

Crocodeal API

Class SignUp

Implemented Interfaces: None

Direct Known Subclasses: None

Public class SignUp

extends JPanel

This class provides the user with the sign up screen in which they can add their account details such as their name, contact details and others. The constructor involves the use of GridBagLayout in order to align the JTextfields and corresponding JPanels.

Constructor Summary:

Public SignUp()

Creates the JPanel for the sign up screen.

Method Summary:

Modifier and Type:

Anonymous Inner Class for Sign Up button.

Checks for exceptions within the user's inputs for the JTextField and submits the details to the database after ensuring the inputs are validated.

Class Login

Implemented Interfaces: None

Direct Known Subclasses: None

Public class Login

extends JPanel

This class provides the user with the login screen in which they can access and make changes to their account details after logging in using their username and password. The constructor involves the use of GridBagLayout in order to align the JTextfields and corresponding JPanels.

Constructor Summary:

Public Login()

Creates the JPanel for the login screen.

Method Summary:

Modifier and Type:

Anonymous Inner Class for Sign Up button.

Checks for exceptions within the user's login details and allows for the user to be sent the marketplace screen with additional features after ensuring the username and password are validated.

Class AdPanel

Implemented Interfaces: None

Direct Known Subclasses: None

Public class AdPanel

extends JPanel

This class extends JPanel and provides a screen for the user to input details for the creation of an advertisement.

Method Summary:

Anonymous inner class for upload image button

Opens a file chooser UI for the user and allows them to choose an image

Anonymous inner class for return button

Allows user to return to the previous page

Anonymous inner class for fuelType

Saves the fuel type selected in the JComboBox to a variable

Anonymous inner class for transmissionType

Saves the transmission type selected in the JComboBox to a variable

Anonymous inner class for the submit button

Takes details from all fields, adds them to an array, checks their validity and if all entries are valid creates a new advertisement in the database

Class MarketPlaceGUI

Implemented Interfaces: None

Direct Known Subclasses: None

Public class MarketPlaceGUI
extends JPanel

This class displays advertisements for the user to see and provides them with several buttons for navigating the system including a search feature to make browsing advertisements easy.

Constructor Summary:

Public MarketPlaceGUI()

Creates a JPanel for the marketplace

Modifier and Type	Method Summary
Public void	<u><i>populateAdDisplay()</i></u> <i>Iterates through an array of ad previews setting up to 45 of them to be visible on the page at any given time.</i>
Public void	<u><i>generateAds(String search)</i></u> <i>Retrieves and formats ad previews from the database, If there is a search entered it will only generate ads relevant to the search.</i>

Class ViewAccount

Implemented Interfaces: None

Direct Known Subclasses: None

Public class ViewAccount

extends JPanel

This class provides the user with the view account screen in which they can view their name, Eircode, phone number and profile picture. From this screen options such as placing advertisements, viewing the marketplace, editing their account information and deleting their account are visible.

Constructor Summary:

Public ViewAccount()

Creates the JPanel for the View Account screen that displays the user'.

Method Summary:

Modifier and Type	Field and Description
public void	<u><i>populatePage()</i></u> <i>This method retrieves the user's name, Eircode, phone number and profile picture from the database and assigns the resultset to variables to be displayed.</i>
public void	<u><i>generateUserAds()</i></u> <i>This method retrieves the user's advertisements and applies the information to the ad previews.</i>

public void	<u><i>populateAdDisplay()</i></u> <i>This method populates the advertisement side of the view account page.</i>
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Anonymous inner class for backButton

This method calls the GUIManager's backButton method to return to the previous page.

Anonymous inner class for placeAdButton

This method calls the GUIManager's changeCreateAd method to go to the AdPanel screen.

Anonymous inner class for viewMarketPlaceButton

This method calls the GUIManager's changeMarketplace method to go to the marketplace screen.

Anonymous inner class for editDetails

This method calls the GUIManager's changeEditAccount method to go to the edit account page.

Anonymous inner class for deleteAccount

This method displays a confirmation dialog using JOptionPane to double check if the user wants to delete their account. If the user says yes, their account will be deleted and will be shown a message dialog and then sent to the marketplace. If the user says no, they will get a message dialog that tells them their account has not been deleted.

