person’s details. This endpoint will be responsible for updating the changed data in the database.

Example request:

```
curl --request PUT
     --url 'http://demo.hartzlerhome.solutions/admin/people'
     --header {'userSessionID': 'A2289581028CF29B20D', 'content-type':
'application/json'}
     --data {
           'personID': '246',
           'phoneNumber': '688.224.4743',
           …}
```

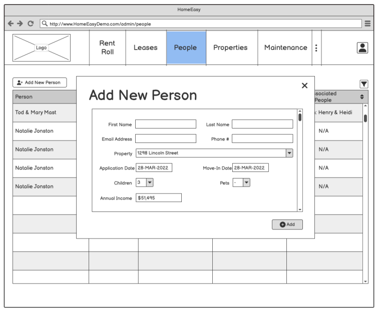
Success Response:

```
{
     'status': 200,
     'message': 'Success: Person details updated',
     'personID': 246
}
```

Error Response:

```
{
     'status': 400,
     'message': 'Bad Request: all fields must be provided.'
}
```

Visual:



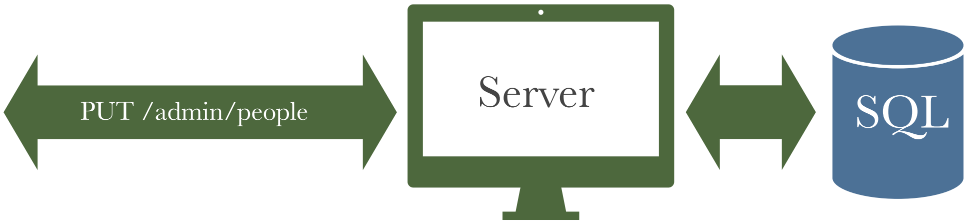
HomeEasy

http://www.HomeEasyDemo.com/admin/people

Person	...sociated People
Tod & Mary Mast	...: Henry & Heidi
Natalie Jonston	N/A
Natalie Jonston	N/A
Natalie Jonston	N/A
Natalie Jonston	N/A

Add New Person

First Name:
Last Name:
Email Address:
Phone #:
Property: 1298 Lincoln Street
Application Date: 28-MAR-2022
Move-In Date: 28-MAR-2022
Children: 3
Pets: -
Annual Income: $51,495



M. Viewing the properties

Method: GET

URL: demo.hartzlerhome.solutions/admin/properties

Purpose: When the admin views the Properties section, the list of properties need listed. This endpoint will return the properties for the given user and can be used to populate the table.

Example request:

```
curl --request GET
     --url ‘http://demo.hartzlerhome.solutions/admin/properties’
     --header ‘userSessionID’: ‘A2289581028CF29B20D’
```

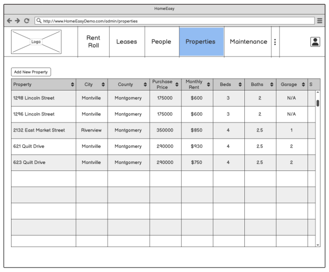
Success Response:

```
{
     {‘propertyID’: ‘142’,
     ‘nickname’: ‘Unit2’,
     ‘address’: ‘1298 Lincoln Street’,
     ‘city’: ‘Montville’,
     ‘county’: ‘Montgomery’,
     ‘purchasePrice’: ‘175,000’,
     ‘monthlyRent’: ‘600.00’,
     ‘beds’: 3,
     ‘baths’: 2,
     ‘garage’: Null,
     …
}
```

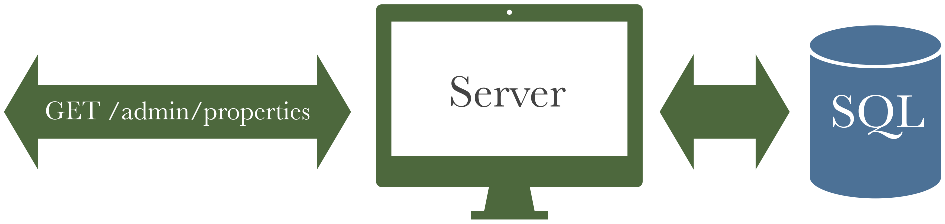
Error Response:

```
{
     ‘status’: 404,
     ‘message’: ‘Not Found: no properties found’
}
```

Visual:



Property	City	County	Purchase Price	Monthly Rent	Beds	Baths	Garage	S
1298 Lincoln Street	Montville	Montgomery	175000	$600	3	2	N/A	
1296 Lincoln Street	Montville	Montgomery	175000	$600	3	2	N/A	
2132 East Market Street	Riverview	Montgomery	350000	$850	4	2.5	1	
621 Quilt Drive	Montville	Montgomery	290000	$930	4	2.5	2	
623 Quilt Drive	Montville	Montgomery	290000	$750	4	2.5	2	



N. Entering a property

Method: POST

URL: demo.hartzlerhome.solutions/admin/properties

Purpose: When the admin adds a new property this endpoint will be responsible for receiving the data from the webpage and saving it to the database.

