

Connection Details

Homepage URL: <https://zeno.computing.dundee.ac.uk/2018-ac32006/team10/>

Login details

Customer

Email: annahutch@gmail.com

Password: 1234qwer

Sales Staff

Email: cowedeng145@gmail.com

Password: 1234qwer

Branch Manager

Email: traywray@gmail.com

Password: 1234qwer

Executive

Email: emchopey142@gmail.com

Password: 1234qwer

User Guide

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User Guide

Customer View

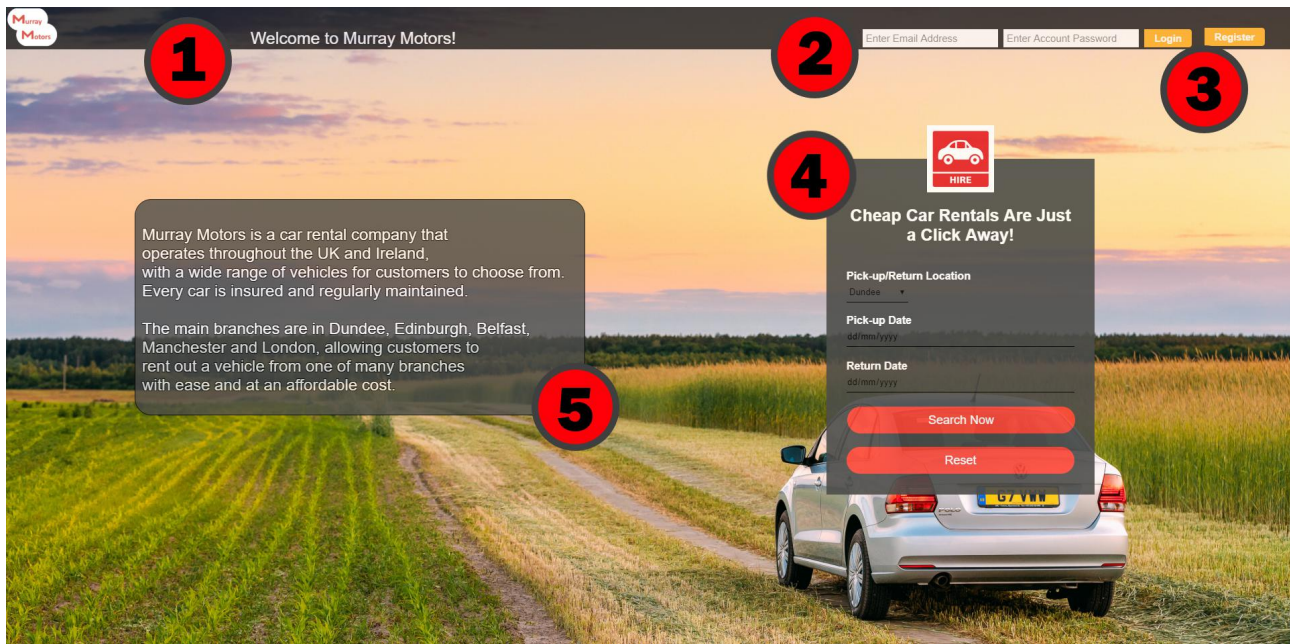


Figure 1 - Home Page

1. This is a responsive message which will give feedback correspondingly based on customers' actions. This will be explained in the following sections.
2. Login with the email address and password of customers or staff members. If login details are incorrect, the responsive message will display "Username and/or password incorrect".
3. Alternatively, if they do not have an account yet, they can click 'Register' to create one.
4. Customers can choose where they want to rent a car from as well as choose the date range for the rental. Click 'Search now' to start browsing cars. If customers choose an invalid date range, i.e. if the pick up date is in the past, the feedback message will become "Invalid date range". Click 'Reset' to clear the form.
5. This is information about the company.