Class EditAccount

Implemented Interfaces: None

Direct Known Subclasses: None

Public class EditAccount

extends JPanel

This class provides the user with the edit account screen in which their current account details will be shown and they will have the ability to add a profile picture. The details that are displayed will be editable.

Constructor Summary:

Public EditAccount()

Displays the JPanel to show the user's account details within JTextfields and allows the user to make and save changes to their account details and add a profile picture.

Method Summary:

Anonymous inner class for addPic

Allows the user to search through their file explorer and select an image to be used as a profile picture.

Anonymous inner class for editButton

Takes the user's inputs, verifies it and then updates the database with any changes made

public void	<u><i>populateEditPage()</i></u> <i>Takes the user's information from the database and assigns them to the corresponding JTextfield.</i>
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Class AdPreview

Implemented Interfaces: None

Direct Known Subclasses: None

```
public class AdPreview
```

```
extends JPanel
```

This class provides a preview for advertisements, allowing the user to visit the ad page upon clicking on the preview.

Constructor Summary:

```
public AdPreview(JPanel from)
```

Creates a blank AdPreview object.

from - the panel which the AdPreview resides in, to be disabled when switching to ViewAd

Method Summary:

Anonymous inner class for AdPreview (MouseListener)

Switches to the ViewAd page for the ad specified in the AdPreview when mouseClicked.

Modifier and Type	Method and Description
public void	<u>setAdID(int id)</u> <i>Sets the AdID to the provided AdID</i>
public void	<u>setTitle(String title)</u> <i>Sets the Title to the provided title</i>
public void	<u>setSeller(String seller)</u> <i>Sets the Seller to the provided username</i>
public void	<u>setPrice(int price)</u> <i>Sets the Price to the provided price</i>

public void	<u>setImage(Blob imageBlob)</u> <i>Converts the provided Blob into an image, and sets the ImageLabel's icon to the created image</i>
public int	<u>getId()</u> <i>Returns the AdID of the object.</i>

Class ViewAd

Implemented Interfaces: None

Direct Known Subclasses: None

```
public class ViewAd
```

```
extends JPanel
```

This class provides a preview for advertisements, allowing the user to visit the ad page upon clicking on the preview.

Constructor Summary:

```
public ViewAd()
```

Creates an unpopulated ViewAd Panel.

Method Summary:

Anonymous inner class for SellerInfoPanel (MouseListener)

Switches to the ViewAccount page for the seller specified in the ViewAd panel when mouseClicked.

Anonymous inner class for deleteButton (ActionListener)

Prompts the user to confirm whether they wish to delete the advertisement, and deletes it if they decide to.

Modifier and Type	Method and Description
public void	<u>populateScreen(int advertisementID)</u> <i>Populates the ViewAd screen with advertisement and seller details using the provided advertisementID</i>
public int	<u>getAdAccountID()</u> <i>Returns the accountID of the current advertisement's seller</i>

Class Verifiers

Implemented Interfaces: None

Direct Known Subclasses: None

Public class Verifiers

This class contains the list of verifiers used for exception handling when dealing with user submitted information.

Constructor Summary:

None

Method Summary:

Modifier and Type	Method and Description
public static void	<u><i>VerifyEntries(String[] Entries)</i></u> <i>Ensures that the array of strings in the parameter are not left empty and throws an exception otherwise.</i>
public static void	<u><i>VerifyPhoneNumber(String numberInput)</i></u> <i>Ensures that the phone number entered only consists of numbers and spaces and throws an exception otherwise.</i>
public static void	<u><i>VerifyEmailAddress(String emailInput)</i></u> <i>Ensures that the email address entered is a valid email address and throws an exception otherwise.</i>

public static void	<u><i>VerifyConfirmPasswordPassword(String password, String confirmPassword)</i></u> <i>Ensures that the password and confirm password inputs are both the same and throws an exception otherwise.</i>
public static void	<u><i>VerifyEircode(String Eircode)</i></u> <i>Ensures that the Eircode entered is valid and throws an exception otherwise.</i>
Public static void	<u><i>VerifyUsernameExists(String username, String column, String table)</i></u> <i>Checks if the username entered already exists in the database for the sign up screen and throws an exception otherwise.</i>
public static void	<u><i>VerifyUsernameNotFound(String username, String column, String table)</i></u> <i>Checks if the username entered exists in the database when logging screen and throws an exception otherwise.</i>
public static void	<u><i>VerifyWrongPassword(String username, password)</i></u> <i>Checks if the user's entered password is correct and throws an exception otherwise.</i>
public static void	<u><i>VerifyInt(String item)</i></u> <i>Checks if the user's input is an int and throws an InputMismatchException otherwise.</i>
public static void	<u><i>VerifyDouble(String item)</i></u> <i>Checks if the user's input is a double and throws an InputMismatchException otherwise.</i>