Example request:

```
curl --request POST
     --url ‘http://demo.hartzlerhome.solutions/admin/properties’
     --header {‘userSessionID’: ‘A2289581028CF29B20D’, ‘content-type’:
‘application/json’}
     --data {
     ‘nickname’: ‘Unit2’,
     ‘houseNumber’: ‘1298’,
     ‘streetName’: ‘Lincoln Street’,
     ‘apptNo’: ‘’,
     ‘city’: ‘Montville’,
     ‘state’: ‘NM’,
     ‘zipCode’: ‘45252’,
     ‘owner’: ‘Pierson Rentals, LLC’,
     ‘purchasePrice’: ‘175000’,
     ‘purchaseDate’: ‘2023.10.10’,
     ‘beds’: 3,
     ‘baths’: 2.5,
     ‘parkingSpots’: 2
     ‘garage’: Null,
     ‘stories’: 2,
     ‘homeType’: ‘Duplex’,
     ‘yearBuilt’: 1955,
     ‘schoolDistrict’: ‘wannabe',
}
```

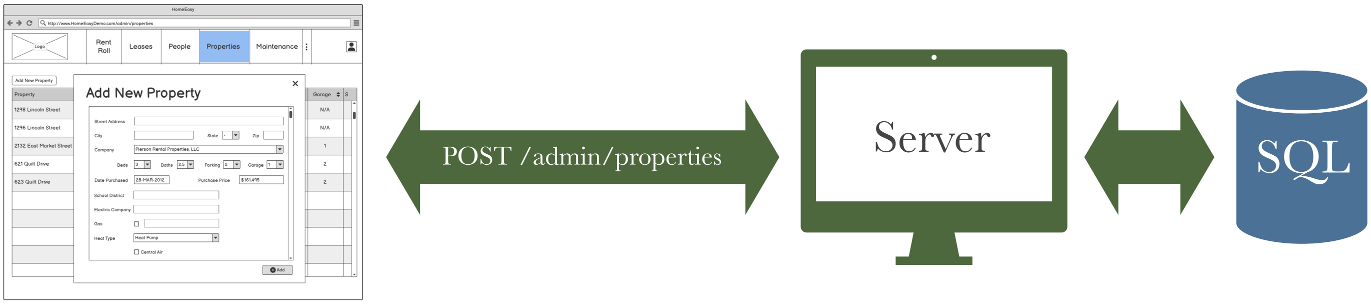
Success Response:

```
{
     ‘status’: 200,
     ‘message’: ‘Success: Property created’,
     ‘propertyID’: ‘266818293’
}
```

Error Response:

```
{
     ‘status’: 403,
     ‘message’: ‘Forbidden: you have no authority to add a property.’
}
```

Visual:



HomeEasy

http://www.HomeEasyDemo.com/admin/properties

Property	Garage
1298 Lincoln Street	N/A
1296 Lincoln Street	N/A
2132 East Market Street	1
621 Quilt Drive	2
623 Quilt Drive	2

Add New Property

Company: Pierson Rental Properties, LLC

Beds: 3 Baths: 2.5 Parking: 2 Garage: 1

Date Purchased: 28-MAR-2012 Purchase Price: $161,495

Heat Type: Heat Pump

□ Central Air

O. Editing a property

Method: PUT

URL: demo.hartzlerhome.solutions/admin/properties

Purpose: When a property's details change, the property manager needs to change details. This endpoint will be responsible for putting the changed data into the database.