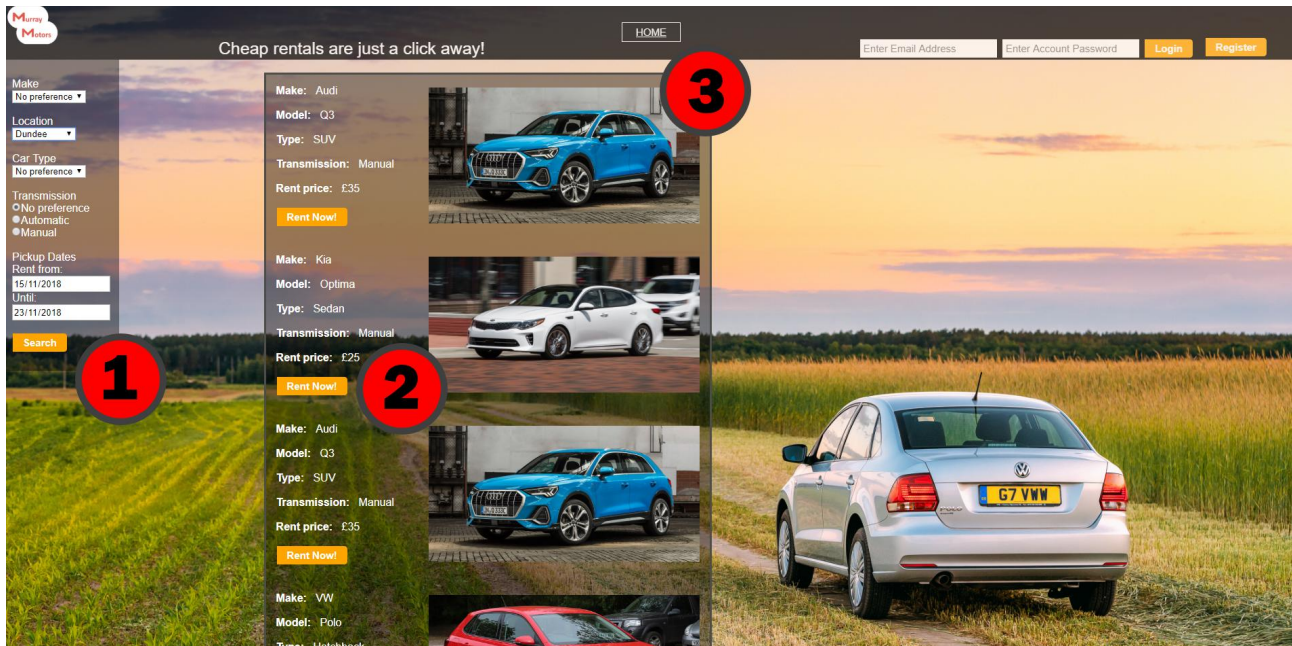


Figure 2 - Car Browse Page

1. Customers can use this filter to narrow down the car options.
2. Click 'Rent Now' when they decided which car to rent. The details of the car being rented can be seen here as well.
3. Click 'Home' to redirect to home page.

Customers have to login before proceeding to payment. When they try to book a car without logging in, they will be redirected to the **Login/Register Page**:

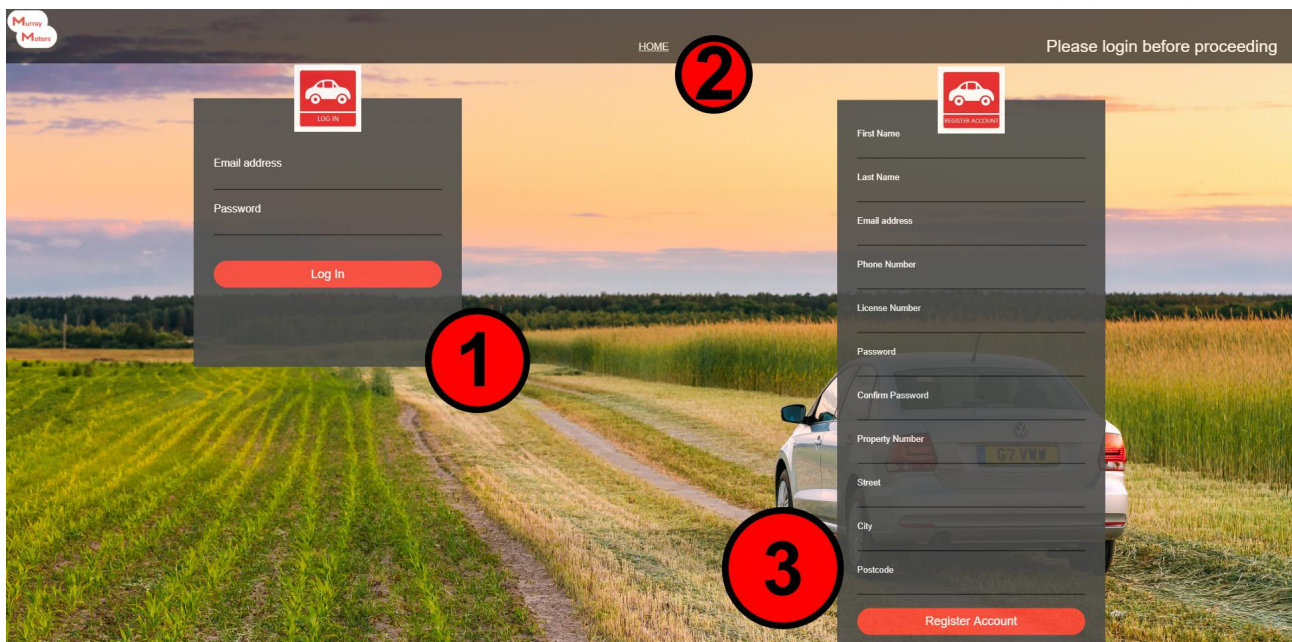


Figure 3 - Login/Register Page

1. Log into customer account.
2. Redirect to home page
3. Fill out the form to register a new account.

If the user does not already have an account, they can create one from the home page by clicking the 'register' button. This page is identical to [Figure 3], with the exception of 3.1 and that 3.3 is centered.

Once customers are logged in, they will enter into the **Booking Page**:

Just one more step! HOME Hello Dave! Profile Logout

Car:
Make: Ford
Model: Focus
Type: Hatchback
Transmission: Manual

Rent:
Pick-up date: 17-11-2018
Drop-off date: 18-11-2018
Total days: 1
Total rent: £25

Pickup Location:
1
Candle Lane
Dundee
DD1 4AS

Please Enter Credit Card Details

Cardholder Name
Enter cardholder name

Card Number
Enter card number

Expiry Date
2018 • 01

Security Number
Enter security number

Book Now

Reset

Figure 4 - Booking Page

1. Details about the car which the customers chose, rental details, and the branch location where they can double check the details are correct.
2. Put in credit card details in order to complete booking.
3. Once the booking is complete, the user will be redirected back to the home page and the responsive message will inform the user that the booking succeeded. The company system will generate a lease for the rental and update the chosen car as not available for other customers to rent in the database. If customers click 'home' the system will NOT generate a lease. Customers need to go through the whole process again in order to successfully rent a car.

Once customers login, they can click 'Profile' from the home page to enter the **Profile Page**:

Profile Page HOME Profile Hello Dave! Logout

First Name	Last Name	Address	Email	Phone Number	Membership	License Number
Dave	McDonald	14 Lawrence Street Leeds LS9 0AA	dmcDonald@gmail.com	07834071755	Yes	6976086019336349

Preferred Make	Preferred Model	Preferred Type	Preferred Transmission
Audi	Any	Any	Any

Edit

First Name	Last Name	Email	Phone Number	License Number

Confirm

Property Number	Street	City	Postcode

Confirm

Preferred Make	Preferred Model	Preferred type	Preferred Transmission

Confirm

Figure 5 - Profile Page

1. This will provide customers feedback based on their editing action.

2. Customers can only see their own information and details about their car preferences.
3. If they want to update any part of their information, just click 'Edit'.
4. Click 'Logout' when they want to leave the company website.

Once our staff for sales, managers, and executives log in from the home page:

Sales View

Staff View

Hello Geoff! Logout

PERSONAL INFO

Staff ID: S000000002, First Name: Geoff, Last Name: Cowden, Sex: M, Address: 14 Finghast Road Belfast BT1 5ST, Email: cowdenG145@gmail.com, Phone Number: 0788460102, Role: Sales, Salary: £20000.00, National Insurance Number: XK635401C

First Name: Last Name: Email: Phone Number: Confirm

Property Number: Street: City: Postcode: Confirm

1 2 3

Figure 6 - Staff Profile Page

1. Navigation sidebar. Clicking any of these buttons will change what table is being displayed. For example, clicking 'Valet' will show a table of Valet services.
2. Edit bars. Input information here to change personal information.
3. A normal sales staff can only view his or her own personal information. Click the 'Edit' button to reveal or conceal the edit bars.

