ATM

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

- DBHandling . . . . . **??**
- IDAL . . . . . **??**
  - DAL . . . . . **??**
- IUser . . . . . **??**
  - User . . . . . **??**
    - Admin . . . . . **??**
    - Customer . . . . . **??**
- IUserInput . . . . . **??**
  - Input . . . . . **??**
- Program . . . . . **??**
- UI . . . . . **??**

Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Admin
: Admin class inheriting from user with extra functionality . . . . . ??

Customer
: Customer class inheriting from user with extra functionality . . . . . ??

DAL
: DAL (Data Abstraction Layer) class to hand direct interaction with the database . . . . . ??

DBHandling
: DBHandling class for the rest of the program to interace with the database . . . . . ??

IDAL
: DAL interface defining core required functionality for a DAL . . . . . ??

Input
: Input class to handle getting user input from the console . . . . . ??

IUser
: User interface defining core required functionality for a User . . . . . ??

IUserInput
: UserInput interface defining core required functionality for UserInput . . . . . ??

Program
: Program class for executing the Main function for the program . . . . . ??

UI
: UI class to handle interaction between a user of the program and the business logic layer . . . ??

User
: User abstract class with core functionality for all users . . . . . ??

Chapter 3

Class Documentation

3.1 Admin Class Reference

Admin class inheriting from user with extra functionality.

Inheritance diagram for Admin:

Public Member Functions

- override void DisplayMenu ()

  Displays the menu for an Admin and handles the user input to select an action.
- override string MenuInput (string input)

  Utilizes menu input for a Admin and handles the user input to select an action.

Public Member Functions inherited from User

- void Exit ()

  Exits the application.
- int GetAccountNumber ()

  Gets the account number for this user.
- string GetAccountName ()

  Gets the account name for this user.
- double GetAccountBalance ()

  Gets the account balance for this user.
- string GetAccountStatus ()

  Gets the account status for this user.
- string GetAccountLogin ()

Gets the account login for this user.

- int GetAccountPin ()

  Gets the account pin for this user.

- void SetAccountBalance (double input_balance)

  Sets the account balance for this user.

- void DisplayMenu ()
- string MenuInput (string input)

Protected Member Functions

- override string **HandleMenuInput** (string input)

Protected Member Functions inherited from User

- **User** (string input_login, int input_pin, string input_name, double input_balance, int input_account_number, string input_status)
- **User** (IUser user)
- string HandleMenuInput (string input)

  Displays the menu for a user and handles the user input to select an action.

3.1.1 Detailed Description

Admin class inheriting from user with extra functionality.

3.1.2 Member Function Documentation

3.1.2.1 DisplayMenu()

```
override void Admin.DisplayMenu ()
```

Displays the menu for an Admin and handles the user input to select an action.

>

Implements IUser.

3.1.2.2 MenuInput()

```
override string Admin.MenuInput (
            string input)
```

Utilizes menu input for a Admin and handles the user input to select an action.

Parameters

input	String number to select an action from the menu.

Returns

String returned from HandleMenuInput function.

Implements IUser.

The documentation for this class was generated from the following file:

- ATM/BusinessLogic/Admin.cs

3.2 Customer Class Reference

Customer class inheriting from user with extra functionality.

Inheritance diagram for Customer:

Public Member Functions

- override void DisplayMenu ()

  Displays the menu for a Customer and handles the user input to select an action.
- override string MenuInput (string input)

  Utilizes menu input for a Customer and handles the user input to select an action.

Public Member Functions inherited from User

- void Exit ()

  Exits the application.
- int GetAccountNumber ()

  Gets the account number for this user.
- string GetAccountName ()

  Gets the account name for this user.
- double GetAccountBalance ()

  Gets the account balance for this user.
- string GetAccountStatus ()

  Gets the account status for this user.
- string GetAccountLogin ()

  Gets the account login for this user.
- int GetAccountPin ()

  Gets the account pin for this user.
- void SetAccountBalance (double input_balance)

  Sets the account balance for this user.
- void DisplayMenu ()
- string MenuInput (string input)

Protected Member Functions

- override string **HandleMenuInput** (string input)

Protected Member Functions inherited from User

- **User** (string input_login, int input_pin, string input_name, double input_balance, int input_account_number, string input_status)
- **User** (IUser user)
- string HandleMenuInput (string input)

  Displays the menu for a user and handles the user input to select an action.

3.2.1 Detailed Description

Customer class inheriting from user with extra functionality.

3.2.2 Member Function Documentation

3.2.2.1 DisplayMenu()

```
override void Customer.DisplayMenu ()
```

Displays the menu for a Customer and handles the user input to select an action.

Implements IUser.

3.2.2.2 MenuInput()

```
override string Customer.MenuInput (
            string input)
```

Utilizes menu input for a Customer and handles the user input to select an action.

Parameters

input	String number to select an action from the menu.

Returns

String returned from HandleMenuInput function.

Implements IUser.

