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| **SWE 4x** | **Übung zu Softwareentwicklung mit**  **mit modernen Plattformen 4** | **SS 2022, Übung 05** |

**Abgabe elektronisch bis Sa 8 Uhr in der KW 20**

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**Punkte: Kurzzeichen Tutor / Übungsleiter /**

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| --- | --- | --- | --- | --- | --- | --- |
| Beispiel | L Lösungsidee | I Implementierung | T Tests | S = L+I+T | Multiplikator | S\*M |
| a | ⌧⌧⌧ | ⌧⌧⌧⌧ | ⌧⌧⌧ | 10 | 5 | 50 |
| b | ⌧⌧⌧ | ⌧⌧⌧⌧ | ⌧⌧⌧ | 10 | 5 | 50 |
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# Lösungsidee

## Allgemein

Um das komplexe Problem besser strukturieren zu können und mir einen Überblick zu verschaffen, habe ich zuerst ein Klassendiagramm erstellt. Nach längerem Überlegen habe ich mich dazu entschlossen, dass es zwei separate Klassen für Bedarf und Hilfsgut benötigt. D.h. eine Annahmestelle meldet einen Bedarf für ein im System hinterlegten Hilfsgut an. Da es sich um eine M:N Beziehung handelt und weitere Infos je Bedarf gespeichert werden sollen (Menge), habe ich die Klasse "Bedarf" als Assoziationsklasse modelliert.

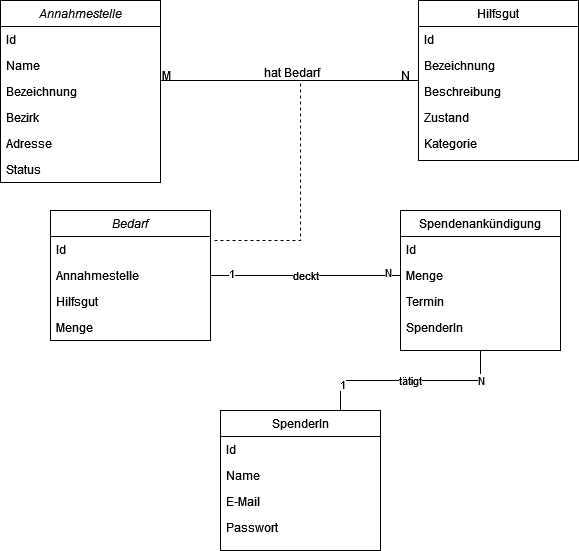


Abbildung 1: Klassendiagramm

**Design / Programmstruktur:**

Bezüglich des Designs habe ich versucht ein MVC-Pattern umzusetzen. Dabei wird versucht die Datenschicht von der Darstellung möglichst zu trennen. Der Controller interagiert als Vermittler zwischen View und Model (Model = Daten) und ist unter anderem für das Eventhandling verantwortlich. Das Model sind wie gesagt die Daten. Diese verwalte ich in einer Klasse "dbMock". Hier lege ich die Dummydaten an und mache diese mit Gettern und Methoden wie "addDemand", "deleteArticle" usw zugänglich. Beide Anwendungen greifen auf diese Klasse zu. In einer weiteren Ausbaustufe ist es mein Ziel, nur die Implementierung der dbMock-Klasse durch den tatsächlichen DB-Zugriff austauschen zu müssen.

Bei mir ist jedes Dialogfenster und jede Ansicht eine eigene Klasse und somit eine eigene View. Lt. MVC-Pattern gibt es für jede View einen Controller, was ich auch so umgesetzt habe. Der folgende Screenshot zeigt die vorhandenen Klassen für die Verwaltungsanwendung (8 Views und für jede View ein Controller).