Example request:

```
curl --request PUT
     --url ‘http://demo.hartzlerhome.solutions/admin/properties’
     --header {‘userSessionID’: ‘A2289581028CF29B20D’, ‘content-type’:
‘application/json’}
     --data {
     ‘nickname’: ‘Unit2’,
     ‘houseNumber’: ‘1298’,
     ‘streetName’: ‘Lincoln Street’,
     ‘apptNo’: ‘’,
     ‘city’: ‘Montville’,
     ‘state’: ‘NM’,
     ‘zipCode’: ‘45252’,
     ‘owner’: ‘Pierson Rentals, LLC’,
     ‘purchasePrice’: ‘175000’,
     ‘purchaseDate’: ‘2023.10.10’,
     ‘beds’: 3,
     ‘baths’: 2.5,
     ‘parkingSpots’: 2
     ‘garage’: Null,
     ‘stories’: 2,
     ‘homeType’: ‘Duplex’,
     ‘yearBuilt’: 1955,
     ‘schoolDistrict’: ‘wannabe',
}
```

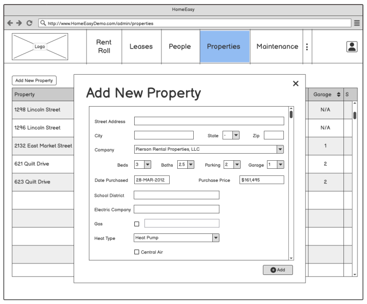
Success Response:

```
{
     'status': 200,
     'message': 'Success: Property updated',
}
```

Error Response:

```
{
     'status': 403,
     'message': 'Forbidden: you have no authority to change a
property.'
}
```

Visual:



Add New Property

Property	Garage
1298 Lincoln Street	N/A
1296 Lincoln Street	N/A
2132 East Market Street	1
621 Quilt Drive	2
623 Quilt Drive	2

Street Address

City State - Zip

Company Pierson Rental Properties, LLC

Beds 3 Baths 2.5 Parking 2 Garage 1

Date Purchased 28-MAR-2012 Purchase Price $161,495

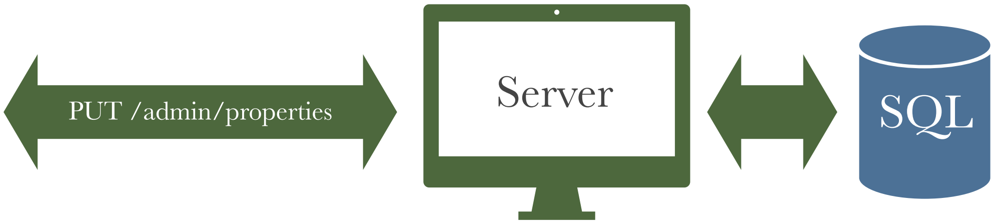
School District

Electric Company

Gas □

Heat Type Heat Pump

□ Central Air



P. Removing a property

Method: DELETE

URL: demo.hartzlerhome.solutions/admin/properties

Purpose: When the admin needs to remove the property due to selling it, foreclosure, etc, they will need to request the data to be removed with this endpoint.

Example request:

```
curl --request DELETE
     --url 'http://demo.hartzlerhome.solutions/admin/properties/lease'
     --header {'userSessionID': 'A2289581028CF29B20D', 'content-type':
'application/json'}
     --data {'propertyID': '91542'}
```

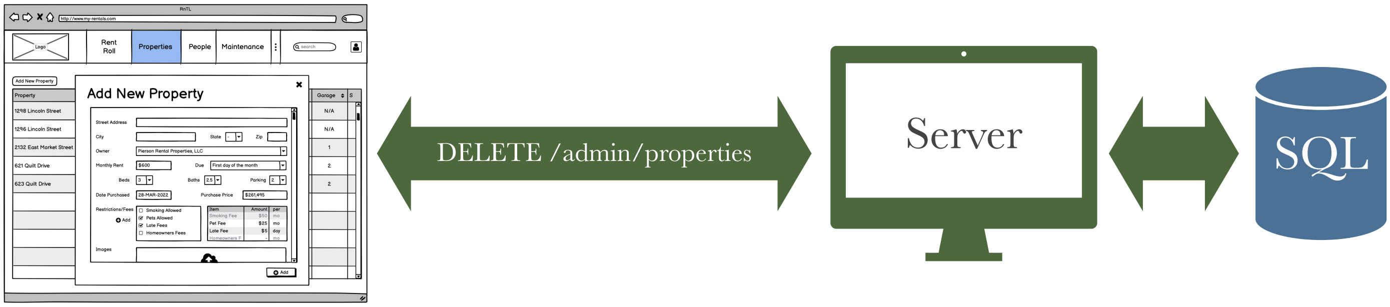
Success Response:

```
{
     'status': 200,
     'message': 'Success: the record has been deleted'
}
```

Error Response:

```
{
      'error': 403,
      'message': 'Forbidden: You are not authorized to delete these
items'
}
```