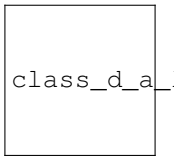
The documentation for this class was generated from the following file:

- ATM/BusinessLogic/Customer.cs

3.3 DAL Class Reference

DAL (Data Abstraction Layer) class to hand direct interaction with the database.

Inheritance diagram for DAL:



Public Member Functions

- MySql.Data.MySqlClient.MySqlConnection Connect ()
  Connects to the SQL database for the ATM.
- User Login (string login, int pin)
  Logs in a user to the database.

3.3.1 Detailed Description

DAL (Data Abstraction Layer) class to hand direct interaction with the database.

3.3.2 Member Function Documentation

3.3.2.1 Connect()

```
MySql.Data.MySqlClient.MySqlConnection DAL.Connect ()
```

Connects to the SQL database for the ATM.

Returns

MySql.Data.MySqlClient.MySqlConnection for the created connection or null if the connection failed.

Implements IDAL.

3.3.2.2 Login()

```
User DAL.Login (
            string login,
            int pin)
```

Logs in a user to the database.

Parameters

login	String login for the user attempting access.
pin	Int pin for the user attempting access.

Returns

User if found or null if the login failed.

Implements IDAL.

The documentation for this class was generated from the following file:

- ATM/DAL/DAL.cs

3.4 DBHandling Class Reference

DBHandling class for the rest of the program to interace with the database.

Static Public Member Functions

- static MySql.Data.MySqlClient.MySqlConnection ConnectHandling (IDAL dal)
  Handles connecting by executing connect for the provided DAL.
- static User LoginHandling (IDAL dal, string login, int pin)
  Handles logging in a user to the database.

3.4.1 Detailed Description

DBHandling class for the rest of the program to interace with the database.

3.4.2 Member Function Documentation

3.4.2.1 ConnectHandling()

```
static MySql.Data.MySqlClient.MySqlConnection DBHandling.ConnectHandling (
            IDAL dal)  [static]
```

Handles connecting by executing connect for the provided DAL.

Parameters

dal	IDAL to attempt a connection with.

Returns

MySql.Data.MySqlClient.MySqlConnection if the connect was successful or null if it failed.

3.4.2.2 LoginHandling()

```
static User DBHandling.LoginHandling (
            IDAL dal,
            string login,
            int pin)  [static]
```

Handles logging in a user to the database.

Parameters

dal	IDAL to attempt a connection with.
login	String login for the user attempting access.
pin	Int pin for the user attempting access.

Returns

User if the login was successful or null if it failed.

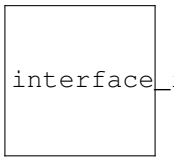
The documentation for this class was generated from the following file:

- ATM/DAL/DBHandling.cs

3.5 IDAL Interface Reference

DAL interface defining core required functionality for a DAL.

Inheritance diagram for IDAL:



Public Member Functions

- MySql.Data.MySqlClient.MySqlConnection Connect ()
  Connects to the SQL database for the ATM.
- User Login (string login, int pin)
  Logs in a user to the database.

3.5.1 Detailed Description

DAL interface defining core required functionality for a DAL.

3.5.2 Member Function Documentation

3.5.2.1 Connect()

```
MySql.Data.MySqlClient.MySqlConnection IDAL.Connect ()  [abstract]
```

Connects to the SQL database for the ATM.

Returns

MySql.Data.MySqlClient.MySqlConnection for the created connection or null if the connection failed.

Implemented in DAL.

3.5.2.2 Login()

```
User IDAL.Login (
            string login,
            int pin)  [abstract]
```

Logs in a user to the database.

Parameters

login	String login for the user attempting access.
pin	Int pin for the user attempting access.

Returns

User if found or null if the login failed.

Implemented in DAL.

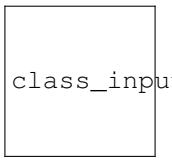
The documentation for this interface was generated from the following file:

- ATM/Interfaces/IDAL.cs

3.6 Input Class Reference

Input class to handle getting user input from the console.

Inheritance diagram for Input:



Public Member Functions

- string GetInput ()
  Gets the input from reading the console.

3.6.1 Detailed Description

Input class to handle getting user input from the console.

3.6.2 Member Function Documentation

3.6.2.1 GetInput()

```
string Input.GetInput ()
```

Gets the input from reading the console.

Returns

String input from the console.

Implements IUserInput.

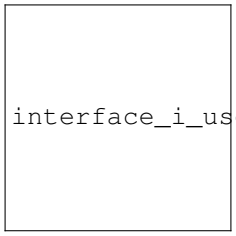
The documentation for this class was generated from the following file:

- ATM/UI/Input.cs

3.7 IUser Interface Reference

User interface defining core required functionality for a User.

Inheritance diagram for IUser:



Protected Member Functions

- void Exit ()
- void SetAccountBalance (double input_balance)

3.7.1 Detailed Description

User interface defining core required functionality for a User.

3.7.2 Member Function Documentation

3.7.2.1 Exit()

```
void IUser.Exit ()  [protected]
```

Implemented in User.

3.7.2.2 SetAccountBalance()

```
void IUser.SetAccountBalance (
            double input_balance)  [protected]
```

Implemented in User.

