Crocodeal Documentation

Description

Crocodeal is a java project in which users can view and create vehicle advertisements. Advertisements contain relevant vehicle details, pictures and information about the seller.

This gives users the opportunity to communicate with each other about advertisements and possible selling arrangements. The user may only place an advertisement if they are logged into an account and they can also edit their account details such as their username, password and contact information.

Additionally users can click on and view each other's accounts in order to see their details. They can also leave a “like” or “dislike” on a seller’s account in order to let other users know if they are trustworthy.

Requirements:

For the system to be successful it must have the following:

The system will have two types of users, unregistered users and registered users.

Unregistered users can browse the marketplace and register a new account.

Unregistered users can also conduct a search on the marketplace.

Registered users can place advertisements with a picture, a description, and various relevant details about the vehicle including its type, mileage and engine size.

After registering an account the user must be able to edit their account details.

Users must be able to log into the account through their username and password.

Identifier	US. 1
Name	Browse Marketplace
Description	As a buyer I want an intuitive way to browse cars for sale and filter my search results so that I can easily find cars for sale that fit my needs and budget.
Acceptance Criteria	1. Advertisements can be viewed by other users. 2. Advertisements can be searched for by other users.

Identifier	US. 2
Name	Sign-Up
Description	As a user I want to be able create an account so that I can save my information for when I need to interact with other users
Acceptance Criteria	1. A user can create an account with a username, name, address, password, email and phone number. 2. Registered User features become available once they have an account

Identifier	US. 3
Name	Login
Description	As a user I want to be able login so that I can save my information for when I need to interact with other users
Acceptance Criteria	1. A user can log-in using their email and password to become a registered user. 2. Registered User features become available once the user is logged in.

Identifier	US. 4
Name	Placing an Ad
Description	As a seller I want to be able to advertise my vehicle to many prospective buyers so that I can sell quickly and easily.

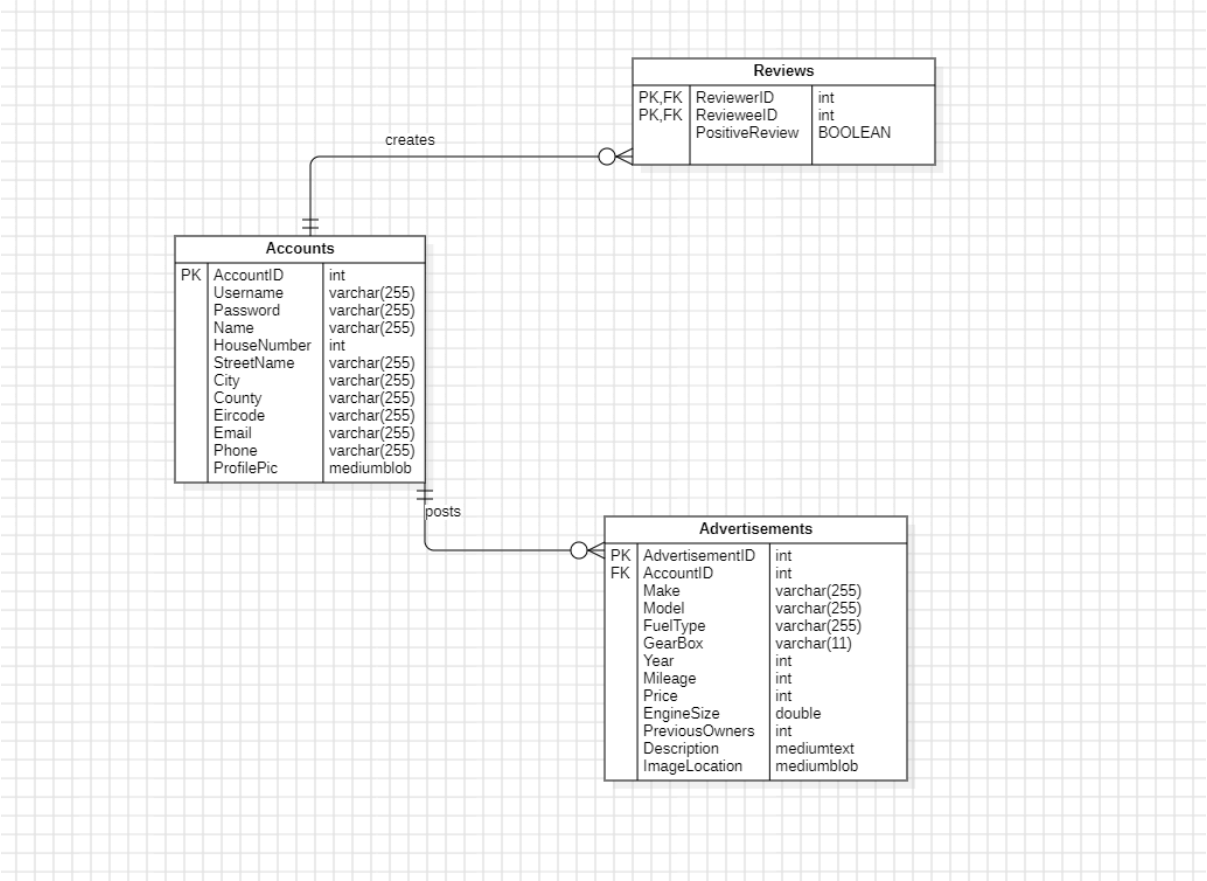
Acceptance Criteria	1. Registered users can post at least three advertisements to the marketplace. 2. Advertisements contain an image, all inputted vehicle details and corresponding seller details. 3. Posted advertisements are visible to all users on the marketplace.