Visual:



Property	Garage
1298 Lincoln Street	N/A
1296 Lincoln Street	N/A
2132 East Market Street	1
621 Quilt Drive	2
623 Quilt Drive	2

Add New Property

Street Address
City State - Zip
Owner Pierson Rental Properties, LLC
Monthly Rent $600 Due First day of the month
Beds 3 Baths 2.5 Parking 2
Date Purchased 28-MAR-2022 Purchase Price $261,495
Restrictions/Fees
□ Smoking Allowed
☑ Pets Allowed
☑ Late Fees
□ Homeowners Fees

Item	Amount	per
Smoking Fee	$50	mo
Pet Fee	$25	mo
Late Fee	$5	day
Homeowners F	-	mo

Images

Q. Viewing Applications - STRETCH GOAL

R. Approving Applications - STRETCH GOAL

S. Getting Application Link QR code - STRETCH GOAL

T. Maintenance Center CRUD - STRETCH GOAL

Tenant User:

The Tenant user would use the same login page as the admin. The system would then serve the proper route so they would access the correct pages.

A. Viewing the rent status

Method: GET

URL: demo.hartzlerhome.solutions/rent

Purpose: When the tenant logs in, the page shows the current status of their rents. As the new deadline approaches, the previous payment reduces to the background and the next information is shown more prominent. This endpoint will need to check when the payment is due, have data to feed the calculator based on the contract business logic, and then the front-end will need to display it all correctly.

Example request:

```
curl --request GET
     --url ‘http://demo.hartzlerhome.solutions/rent’
     --header ‘userSessionID’: ‘A2289581028CF29B20D’
```

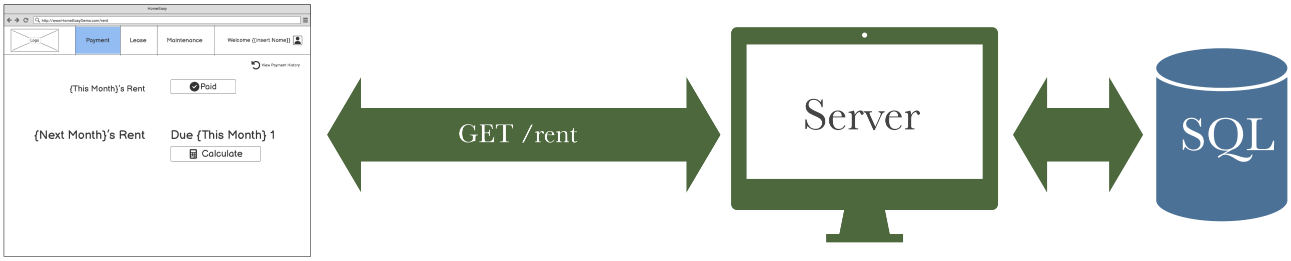
Success Response:

```
{
     ‘previousMonthRent’: {
          ‘period’: ‘August 2023’,
          ‘status’: ’paid’,
          ‘paymentID’: 1555438,
          ‘paymentDate’: 2023-08-01,
          ‘paymentDueDate’: 2023-08-01
     }
     ‘nextRent’: {
          ‘status’: ‘unpaid’,
          ‘itemsDue’: {
               ‘monthlyRent’: 600,
               ‘monthlyPetFee’: 25,
               ‘dailyLateFee’: 5
          },
          ‘dueDate’: 2023-09-01
     }
}
```

Error Response:

```
{
     ‘status’: 404,
     ‘message’: ‘Not Found: no payment history was found.’
}
```

Visual:



B. Viewing payment history

Method: GET

URL: demo.hartzlerhome.solutions/payment-history

Purpose: When the tenant wishes to see their past payment history, they can view it on the payment history page. This endpoint will list out all the previous payments and provide a link that will create and download an invoice.