Class NoConnection

Implemented Interfaces: None

Direct Known Subclasses: None

Public class NoConnection

extends JPanel

Displays the message "No Connection :(“ when the application is opened but cannot connect to the crocodile database.

Constructor Summary:

Public NoConnection()

Creates the NoConnection Panel for use when connection fails.

Class GUIManager

Implemented Interfaces: None

Direct Known Subclasses: None

```
public class GUIManager
```

This functionally Static class contains the main JFrame of the application, and contains methods for switching GUI Panels/Screens.

Constructor Summary:

Private GUIManager()

As a functionally static class, the constructor cannot be used, and does nothing.

Method Summary:

Modifier and Type	Method and Description
public static void	<u>prepareManager()</u> <i>Prepares the GUI, defaulting to either the MarketPlaceGUI or NoConnection panel, depending on database connectivity.</i>
public static void	<u>changeMarketplace(JPanel switchFrom, String search)</u> <i>Switches to the marketplace panel, generating ads from search if provided.</i>
public static void	<u>changeLogin(JPanel switchFrom)</u> <i>Switches to the login panel.</i>
public static void	<u>changeSignup(JPanel switchFrom)</u> <i>Switches to the signup panel.</i>
public static void	<u>changeAccount(JPanel switchFrom, int id)</u> <i>Switches to the account panel, populating it from the given account id.</i>
public static void	<u>changeEditAccount(JPanel switchFrom)</u> <i>Switches to the edit account panel.</i>

public static void	<u>changeViewAd(JPanel switchFrom, int adId)</u> <i>Switches to the view ad panel, populating it with the given advertisementID.</i>
public static void	<u>backButton(JPanel switchFrom)</u> <i>Switches to the previous panel.</i>
public static void	<u>loggedIn()</u> <i>Makes changes to some panels, as a result of the user logging in.</i>
public static void	<u>loggedOut()</u> <i>Makes changes to some panels, as a result of the user logging out.</i>
public static Boolean	<u>checkConnection()</u> <i>Checks if the database connection is still valid, and displays the NoConnection screen if not.</i>

Class DatabaseManager

Implemented Interfaces: None

Direct Known Subclasses: None

```
public class DatabaseManager
```

This functionally Static class contains the main CRUD of the application, facilitating any and all sql queries/updates made by the application.

Constructor Summary:

Private DatabaseManager()

As a functionally static class, the constructor cannot be used, and does nothing.

Method Summary:

Modifier and Type	Method and Description
public static void	<u>establishConnection()</u> <i>Establishes a connection to the database.</i>
public static void	<u>close()</u> <i>Closes the connection, if open.</i>
public static void	<u>createEntry(String table, String parameters[], String values[])</u> <i>Creates an entry in the database, with the provided parameters, values, and in the provided table.</i>
public static ResultSet	<u>executeQuery(String parameters[], String table, String column, String value, String order, String orderField)</u> <i>Queries the database with the given constraints. Functions with LIKE as the column, or without ordering.</i>
public static void	<u>executeUpdate(String table, String setParameter, String setValue, String locationParameter, String locationValue)</u> <i>Updates a table in the database with the provided constraints</i>

Public static ResultSet	<u>innerJoinQuery(String tableOne, String tableTwo, String constraintOne, String constraintTwo, String parameter, String value)</u> <i>Queries the database using an inner join, returning the result set.</i>
public static void	<u>deleteEntry(String table, String column, String parameter)</u> <i>Deletes from a table given the specified column and value.</i>
public static void	<u>countRows(String table, String column, String parameter)</u> <i>Queries the database using the provided parameters, and returns true if the amount of rows is greater than 0</i>
public static boolean	<u>checkPassword(String username, String password)</u> <i>Checks if the username and password exist, and belong to the same account. Returns true if they do.</i>
public static ResultSet	<u>checkReviews(String reviewerID, String revieweeID)</u> <i>Checks if a review exists in the database.</i>
public static void	<u>updateReviews(String reviewerID, String revieweeID, String reviewType)</u> <i>Changes a pre-existing review.</i>
public static void	<u>addReview(String reviewerID, String revieweeID, String reviewType)</u> <i>Adds a review to the database, changing a pre-existing one if the opposite type review exists already</i>
public static int	<u>countPositiveReviews(String revieweeID)</u> <i>Counts the amount of positive reviews a reviewee has.</i>
public static int	<u>countAllReviews(String revieweeID)</u> <i>Counts the amount of total reviews a reviewee has.</i>