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Automatisch generierte Beschreibung

## Verwaltungsanwendung:

Im Folgenden gebe ich einen Überblick über die Mockups und die tatsächlichen Screens der Verwaltungsanwendung. Während dem Programmieren haben sich die Mockups natürlich auch weiterentwickelt und verändert, da man immer wieder auf neue Punkte drauf gekommen ist, die ich zu Beginn nicht berücksichtigt habe.

Laut Angabe wurde gefordert, dass ein User zuerst eine/seine Annahmestelle auswählen muss und sich alle weiteren Operationen dann auf diese Annahmestelle beziehen sollen. Daher habe ich folgenden Startscreen für die Verwaltungsapp implementiert. Der User wählt seine Annahmestelle aus einer Liste. Im Vergleich zum Mock-Up habe ich mich für eine Tabelle und kein Drop-Down-Feld entschieden, da das etwas unübersichtlicher werden kann bei vielen Annahmestellen im System.

|  |  |
| --- | --- |
|  |  |

Sobald der User seine Annahmestelle ausgewählt hat, erhält er ein Fenster mit folgenden Inhalten:

* Top Navigation
* Info zur aktiven Annahmestelle und Möglichkeit diese zu ändern
* Tabelle mit den gemeldeten Bedarfsmeldungen dieser Annahmestelle
* Buttons, um den Bedarf zu verwalten (hinzufügen, löschen, ändern)
* Tabelle mit den Spendenankündigungen für diese Annahmestelle und Filtermöglichkeiten

|  |  |
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|  |  |

Die Bedarfsmeldungen können über ein Dialogfeld verwaltet werden:

|  |  |
| --- | --- |
|  |  |

Über die Navigation-Bar können mehrere Submenüs ausgewählt werden

* Bedarf verwalten (das ist die oberhalb gesehen Ansicht 🡺 also eigentlich die Hauptansicht)
* Annahmestellen vewalten 🡺 hier können die Annahmestellen verwaltet werden
* Hilfsgüter verwalten 🡺 zum Verwalten der Hilfsgüter

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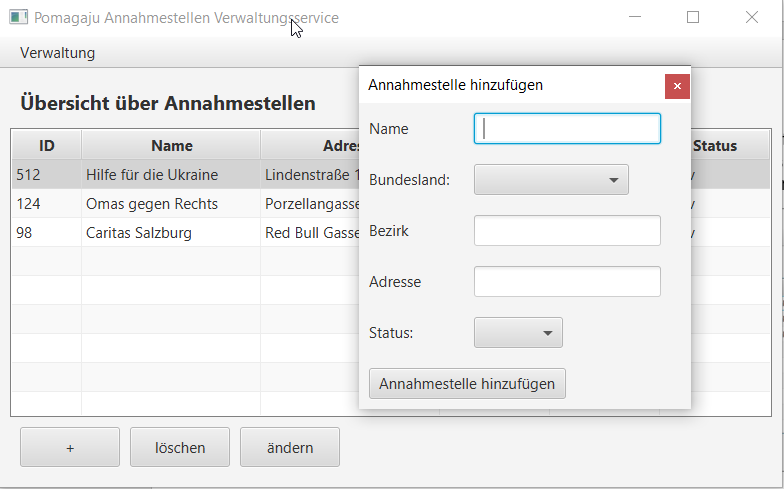
Automatisch generierte Beschreibung

Die beiden Menüs "Annahemstellen verwalten" und "Hilfsguter verwalten" sind beide ident aufgebaut. In einer Tabelle werden die Infos dargestellt.

Ein Bild, das Tisch enthält.