Identifier	US. 5
Name	Review User
Description	As a buyer I want to be able to review sellers I have dealt with so that I can let other people know if they are trustworthy.
Acceptance Criteria	1. Registered Users can like or dislike other registered users who have posted advertisements in the past. 3. Users can view the trust rating of other registered users.

Tests:

Test No.	Scenario	Result	Pass/Fail
TC. 1 Browse Marketplace	Application started	Ads are displayed on the screen	Pass
TC. 1.1 Search Marketplace	User clicks the search bar, enters a search, and clicks the search button	Only ads relevant to the search are displayed	Pass
TC. 2 Signing Up	User clicks on SignUp button, fills in details, and clicks next SignUp button	Account details are added to the database	Pass
TC. 3 Logging In	User clicks Login, fills in details, and clicks the next Login button	Users are now allowed to place an ad, view account, like/dislike users etc.	Pass
TC. 3.1	Logged in user clicks the LogOut button	User is logged out	Pass
TC. 4 Placing Advertisements	Logged in user clicks the Place Ad button, fills in details, and clicks submit	Advertisement is added to database, user is taken to the advertisement they created and advertisement is viewable on marketplace	Pass
TC. 4.1 Deleting Advertisements	Logged in user clicks Delete Advertisement unser their ad	Advertisement is removed from the database, user is returned to marketplace	Pass
TC. 5 Liking/Disliking Users	Logged in user clicks like or dislike on another user's account	Account trust rating is updated	Pass

ER Model:


Reviews
PK,FK ReviewerID int
PK,FK RevieweeID int
PositiveReview BOOLEAN
creates
Accounts
PK AccountID int
Username varchar(255)
Password varchar(255)
Name varchar(255)
HouseNumber int
StreetName varchar(255)
City varchar(255)
County varchar(255)
Eircode varchar(255)
Email varchar(255)
Phone varchar(255)
ProfilePic mediumblob
posts
Advertisements
PK AdvertisementID int
FK AccountID int
Make varchar(255)
Model varchar(255)
FuelType varchar(255)
GearBox varchar(11)
Year int
Mileage int
Price int
EngineSize double
PreviousOwners int
Description mediumtext
ImageLocation mediumblob

Database Screenshots:

account table:

Structure

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	AccountID	int(11)			No	None		AUTO_INCREMENT	Change Drop More
☐	2	Username	varchar(255)	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	3	Password	varchar(255)	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	4	Name	varchar(255)	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	5	HouseNumber	int(11)			Yes	NULL			Change Drop More
☐	6	StreetName	varchar(255)	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	7	City	varchar(255)	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	8	County	varchar(255)	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	9	Eircode	varchar(255)	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	10	Email	varchar(255)	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	11	Phone	varchar(255)	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	12	ProfilePic	mediumblob			No	None			Change Drop More