Class BlankEntryException

Implemented Interfaces: None

Direct Known Subclasses: None

Public class BlankEntryException

extends Exception

This class is an exception for when the inputs made are blank

Constructor Summary:

Public BlankEntryException(String msg)

Displays the message inputted in the parameter

Class ConfirmPasswordException

Implemented Interfaces: None

Direct Known Subclasses: None

Public class ConfirmPasswordException

extends Exception

This class is an exception for when the confirm password input in the sign up screen is incorrect.

Constructor Summary:

Public ConfirmPasswordException(String msg)

Displays the message inputted in the parameter

Class UsernameExistsException

Implemented Interfaces: None

Direct Known Subclasses: None

Public class UsernameExistsException

extends Exception

This class is an exception for when the username entered in the sign up screen already exists

Constructor Summary:

Public UsernameExistsException (String msg)

Displays the message inputted in the parameter

Class UsernameNotFoundException

Implemented Interfaces: None

Direct Known Subclasses: None

Public class UsernameNotFoundException

extends Exception

This class is an exception for when the username entered in the log in screen is not found on the database

Constructor Summary:

Public UsernameNotFoundException (String msg)

Displays the message inputted in the parameter

Class WrongPasswordException

Implemented Interfaces: None

Direct Known Subclasses: None

Public class WrongPasswordException

extends Exception

This class is an exception for when the password entered in the log in screen is not found in the database.

Constructor Summary:

Public WrongPasswordException (String msg)

Displays the message inputted in the parameter

Class EmailException

Implemented Interfaces: None

Direct Known Subclasses: None

Public class EmailException

extends Exception

This class is an exception for when the email entered in the sign up screen is not a valid email

Constructor Summary:

Public EmailException (String msg)

Displays the message inputted in the parameter

Class PhoneException

Implemented Interfaces: None

Direct Known Subclasses: None

Public class PhoneException

extends Exception

This class is an exception for when the email entered in the phone number entered is invalid

Constructor Summary:

Public PhoneException (String msg)

Displays the message inputted in the parameter

Class EircodeException

Implemented Interfaces: None

Direct Known Subclasses: None

Public class EircodeException

extends Exception

This class is an exception for when the Eircode entered is invalid

Constructor Summary:

Public EircodeException (String msg)

Displays the message inputted in the parameter

Class AccountButtonAL

Implemented Interfaces: ActionListener

Direct Known Subclasses: None

Public Class AccountButtonAL

This class provides a named Action Listener for use with all "Account" buttons.

Field Summary:

Modifier and Type	Field and Description
private JPanel	<u>from</u> <i>This field is used to know which panel to disable/remove when switching screens.</i>

Constructor Summary:

public AccountButtonAL(JPanel switchFrom)

Creates an AccountButtonAL object, providing the panel it was instantiated in as the panel to switch from.

switchFrom - The JPanel which gets deactivated upon triggering ActionPerformed

Method Summary:

public void ActionPerformed(ActionEvent accountButtonClicked)

Switches from the current screen to the ViewAccount screen.

Class BackButtonAL

Implemented Interfaces: ActionListener

Direct Known Subclasses: None

Public Class BackButtonAL

This class provides a named Action Listener for use with all “Back” buttons.

Field Summary:

Modifier and Type	Field and Description
private JPanel	<u>from</u> <i>This field is used to know which panel to disable/remove when switching screens.</i>

Constructor Summary:

public BackButtonAL(JPanel switchFrom)

Creates a BackButtonAL object, providing the panel it was instantiated in as the panel to switch from.

switchFrom - The JPanel which gets deactivated upon triggering ActionPerformed

Method Summary:

public void ActionPerformed(ActionEvent backClicked)

Switches from the current screen to the previous screen.