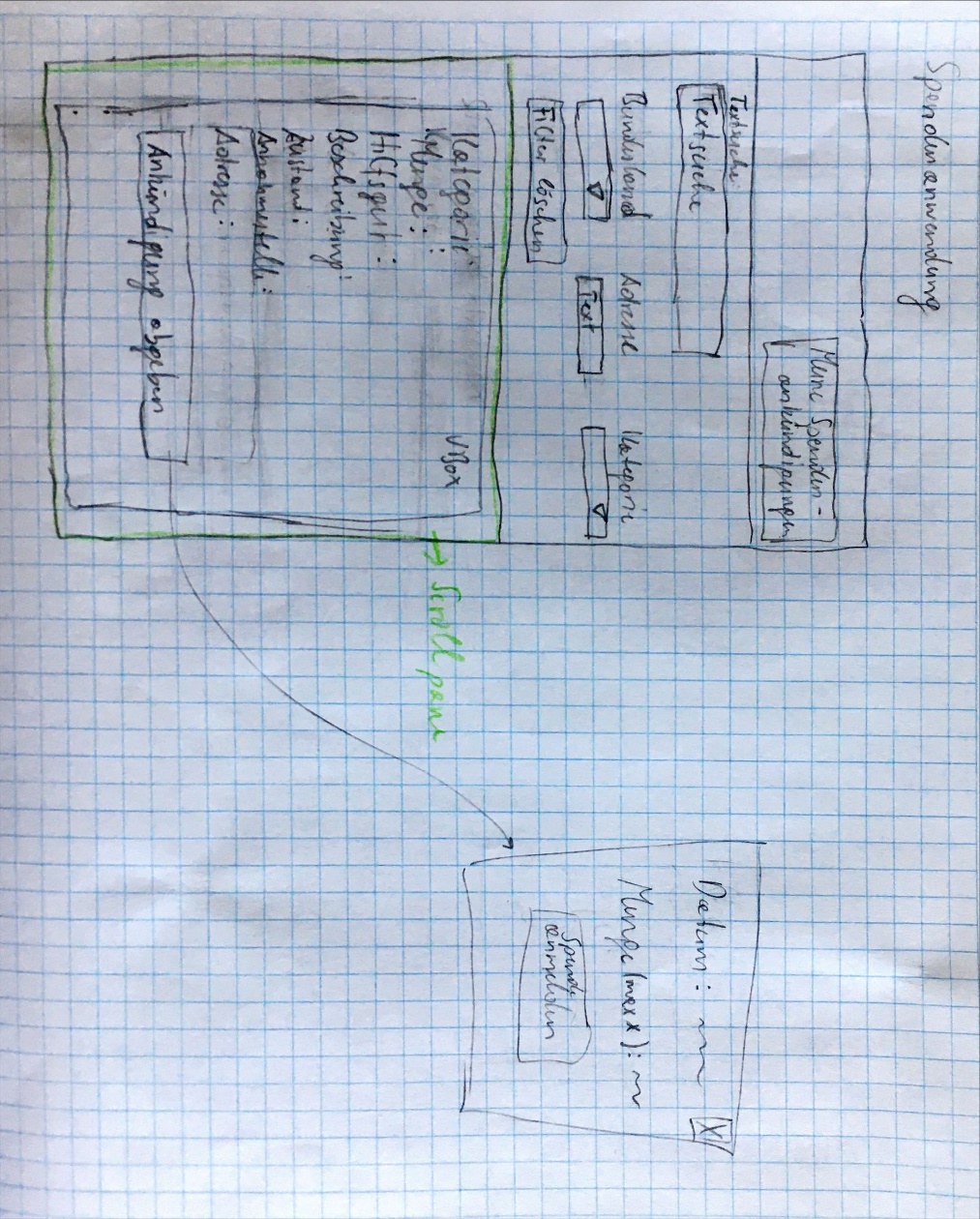
Automatisch generierte Beschreibung

Über Buttons unterhalb der Tabelle können die Daten verwaltet werden. Dazu wird jeweils ein Dialogfenster geöffnet.



## Spendenanwendung:

In der Spendenanwendung sollen die Bedarfsmeldungen der Annahmestellen angezeigt werden. Der User soll die Möglichkeit haben die Bedarfsmeldungen nach verschiedenen Kriterien filtern zu können. Ich habe versucht die Bedarfsmeldungen kompakter und eher im Hochformat darzustellen, damit diese Darstellungen auch auf Mobilgeräte übertragen werden könnte. Die Ankündigung einer Spende funktioniert wieder über eine Pop-Up in welchem nach Abschluss des Prozesses auch der Token angezeigt wird.