Staff View

Hello Geoff! Logout

PERSONAL INFO

Supplier Name Insurance Number Vehicle Identification Number Make Model Type Transmission Rent Colour Available Leased Advertised Last Checkup

Craigs Cars 6398430594 406LLA7X9M BMW X5 SUV Manual 45.00 Black No Yes Yes 2018-07-02

Steves Showroom 8520968755 ETGLLWB83B Audi A5 Sedan Manual 40.00 Red Yes No No 2018-05-07

Craigs Cars 5199681768 3FAHP0CG7C Volvo V60 SUV Manual 40.00 Blue No Yes Yes 2018-09-13

Cars4U 8295327075 FWJHQNAZT7 Kia Optima Sedan Automatic 25.00 Red Yes No No 2018-05-07

Steves Showroom 5802158595 7D9AJF2FDL Volvo V60 SUV Manual 40.00 Blue Yes No No 2018-05-07

Craigs Cars 2218720769 5TFJU4GN8F Kia Rio Hatchback Manual 30.00 Silver Yes No No 2018-05-07

Steves Showroom 3889621113 K7MT9AU0PZ BMW i3 Hatchback Automatic 30.00 Red Yes No No 2018-05-07

Craigs Motors 9456983690 3BRBMSBD48 Audi Q3 SUV Manual 35.00 Blue Yes No No 2018-05-07

Steves Showroom 9844882379 BL1TN8B26R Range Rover Evoque SUV Manual 50.00 Red Yes No No 2018-05-07

Steves Showroom 9402236237 RB27YZUUF5 Audi Q3 SUV Automatic 35.00 Black Yes No No 2018-05-07

Craigs Cars 8293535531 5Y2SL62864 Kia Rio Hatchback Manual 30.00 Green Yes No No 2018-05-07

Craigs Cars 4007413152 0L0MEGRWMW VW Polo Hatchback Manual 25.00 Blue No Yes Yes 2018-11-01

Steves Showroom 6456191137 VYJ43ERNNP Volvo V40 Hatchback Manual 35.00 Grey Yes No No 2018-05-07

Steves Showroom 8010258927 3PILEWACCA Kia Optima Sedan Manual 25.00 Blue Yes No No 2018-05-07

Craigs Cars 5531912689 JN8AR05YXX Kia Optima Sedan Automatic 25.00 Blue No No No 2018-02-11

Craigs Cars 2888110979 4LB0CQJXSM Tesla Model 3 Luxury Automatic 75.00 White No Yes Yes 2018-10-15

Steves Showroom 1129338917 DD00W74HNT VW Golf Hatchback Manual 30.00 Red Yes No No 2018-05-07

Mairroids Motors 8915247668 7JLC3EY8HP Audi Q2 SUV Manual 35.00 Blue Yes No No 2018-05-07

Cars4U 9417349544 426VOC6QDY Audi Q3 SUV Manual 35.00 Blue Yes No No 2018-05-07

Steves Showroom 1889841383 04COIM80BQ Ford Mondeo Sedan Automatic 30.00 Black Yes No No 2018-05-07

Craigs Cars 0419561966 7BY57M2XE3 Ford Focus Hatchback Manual 25.00 Red No No No 2018-05-23

Steves Showroom 6238820722 NMAQ25QJRU Volvo V40 Hatchback Automatic 35.00 Black Yes No No 2018-05-07

Craigs Cars 7378427401 WBAAV53481 Volvo S90 Sedan Automatic 45.00 Green Yes No No 2018-09-13

1 2 3

Figure 7 - Staff Car Stock Page

1. Use the options in this bar to refine the results by different filters. This can be used, for example, to only show cars that are currently available or only manual cars.
2. Navigation sidebar.

3. Database table. Displays information of the appropriate table along with any filters set by the user. In the case of a sales staff member, only data relevant to their branch will be shown.