Example request:

```
curl --request GET
     --url 'http://demo.hartzlerhome.solutions/payment-history'
     --header 'userSessionID': 'A2289581028CF29B20D'
```

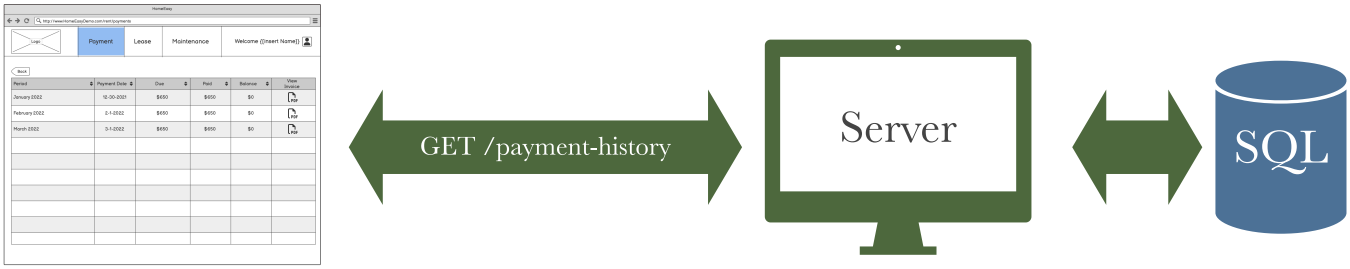
Success Response:

```
{
     {
          'paymentID': 1555438,
          'period': 'August 2023',
          'paymentDate': 2023-08-01,
          'amountDue': 650,
          'amountPaid': 650,
     }, {
          'paymentID': 1558756,
          'period': 'September 2023',
          'paymentDate': 2023-09-01,
          'amountDue': 650,
          'amountPaid': 650,
     }, {…}
}
```

Error Response:

```
{
     'status': 404,
     'message': 'Not Found: no payment history was found.'
}
```

Visual:



Period	Payment Date	Due	Paid	Balance	View Invoice
January 2022	12-30-2021	$650	$650	$0	PDF
February 2022	2-1-2022	$650	$650	$0	PDF
March 2022	3-1-2022	$650	$650	$0	PDF

C. Viewing Lease Details

Method: GET

URL: demo.hartzlerhome.solutions/lease

Purpose: When the tenant wishes to see their lease information, they can view it on the lease page. This endpoint will show the data associated with their lease.

Example request:

```
curl --request GET
     --url ‘http://demo.hartzlerhome.solutions/lease’
     --header ‘userSessionID’: ‘A2289581028CF29B20D’
```

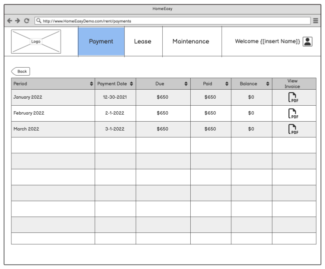
Success Response:

```
{
     ‘contractBegin’: ‘2023.05.01’,
     ‘contractEnd’: ‘2023.04.30’,
     ‘leaseSuccession’: ‘month-to-month’,
     ‘amountDue’: 650,
     ‘due’: ‘first of period’,
     ‘period’: ’Month’,
     ‘fees’:[{
           ‘Pet Fee’: ’25’,
           ‘per’: ‘month’},{
           ‘Late Fee’: ‘5’,
           ‘per’: ‘day’}]
     ‘documents’: [{
           ‘docName’: ‘Rental Contract’,
           ‘docDate’: ‘2023.05.04’,
           ‘docLink’: ‘http://cloudDocuments.com/docid?=2345'
           }, {…}
     ]
}
```

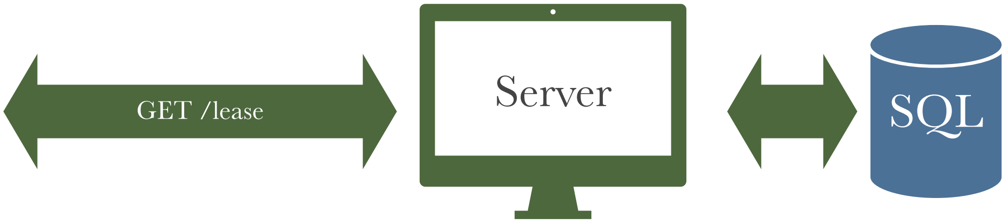
Error Response:

```
{
     'status': 404,
     'message': 'Not Found: no payment history was found.'
}
```

Visual:



Period	Payment Date	Due	Paid	Balance	View Invoice
January 2022	12-30-2021	$650	$650	$0	PDF
February 2022	2-1-2022	$650	$650	$0	PDF
March 2022	3-1-2022	$650	$650	$0	PDF



D. Submitting Rental Application - STRETCH GOAL

Revision Log –

Rev	Date	Modified By:	Changes
1	**2023.11.12**	**Trevin**	1. Updated URL to demo.hartzlerhome.solutions from homeeasy.hartzlerhome.solutions 2. Separated the CRUD sections for Properties/Lease into Properties and Leases sections 3. Marked Stretch goals as such