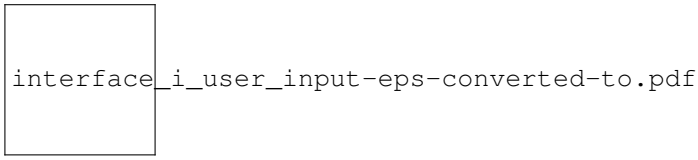
The documentation for this interface was generated from the following file:

- ATM/Interfaces/IUser.cs

3.8 IUserInput Interface Reference

UserInput interface defining core required functionality for UserInput.

Inheritance diagram for IUserInput:



Public Member Functions

- string GetInput ()

3.8.1 Detailed Description

UserInput interface defining core required functionality for UserInput.

3.8.2 Member Function Documentation

3.8.2.1 GetInput()

```
string IUserInput.GetInput ()
```

Implemented in Input.

The documentation for this interface was generated from the following file:

- ATM/Interfaces/IUserInput.cs

3.9 Program Class Reference

Program class for executing the Main function for the program.

3.9.1 Detailed Description

Program class for executing the Main function for the program.

The documentation for this class was generated from the following file:

- ATM/BusinessLogic/Program.cs

3.10 UI Class Reference

UI class to handle interaction between a user of the program and the business logic layer.

Static Public Member Functions

- static string Input (IUser user, IUserInput input)
  Handles getting input.
- static void Menu (IUser user)
  Menu functionality for the program.

3.10.1 Detailed Description

UI class to handle interaction between a user of the program and the business logic layer.

3.10.2 Member Function Documentation

3.10.2.1 Input()

```
static string UI.Input (
            IUser user,
            IUserInput input)  [static]
```

Handles getting input.

Parameters

input	IUserInput to execute getting input with.

Returns

String returned from getting input with IUserInput.

3.10.2.2 Menu()

```
static void UI.Menu (
            IUser user)  [static]
```

Menu functionality for the program.

Parameters

user	IUser to display the menu for.
input	String input to select a menu option.

Returns

String that was provided as input.

The documentation for this class was generated from the following file:

- ATM/UI/UI.cs

3.11 User Class Reference

User abstract class with core functionality for all users.

Inheritance diagram for User:

Public Member Functions

- void Exit ()

  Exits the application.
- int GetAccountNumber ()

  Gets the account number for this user.
- string GetAccountName ()

  Gets the account name for this user.
- double GetAccountBalance ()

  Gets the account balance for this user.
- string GetAccountStatus ()

  Gets the account status for this user.
- string GetAccountLogin ()

  Gets the account login for this user.
- int GetAccountPin ()

  Gets the account pin for this user.
- void SetAccountBalance (double input_balance)

  Sets the account balance for this user.
- void DisplayMenu ()
- string MenuInput (string input)

Protected Member Functions

- **User** (string input_login, int input_pin, string input_name, double input_balance, int input_account_number, string input_status)
- **User** (IUser user)
- string HandleMenuInput (string input)

  Displays the menu for a user and handles the user input to select an action.

3.11.1 Detailed Description

User abstract class with core functionality for all users.

3.11.2 Member Function Documentation

3.11.2.1 DisplayMenu()

```
void User.DisplayMenu ()  [abstract]
```

Implements IUser.

3.11.2.2 Exit()

```
void User.Exit ()
```

Exits the application.

Implements IUser.

3.11.2.3 GetAccountBalance()

```
double User.GetAccountBalance ()
```

Gets the account balance for this user.

Returns

Double account balance.

Implements IUser.

3.11.2.4 GetAccountLogin()

```
string User.GetAccountLogin ()
```

Gets the account login for this user.

Returns

String account login.

Implements IUser.

3.11.2.5 GetAccountName()

```
string User.GetAccountName ()
```

Gets the account name for this user.

Returns

String account name.

Implements IUser.

3.11.2.6 GetAccountNumber()

```
int User.GetAccountNumber ()
```

Gets the account number for this user.

Returns

Int account number.

Implements IUser.

3.11.2.7 GetAccountPin()

```
int User.GetAccountPin ()
```

Gets the account pin for this user.

Returns

Int account pin.

Implements IUser.

3.11.2.8 GetAccountStatus()

```
string User.GetAccountStatus ()
```

Gets the account status for this user.

Returns

String account status.

Implements IUser.

3.11.2.9 HandleMenuInput()

```
string User.HandleMenuInput (
            string input)  [abstract], [protected]
```

Displays the menu for a user and handles the user input to select an action.

Parameters

input	String number to select an action from the menu.

Returns

String that was input.

3.11.2.10 MenuInput()

```
string User.MenuInput (
            string input)  [abstract]
```

Implements IUser.

3.11.2.11 SetAccountBalance()

```
void User.SetAccountBalance (
            double input_balance)
```

Sets the account balance for this user.

Parameters

input_balance	Double to set the balance to.

Implements IUser.

The documentation for this class was generated from the following file:

- ATM/BusinessLogic/User.cs