Manager View

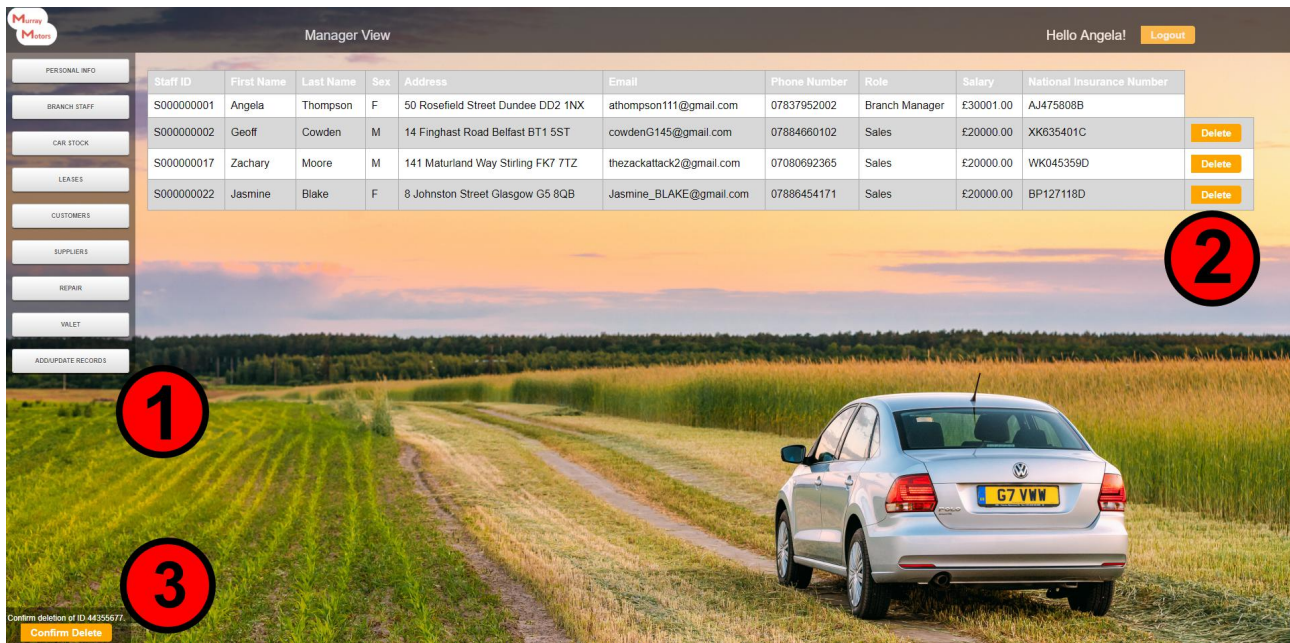


Figure 8 - Manager Overview

1. Similar navigation sidebar to view data only relevant to their branch. Unlike sales staffs, managers can add or edit record to tables.
2. Managers can also delete data by clicking 'Delete'.
3. Once 'Delete' has been clicked, this prompt will appear to confirm the deletion.