Login mit "admin" und "admin":

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| --- | --- |
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| Ein Bild, das Text enthält.  Automatisch generierte Beschreibung | Ein Bild, das Text enthält.  Automatisch generierte Beschreibung |

Laut Angabe ist gefordert, dass der User neben dem Datum und der Menge auch die Annahmestelle auswählen kann. Nachdem eine Bedarfsmeldung aber zu genau einer Annahmestelle gehört, erscheint es mir unsinnig, dass der User eine beliebige Stelle auswählen kann.

# Quellcode

## Datenmodell (Model):

package at**.**fhooe**.**swe4**.**model**.**enums**;**

//File: Category.java

public enum Category **{**

CLOTHS**(**"Kleidung"**),**

ELECTRONICS**(**"Elektronikgeräte"**),**

FOOD**(**"Haltbare Lebensmittel"**),**

HYGIENE**(**"Hygieneartikel"**),**

OTHER**(**"andere"**);**

private String stringRepresentation**;**

public String getCategory**()** **{**

**return** stringRepresentation**;**

**}**

@Override

public String toString**()** **{**

**return** stringRepresentation**;**

**}**

private Category**(**String category**)** **{**

**this.**stringRepresentation **=** category**;**

**}**

**}**

package at**.**fhooe**.**swe4**.**model**.**enums**;**

//File: Condition.java

public enum Condition **{**

NEW**(**"neu"**),**

SLIGHTLYUSED**(**"wenig benutzt"**),**

HEAVILYUSED**(**"stark benutzt"**);**

private String stringRepresentation**;**

private Condition**(**String condition**)** **{**

**this.**stringRepresentation **=** condition**;**

**}**

@Override

public String toString**()** **{**

**return** stringRepresentation**;**

**}**

**}**

package at**.**fhooe**.**swe4**.**model**.**enums**;**

//File: FederalSate.java

public enum FederalState **{**

VORARLBERG**(**"Vorarlberg"**),**

TYROL**(**"Tirol"**),**

SALZBURG**(**"Salzburg"**),**

CARINTHIA**(**"Kärnten"**),**

LOWERAUSTRIA**(**"Niederösterreich"**),**

UPPERAUSTRIA**(**"Oberösterreich"**),**

STYRIA**(**"Steiermark"**),**

BURGENLAND**(**"Burgenland"**),**

VIEANNA**(**"Wien"**);**

private String stringRepresentation**;**

private FederalState**(**String federalState**)** **{**

**this.**stringRepresentation **=** federalState**;**

**}**

@Override

public String toString**()** **{**

**return** stringRepresentation**;**

**}**

**}**

package at**.**fhooe**.**swe4**.**model**.**enums**;**

//File: Status.java

public enum Status **{**

ACTIVE**(**"aktiv"**),**

INACTIVE**(**"inaktiv"**);**

private String stringRepresentation**;**

private Status**(**String status**)** **{**

**this.**stringRepresentation **=** status**;**

**}**

@Override

public String toString**()** **{**

**return** stringRepresentation**;**

**}**

**}**

package at**.**fhooe**.**swe4**.**model**;**

//File: Article.java

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**Category**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**Condition**;**

public class Article **{**

private Integer id**;**

private String name**;**

private String description**;**

private Condition condition**;**

private Category category**;**

public Article**(**Integer id**,** String name**,** String description**,** Condition condition**,** Category category**)** **{**

**this.**id **=** id**;**

**this.**name **=** name**;**

**this.**description **=** description**;**

**this.**condition **=** condition**;**

**this.**category **=** category**;**

**}**

@Override

public String toString**()** **{**

**return**

"AritkelNr: " **+** id **+** ", " **+** name **+** ", " **+** condition **+** ", " **+** category**;**