Class LoginButtonAL

Implemented Interfaces: ActionListener

Direct Known Subclasses: None

Public Class LoginButtonAL

This class provides a named Action Listener for use with all "Login" buttons.

Field Summary:

Modifier and Type	Field and Description
private JPanel	<u>from</u> <i>This field is used to know which panel to disable/remove when switching screens.</i>

Constructor Summary:

public LoginButtonAL(JPanel switchFrom)

Creates a LoginButtonAL object, providing the panel it was instantiated in as the panel to switch from.

switchFrom - The JPanel which gets deactivated upon triggering ActionPerformed

Method Summary:

public void ActionPerformed(ActionEvent loginClicked)

Switches from the current screen to the Login screen.

Class LogoutButtonAL

Implemented Interfaces: ActionListener

Direct Known Subclasses: None

Public Class AccountButtonAL

This class provides a named Action Listener for use with all “Logout” buttons.

Constructor Summary:

public LogoutButtonAL()

Creates a LogoutButtonAL object.

Method Summary:

public void ActionPerformed(ActionEvent logoutClicked)

Logs the current user out.

Class MarketplaceButtonAL

Implemented Interfaces: ActionListener

Direct Known Subclasses: None

Public Class MarketplaceButtonAL

This class provides a named Action Listener for use with all "Marketplace" buttons.

Field Summary:

Modifier and Type	Field and Description
private JPanel	<u>from</u> <i>This field is used to know which panel to disable/remove when switching screens.</i>

Constructor Summary:

public MarketplaceButtonAL(JPanel switchFrom)

Creates a MarketplaceButtonAL object, providing the panel it was instantiated in as the panel to switch from.

switchFrom - The JPanel which gets deactivated upon triggering ActionPerformed

Method Summary:

public void ActionPerformed(ActionEvent accountButtonClicked)

Switches from the current screen to the MarketPlaceGUI screen.

Class PlaceAdButtonAL

Implemented Interfaces: ActionListener

Direct Known Subclasses: None

Public Class PlaceAdButtonAL

This class provides a named Action Listener for use with all "Place Advertisement" buttons.

Field Summary:

Modifier and Type	Field and Description
private JPanel	<u>from</u> <i>This field is used to know which panel to disable/remove when switching screens.</i>

Constructor Summary:

public PlaceAdButtonAL(JPanel switchFrom)

Creates a PlaceAdButtonAL object, providing the panel it was instantiated in as the panel to switch from.

switchFrom - The JPanel which gets deactivated upon triggering ActionPerformed

Method Summary:

public void ActionPerformed(ActionEvent accountButtonClicked)

Switches from the current screen to the AdPanel screen.

Class SignupButtonAL

Implemented Interfaces: ActionListener

Direct Known Subclasses: None

Public Class SignupButtonAL

This class provides a named Action Listener for use with all “Sign Up” buttons.

Modifier and Type	Field and Description
private JPanel	<u>from</u> <i>This field is used to know which panel to disable/remove when switching screens.</i>

Field Summary:

Constructor Summary:

public SignupButtonAL(JPanel switchFrom)

Creates a SignupButtonAL object, providing the panel it was instantiated in as the panel to switch from.

switchFrom - The JPanel which gets deactivated upon triggering ActionPerformed

Method Summary:

public void ActionPerformed(ActionEvent accountButtonClicked)

Switches from the current screen to the SignUp screen.

Class CurrentSession

Implemented Interfaces: None

Direct Known Subclasses: None

```
public class CurrentSession
```

This class keeps track of the current user's ID, their log in status and contains the methods to log the user in and out.

Field Summary:

Constructor Summary:

```
private CurrentSession() {}
```

A class with a private constructor so that it can't be instantiated.

Method Summary:

Modifier and Type	Field and Description
public static void	<u>logUserIn(int UserID)</u> <i>Sets the user's ID to the current ID so that it can be returned and sets the boolean variable isLoggedIn to true so the user may have access to features available only to those logged in.</i>
public static void	<u>logUserOut()</u> <i>Sets the userID to 0 and sets the boolean variable isLoggedIn to true so the user has no access to features available only to those logged in.</i>
public static void	<u>getLoginStatus()</u> Returns the user's login status
public static void	<u>getUserID()</u> Returns the user's ID