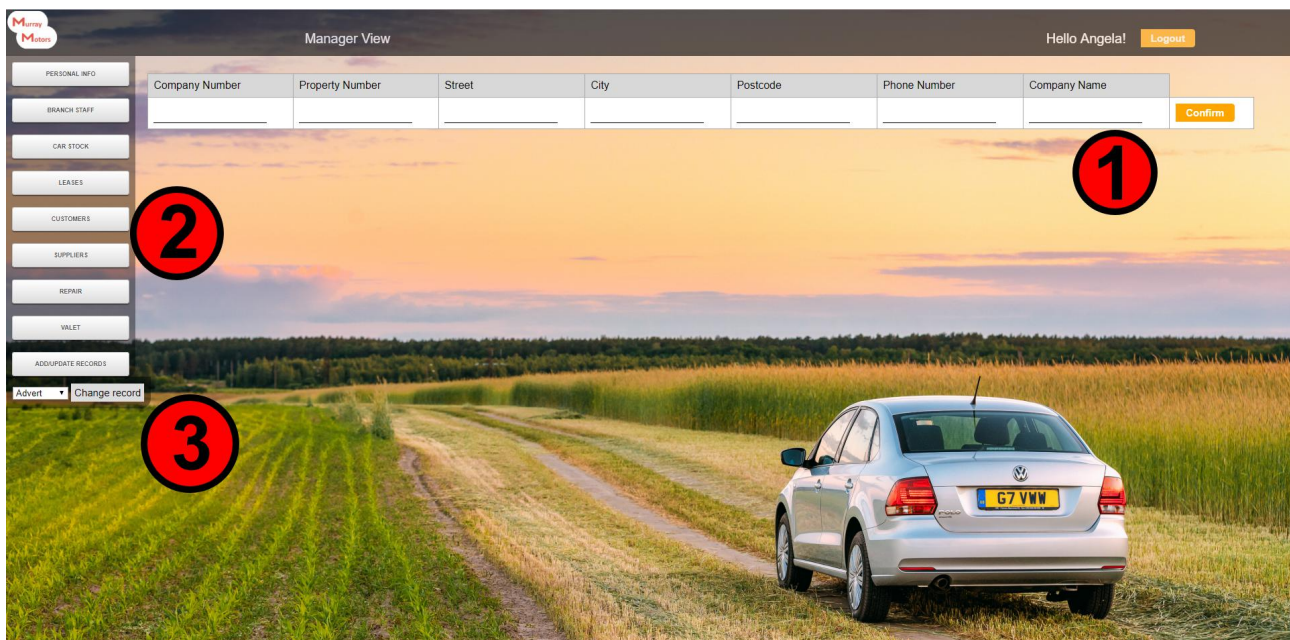


Figure 9 - Manager Add/Edit Record

1. Enter information here to add or edit a record. To edit a record, the left-most field must match an already existing record. To add a new record, the left-most field needs to be unique.
2. Navigation sidebar.
3. In order to change what record is being added/edited, use the drop down menu to select the type of record to add or edit in the database. Click 'Change record' to switch

Executive View

Staff Number	First Name	Last Name	Sex	Address	Email	Phone Number	Role	Monthly Salary	National Insurance Number
B000000001	Angela	Thompson	F	50 Rosefield Street Dundee DD2 1NX	athompson111@gmail.com	07837952002	Branch Manager	2500.08	AJ475808B
B000000001	Geoff	Cowden	M	14 Finghast Road Belfast BT1 5ST	cowdenG145@gmail.com	07884660102	Sales	1666.67	XK635401C
B000000002	Katy	Vann	F	21 Pinfield Drive Edinburgh EH2 7JF	k@gmail.com	07856460001	Executive	3583.33	YL327357D
B000000002	Helen	Scrivens	F	3 Key Street Belfast BT7 8SA	helen_scrivney123@btinternet.com	07890140000	Sales	1666.67	LG925011G
B000000002	Keir	Spurling	M	63 High Street Belfast BT6 9KX	Spurling_k@gmail.com	07811290000	Sales	1666.67	EA752718B
B000000002	Travis	Wray	M	12 Forestbank Road Dundee DD1 4HD	trayray@gmail.com	07722138843	Branch Manager	2500.00	SH546011A
B000000004	Emily	Hope	F	86 Quaterly Terrace Edinburgh EH5 2PS	emchopey142@gmail.com	07058395617	Executive	3583.33	WJ786534
B000000002	Lucas	John	M	43 Upper Columbo Road Belfast BT3 6AT	lucas-johnn@gmail.com	07015748192	Sales	1666.67	BW550395B
B000000003	George	Smart	M	73 Annfield Street Manchester M5 3DY	smartypants68plus1@btinternet.com	07981521903	Sales	1666.67	SN163659A
B000000003	Yasmin	Parkin	F	13 Fleuchar Street Liverpool L8 2TB	yas-park1n@yahoo.com	07768573546	Sales	1666.67	BY661218B
B000000005	Jacob	Dunn	M	185 Filliment Street Edinburgh EH3 9AC	dunndunndunn258@yahoo.com	07855562268	Executive	3583.33	GR266796B
B000000003	Riley	Ingram	M	74 Albany Terrace Perth PH3 0TH	IngramRi450@gmail.com	07857909225	Branch Manager	2500.00	NG693139C
B000000003	Alexandra	Lord	F	63 Baxter Street Manchester M50 3XZ	lexylord005@gmail.com	07861617124	Sales	1666.67	WS833843A
B000000004	Jade	Glover	F	12 Dudhope Road Manchester M34 3NS	notdannyglover369@gmail.com	07824160563	Sales	1666.67	LJ941967C
B000000004	Rhys	Gardner	F	11 Benvie Road Sheffield S9 3TY	notdannyglover639@gmail.com	07066625105	Sales	1666.67	RJ745035B
B000000004	Isabella	Webster	F	84 Kirkton Place Manchester M20 5QX	webstersdictionarylol@gmail.com	07082059059	Sales	1666.67	JM797135C
B000000001	Zachary	Moore	M	141 Maturiland Way Stirling FK7 7TZ	thezackattack2@gmail.com	07080692365	Sales	1666.67	WK045359D
B000000005	Corey	Owen	M	24 Fredrick Place London N1C 4DD	corey-in-the-email@gmail.com	07829053242	Sales	1666.67	HA334793D
B000000005	Kieran	Warner	M	11 School Drive London SW6 2UR	kieranewarner1916@gmail.com	07863091231	Sales	1666.67	OR380289