**}**

public Integer getId**()** **{**

**return** id**;**

**}**

public void setId**(**Integer id**)** **{**

**this.**id **=** id**;**

**}**

public String getName**()** **{**

**return** name**;**

**}**

public void setName**(**String name**)** **{**

**this.**name **=** name**;**

**}**

public String getDescription**()** **{**

**return** description**;**

**}**

public void setDescription**(**String description**)** **{**

**this.**description **=** description**;**

**}**

public Condition getCondition**()** **{**

**return** condition**;**

**}**

public void setCondition**(**Condition condition**)** **{**

**this.**condition **=** condition**;**

**}**

public Category getCategory**()** **{**

**return** category**;**

**}**

public void setCategory**(**Category category**)** **{**

**this.**category **=** category**;**

**}**

**}**

package at**.**fhooe**.**swe4**.**model**;**

//File: DemandItem.java

**import** javafx**.**beans**.**property**.**IntegerProperty**;**

**import** javafx**.**beans**.**property**.**SimpleIntegerProperty**;**

public class DemandItem **{**

private Integer id**;**

private Article relatedArticle**;**

private ReceivingOffice relatedOffice**;**

private IntegerProperty amount**;**

public Integer getId**()** **{**

**return** id**;**

**}**

public void setId**(**Integer id**)** **{**

**this.**id **=** id**;**

**}**

public DemandItem**(**Integer id**,** Article relatedGood**,** ReceivingOffice relatedOffice**,** Integer amount**)** **{**

**this.**id **=** id**;**

**this.**relatedArticle **=** relatedGood**;**

**this.**relatedOffice **=** relatedOffice**;**

**this.**amount **=** **new** SimpleIntegerProperty**();**

**this.**amount**.**setValue**(**amount**);**

**}**

public IntegerProperty getObsAmount**()** **{**

**return** amount**;**

**}**

@Override

public String toString**()** **{**

**return** id **+** ", " **+** relatedArticle **+** ", " **+** relatedOffice **+** ", " **+** amount**;**

**}**

public Article getRelatedArticle**()** **{**

**return** relatedArticle**;**

**}**

public void setRelatedArticle**(**Article relatedArticle**)** **{**

**this.**relatedArticle **=** relatedArticle**;**

**}**

public ReceivingOffice getRelatedOffice**()** **{**

**return** relatedOffice**;**

**}**

public void setRelatedOffice**(**ReceivingOffice relatedOffice**)** **{**

**this.**relatedOffice **=** relatedOffice**;**

**}**

public Integer getAmount**()** **{**

**return** amount**.**getValue**();**

**}**

public void setAmount**(**Integer amount**)** **{**

**this.**amount**.**setValue**(**amount**);**

**}**

**}**

package at**.**fhooe**.**swe4**.**model**;**

//File: Donation.java

**import** java**.**time**.**LocalDate**;**

public class Donation **{**

private DemandItem relatedDemand**;**

private LocalDate date**;**

private User user**;**

private Integer amount**;**

public Donation**(**DemandItem relatedDemand**,** LocalDate date**,** User user**,** Integer amount**)** **{**

**this.**relatedDemand **=** relatedDemand**;**

**this.**date **=** date**;**

**this.**user **=** user**;**

**this.**amount **=** amount**;**

**}**

@Override

public String toString**()** **{**

**return** relatedDemand **+**", " **+** date **+**

", " **+** user **+**

", " **+** amount**;**

**}**

public DemandItem getRelatedDemand**()** **{**

**return** relatedDemand**;**

**}**

public void setRelatedDemand**(**DemandItem relatedDemand**)** **{**

**this.**relatedDemand **=** relatedDemand**;**

**}**

public LocalDate getDate**()** **{**

**return** date**;**

**}**

public void setDate**(**LocalDate date**)** **{**

**this.**date **=** date**;**

**}**

public User getUser**()** **{**

**return** user**;**

**}**

public void setUser**(**User user**)** **{**

**this.**user **=** user**;**

**}**

public Integer getAmount**()** **{**

**return** amount**;**

**}**

public void setAmount**(**Integer amount**)** **{**

**this.**amount **=** amount**;**

**}**

**}**

package at**.**fhooe**.**swe4**.**model**;**

//File: ReceivingOffice.java

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**FederalState**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**Status**;**