Sample Data

←T→		AccountID	Username	Password	Name	HouseNumber	StreetName	City	County	Eircode	Email	Phone	ProfilePic
☐	Edit Copy Delete	16	Diarmuid825	Password67	Diarmuid O'Neill	1	Knocklonegad	Bagenalstown	Carlow	R21 XH59	diarmuidoneill2003@gmail.com	0892564726	[BLOB - 28.3 KiB]
☐	Edit Copy Delete	17	Stuart237	pa55word	Stuart Rossiter	82	Main Street	Wexford Town	Wexford	Y35 RIZZ	Stuart@Yahoo.com	3	[BLOB - 28.3 KiB]
☐	Edit Copy Delete	18	Nash123	12345	Isaiah Andres	27	Main Street	Arklow Town	Wicklow	R56 HY42	isaiah@gmail.com	0895671432	[BLOB - 28.3 KiB]

advertisement table:

Structure

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	AdvertisementID	int(11)			No	None		AUTO_INCREMENT	Change Drop More
☐	2	AccountID	int(11)			No	None			Change Drop More
☐	3	Make	varchar(255)	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	4	Model	varchar(255)	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	5	FuelType	varchar(255)	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	6	GearBox	varchar(11)	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	7	Year	int(11)			Yes	NULL			Change Drop More
☐	8	Mileage	int(11)			Yes	NULL			Change Drop More
☐	9	Price	int(11)			Yes	NULL			Change Drop More
☐	10	EngineSize	double			Yes	NULL			Change Drop More
☐	11	PreviousOwners	int(11)			Yes	NULL			Change Drop More
☐	12	Description	mediumtext	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	13	Image	mediumblob			Yes	NULL			Change Drop More

Sample Data

	AdvertisementID	AccountID	Make	Model	FuelType	GearBox	Year	Mileage	Price	EngineSize	PreviousOwners	Description	Image
Edit Copy Delete	8	16	Ford	Fiesta	Petrol	Manual	2010	98000	4950	1.25	3	Well looked after car, comes with tax and nct for ...	[BLOB - 429.7 KiB]
Edit Copy Delete	9	16	Skoda	Octavia VRS	Petrol	Automatic	2015	79000	16000	2	3	Immaculate Skoda VRS for sale, comes fully valeted...	[BLOB - 460.8 KiB]
Edit Copy Delete	10	16	Audi	E-Tron GT	Electric	Automatic	2023	30000	60000	0	1	Stunning Audi E-Tron GT for sale, up to 500km rang...	[BLOB - 442.8 KiB]
Edit Copy Delete	11	17	Suzuki	Jimny	Petrol	Manual	2006	200000	4000	1.5	2	grand little yoke, got me through my divorce from ...	[BLOB - 2.5 MiB]
Edit Copy Delete	12	17	Stridvagn	L-60	Diesel	Manual	1934	50000	20000	7.9	1	selling my Stridvagn L-60 light battle tank. dont ...	[BLOB - 4.7 MiB]
Edit Copy Delete	13	18	Peugeot	205 gti	Petrol	Manual	1989	156000	12000	1.9	3	Perfect condition 1989 205 gti recently valeted an...	[BLOB - 5.3 MiB]
Edit Copy Delete	14	18	Ford	Prefect	Petrol	Manual	1949	200000	2000	1	4	Ford Prefect for sale, needs a bit of work to get ...	[BLOB - 5.3 MiB]
Edit Copy Delete	15	18	Nissan	GTR	Petrol	Manual	2008	136000	45000	3.8	4	Perfect condition nissan GTR, mapped to 1000bhp!! ...	[BLOB - 6.4 MiB]
Edit Copy Delete	16	16	Porsche	Boxter	Petrol	Automatic	2023	36000	70000	4	1	Stunning Porsche Boxter (convertible) for sale, Ca...	[BLOB - 7.5 MiB]

Reviews table:

Structure

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
	1	**ReviewerID**	int(11)			No	*None*			Change Drop More
	2	**RevieweeID**	int(11)			No	*None*			Change Drop More
	3	**PositiveReview**	tinyint(1)			Yes	*NULL*			Change Drop More

Sample Data

	ReviewerID	RevieweeID	PositiveReview
Edit Copy Delete	16	17	0
Edit Copy Delete	16	18	1

Interesting Code:

Snippet From the GUIManager class that allows for the user to switch to different screens and reduces code redundancy.

```
   public static void changeMarketplace(JPanel switchFrom, String search)
      {
         switchFrom.setVisible(false);                    //Sets the current screen's panel to be
invisible
         frame.remove(switchFrom);                        //Removes the current screen's panel
from the frame
         lastScreen = switchFrom;
         if (checkConnection())                           //Make sure connection is still valid
         {
            marketplace.generateAds(search);
            marketplace.setVisible(true);                 //Sets the marketplace's panel to be
visible
            frame.add(marketplace);                       //Adds the marketplace's panel to the
Frame
         }
      }
   public static void changeLogin(JPanel switchFrom)
      {
         switchFrom.setVisible(false);                    //Sets the current screen's panel to be
invisible
         frame.remove(switchFrom);                        //Removes the current screen's panel
from the frame
         lastScreen = switchFrom;
         if (checkConnection())                           //Make sure connection is still valid
         {
            login.setVisible(true);                      //Sets the login screen's panel to be visible
            frame.add(login);                            //Adds the login screen's panel to the Frame
         }
         }
```

Snippet from the Login class which uses gridbaglayout to place the gui components

```
        setLayout(new GridBagLayout()); //Setting the layout and background colour
        setBackground(green);
        GridBagConstraints gbc = new GridBagConstraints();

        backButton = new JButton("Back"); //Placing the back button, and adding an action listener
to it
        backButton.addActionListener(new BackButtonAL(Login.this));
        gbc.gridx = 0;
        gbc.gridy = 0; // Place at the first row
        gbc.insets = new Insets(10, 10, 10, 10); //Specifying the padding for this element
        add(backButton, gbc);



        title.setFont(titleFont);                                                    // Sets the title font,
bold and size
        title.setForeground(white);                                                  // Sets the title
text colour to white
        title.setBackground(green);

        title.setOpaque(true); //Setting the title to be visible
        gbc.gridx = 1;
        gbc.gridy = 0; // Place the title next to the back button
        gbc.insets = new Insets(0, 0, 10, 0); //Specifying the padding for this element
        add(title,gbc);
```

Snippet from the DatabaseManager class that allows for inserting images into the database and adding multiple entries.

```
public static void createEntry(String table, String parameters[], String values[])
    {
        try
        {
            int index;
            String valueString = "";

            // Creates a New Entry for a Table
            PreparedStatement pstat = null;

            // Makes a string for the values placeholders
            for (index = 0; index < parameters.length; index++)
               {
                  if (index == 0)
```

```
                {
                    valueString = "?";
                }
            else
                {
                    valueString += ", ?";
                }
        }
        String parametersString ="";
        for (index = 0; index < parameters.length; index++)
        {
            if (index == 0)
                {
                    parametersString = parameters[index];
                }
            else
                {
                    parametersString += ", " + parameters[index];
                }
        }

        // Create a prepared statement using the supplied parameters
        pstat = connection.prepareStatement("INSERT INTO " + table + " (" +
parametersString + ") VALUES (" + valueString + ")");

        for(int i=0; i<parameters.length;i++)
        {
            if (parameters[i].equals("Image") || parameters[i].equals("ProfilePic"))
                {
                    try
                        {
                            File image = new File(values[i]);
                            FileInputStream fis = new FileInputStream(image);
                            pstat.setBinaryStream((i+1), fis, (int) image.length());
                        }
                    catch (FileNotFoundException fnfe)
                        {
                            fnfe.printStackTrace();
                            System.out.println("oops");
                        }

                }
            else
```

```
                {
                    pstat.setString( (i+1) , values[i]);
                }

        }

        // Execute update
        pstat.executeUpdate();
    }
    catch (SQLException e)
    {
        e.printStackTrace();
        // Handle exceptions appropriately
    }
}
```