Figure 10 - Executive View

1. Similar to manager view, executives can also use the navigation sidebar and add or edit records.
2. Unlike managers who can only view information related to their own branch, executives can see all information across branches.
3. Narrow down the results of staff information by applying specific filters.

Technical Annex

Branch View:

```

SELECT
COUNT(DISTINCT `staff`.`staff_number`) AS `staff`,
COUNT(DISTINCT `car`.`VIN`) AS `cars`,
COUNT(DISTINCT `lease`.`lease_number`) AS `leases`,
(SELECT
SUM(`staff`.`salary`)
FROM
`staff`
WHERE
(`staff`.`BranchNumber` = `branch`.`branch_number`)) AS `salary`,
`address`.`property_number` AS `property_number`,
`address`.`street` AS `street`,
`address`.`city` AS `city`,
`address`.`postcode` AS `postcode`,
`branch`.`branch_number` AS `branch_number`,
`branch`.`Manager_StaffNumber` AS `managerid`
FROM
((((`branch`
LEFT JOIN `staff` ON ((`branch`.`branch_number` = `staff`.`BranchNumber`)))
LEFT JOIN `address` ON ((`branch`.`AddressID` = `address`.`address_id`)))
LEFT JOIN `car` ON ((`branch`.`branch_number` = `car`.`BranchNumber`)))
LEFT JOIN `lease` ON ((`car`.`VIN` = `lease`.`CarVIN`)))
GROUP BY `branch`.`branch_number`

```

Count and distinct are used to get a total number of unique staff members, cars, and leases across the database. A sub-select sum is used to get the total salary of all staff members per branch. The

view left joins the branch table to staff, address, car and lease. The view is indexed by branch number and is only accessible by executive users.

Payroll View:

```
SELECT
    `staff`.`BranchNumber` AS `BranchNumber`,
    `address`.`property_number` AS `property_number`,
    `address`.`street` AS `street`,
    `address`.`city` AS `city`,
    `address`.`postcode` AS `postcode`,
    `staff`.`staff_number` AS `staff_number`,
    `staff`.`first_name` AS `first_name`,
    `staff`.`last_name` AS `last_name`,
    `staff`.`sex` AS `sex`,
    `staff`.`email` AS `email`,
    `staff`.`phone_number` AS `phone_number`,
    `staff`.`role` AS `role`,
    `staff`.`national_insurance_number` AS `nin`,
    CAST((`staff`.`salary` / 12) AS DECIMAL (10 , 2 )) AS `Monthly_Salary`
FROM
    (`staff`
    JOIN `address` ON ((`staff`.`AddressID` = `address`.`address_id`)))
```

Monthly_Salary is returned as the salary of each staff member divided by 12 in order to get the salary per month. It is casted as a decimal with 2 decimal places to round accurately to real currency. The view joins the staff table to address. The view is indexed by staff number, and is only accessible by executive users.