**import** java**.**util**.**Objects**;**

public class ReceivingOffice **{**

private Integer id**;**

private String name**;**

private FederalState federalState**;**

private String district**;**

private String address**;**

private Status status**;**

public ReceivingOffice**(**Integer id**,** String name**,** FederalState federalState**,** String district**,**

String address**,** Status status**)** **{**

**this.**id **=** id**;**

**this.**name **=** name**;**

**this.**federalState **=** federalState**;**

**this.**district **=** district**;**

**this.**address **=** address**;**

**this.**status **=** status**;**

**}**

@Override

public String toString**()** **{**

**return** "Annahmestelle: " **+** id **+** ", "

**+** ", "**+** name **+**", " **+** district **+** ", " **+** address**;**

**}**

@Override

public boolean equals**(**Object o**)** **{**

**if** **(this** **==** o**)** **return** **true;**

**if** **(**o **==** **null** **||** getClass**()** **!=** o**.**getClass**())** **return** **false;**

ReceivingOffice office **=** **(**ReceivingOffice**)** o**;**

**return** id**.**equals**(**office**.**id**);**

**}**

@Override

public int hashCode**()** **{**

**return** Objects**.**hash**(**id**);**

**}**

public Integer getId**()** **{**

**return** id**;**

**}**

public void setId**(**Integer id**)** **{**

**this.**id **=** id**;**

**}**

public String getName**()** **{**

**return** name**;**

**}**

public void setName**(**String name**)** **{**

**this.**name **=** name**;**

**}**

public FederalState getFederalState**()** **{**

**return** federalState**;**

**}**

public void setFederalState**(**FederalState federalState**)** **{**

**this.**federalState **=** federalState**;**

**}**

public String getDistrict**()** **{**

**return** district**;**

**}**

public void setDistrict**(**String district**)** **{**

**this.**district **=** district**;**

**}**

public String getAddress**()** **{**

**return** address**;**

**}**

public void setAddress**(**String address**)** **{**

**this.**address **=** address**;**

**}**

public Status getStatus**()** **{**

**return** status**;**

**}**

public void setStatus**(**Status status**)** **{**

**this.**status **=** status**;**

**}**

**}**

package at**.**fhooe**.**swe4**.**model**;**

//File: User.java

**import** java**.**util**.**Objects**;**

public class User **{**

private String name**;**

private String password**;**

private String email**;**

public User**(**String name**,** String password**,** String email**)** **{**

**this.**name **=** name**;**

**this.**password **=** password**;**

**this.**email **=** email**;**

**}**

@Override

public boolean equals**(**Object o**)** **{**

**if** **(this** **==** o**)** **return** **true;**

**if** **(**o **==** **null** **||** getClass**()** **!=** o**.**getClass**())** **return** **false;**

User user **=** **(**User**)** o**;**

**return** Objects**.**equals**(**name**,** user**.**name**)** **&&** Objects**.**equals**(**password**,** user**.**password**)** **&&** Objects**.**equals**(**email**,** user**.**email**);**