Customer View:


```

SELECT
  `customer`.`customer_number` AS `customer_number`,
  `customer`.`first_name` AS `first_name`,
  `customer`.`last_name` AS `last_name`,
  `customer`.`email` AS `email`,
  `customer`.`phone_number` AS `phone_number`,
  `customer`.`license_number` AS `license_number`,
  `address`.`property_number` AS `property_number`,
  `address`.`street` AS `street`,
  `address`.`city` AS `city`,
  `address`.`postcode` AS `postcode`,
  COALESCE(`preferences`.`make`, 'Any') AS `make`,
  COALESCE(`preferences`.`model`, 'Any') AS `model`,
  COALESCE(`preferences`.`type`, 'Any') AS `type`,
  COALESCE(`preferences`.`transmission`, 'Any') AS `transmission`,
  (CASE
    WHEN
      EXISTS( SELECT
        1
        FROM
          `lease`
        WHERE
          (`lease`.`CustomerNumber` = `customer`.`customer_number`))
    THEN
      'Yes'
    ELSE 'No'
  END) AS `lease`,
  (CASE
    WHEN (`customer`.`membership` = 1) THEN 'Yes'
    ELSE 'No'
  END) AS `membership`
FROM
  (((`customer`
  JOIN `address` ON ((`customer`.`Address_ID` = `address`.`address_id`)))
  LEFT JOIN `preferences` ON ((`customer`.`customer_number` = `preferences`.`Customer_Number`)))
  LEFT JOIN `lease` ON ((`customer`.`customer_number` = `lease`.`CustomerNumber`)))

```

COALESCE function is used to return “Any” where a preference is null. “lease” is returned as a “Yes” or “No” by using an exists on a subselect that checks if a customer and lease share the same customer number. If they do, “Yes” is returned to indicated that customer has a lease. “membership” is returned as a “Yes” or “No” for values 1 and 0 respectively. The view joins customer to address and left joins customer to preferences and lease. The view is indexed by customer number, and is accessible by all users. A customer can only see their own data whereas sales, manager and executive views can see all customer data.

Car Stock View:

```

SELECT
  `car`.`VIN` AS `VIN`,
  `car`.`BranchNumber` AS `BranchNumber`,
  `car`.`InsuranceNumber` AS `InsuranceNumber`,
  `supplier`.`company_name` AS `company_name`,
  `car`.`type` AS `type`,
  `car`.`make` AS `make`,
  `car`.`model` AS `model`,
  `car`.`transmission` AS `transmission`,
  `car`.`colour` AS `colour`,
  `car`.`availability` AS `availability`,
  `car`.`rent_per_day` AS `rent_per_day`,
  `car`.`last_checkup` AS `last_checkup`,
  `insurance`.`provider` AS `provider`,
  `insurance`.`insurance_type` AS `insurance_type`,
  (CASE
    WHEN (`car`.`availability` = 1) THEN 'Yes'
    ELSE 'No'
  END) AS `available`,
  (CASE
    WHEN
      EXISTS( SELECT
        1
      FROM
        `lease`
      WHERE
        (`lease`.`CarVIN` = `car`.`VIN`))
    THEN
      'Yes'
    ELSE 'No'
  END) AS `leased`,
  (CASE
    WHEN
      EXISTS( SELECT
        1
      FROM
        `adverts`
      WHERE
        (`adverts`.`CarVIN` = `car`.`VIN`))
    THEN
      'Yes'
    ELSE 'No'
  END) AS `advertised`
FROM
  ((((`car`
  LEFT JOIN `lease` ON ((`car`.`VIN` = `lease`.`CarVIN`)))
  JOIN `supplier` ON ((`car`.`Supplier_CompanyNumber` = `supplier`.`company_number`)))
  LEFT JOIN `adverts` ON ((`car`.`VIN` = `adverts`.`CarVIN`)))
  JOIN `insurance` ON ((`car`.`InsuranceNumber` = `insurance`.`insurance_number`)))

```

“available” is returned as “Yes” or “No” when availability is 1 or 0 respectively. “leased” and “advertised” are returned as “Yes” through an exists sub-select statement if it is found that a car shares its VIN with a lease or advert. Otherwise, “No” is returned. The view joins the car table with supplier and insurance, and left joins the car table with lease and adverts. The view is only accessible by sales, manager and executive users.