**}**

@Override

public int hashCode**()** **{**

**return** Objects**.**hash**(**name**,** password**,** email**);**

**}**

@Override

public String toString**()** **{**

**return** name **+** ", " **+** email**;**

**}**

public String getEmail**()** **{**

**return** email**;**

**}**

public void setEmail**(**String email**)** **{**

**this.**email **=** email**;**

**}**

public String getName**()** **{**

**return** name**;**

**}**

public void setName**(**String name**)** **{**

**this.**name **=** name**;**

**}**

public String getPassword**()** **{**

**return** password**;**

**}**

public void setPassword**(**String password**)** **{**

**this.**password **=** password**;**

**}**

**}**

package at**.**fhooe**.**swe4**.**model**;**

//File: dbMock.java

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**Category**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**Condition**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**FederalState**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**Status**;**

**import** javafx**.**collections**.**FXCollections**;**

**import** javafx**.**collections**.**ObservableList**;**

**import** java**.**time**.**LocalDate**;**

**import** java**.**util**.**HashMap**;**

public class dbMock **{**

private static dbMock obj**;**

private static final ObservableList**<**DemandItem**>** demand **=**

FXCollections**.**observableArrayList**();**

private static final ObservableList**<**Donation**>** donations **=**

FXCollections**.**observableArrayList**();**

private static final ObservableList**<**Article**>** articles **=**

FXCollections**.**observableArrayList**();**

private static final ObservableList**<**ReceivingOffice**>** offices **=**

FXCollections**.**observableArrayList**();**

private static ReceivingOffice activeOffice**;**

//key = email (String); value = user object

private static HashMap**<**String**,** User**>** users **=** **new** HashMap**<>();**

private static User currentUser**;**

private dbMock**()** **{};**

public static dbMock getInstance**()** **{**

**if(**obj **==** **null)** **{**

obj **=** **new** dbMock**();**

obj**.**initWithTestData**();**

**}**

**return** obj**;**

**}**

private void initWithTestData**(){**

//articles

Article temp **=** **new** Article**(**1**,** "Babynahrung"**,** "in Gläsern, alle Sorten"**,** Condition**.**NEW**,** Category**.**FOOD**);**

Article temp2 **=** **new** Article**(**2**,** "Damenhygieneartikel"**,** "alles mögliche"**,** Condition**.**NEW**,** Category**.**HYGIENE**);**

Article temp3 **=** **new** Article**(**3**,** "Spielzeug"**,** "für alle Altersstufen"**,** Condition**.**NEW**,** Category**.**OTHER**);**

Article temp4 **=** **new** Article**(**4**,** "Handys"**,** "frei, müssen keine Smartphones sein"**,** Condition**.**NEW**,** Category**.**ELECTRONICS**);**

articles**.**addAll**(**temp**,** temp2**,** temp3**,** temp4**);**

//Offices

offices**.**add**(new** ReceivingOffice**(**512**,** "Hilfe für die Ukraine"**,** FederalState**.**CARINTHIA**,**

"Spittal/Drau"**,** "Lindenstraße 1"**,** Status**.**ACTIVE**));**

offices**.**add**(new** ReceivingOffice**(**124**,** "Omas gegen Rechts"**,** FederalState**.**VIEANNA**,**

"Wien"**,** "Porzellangasse"**,** Status**.**ACTIVE**));**

offices**.**add**(new** ReceivingOffice**(**98**,** "Caritas Salzburg"**,** FederalState**.**SALZBURG**,**

"Gnigl"**,** "Red Bull Gasse"**,** Status**.**ACTIVE**));**

//demand items

demand**.**add**(new** DemandItem**(**1**,** articles**.**get**(**0**),** offices**.**get**(**0**),** 3**));**

demand**.**add**(new** DemandItem**(**2**,** articles**.**get**(**1**),** offices**.**get**(**0**),** 12**));**

demand**.**add**(new** DemandItem**(**3**,** articles**.**get**(**2**),** offices**.**get**(**1**),** 4**));**

//users

users**.**put**(**"admin"**,** **new** User**(**"admin"**,** "admin"**,** "admin@admin.at"**));**

users**.**put**(**"john.doe@gmail.com"**,** **new** User**(**"Jon Doe"**,** "1234"**,** "john.doe@gmail.com"**));**

users**.**put**(**"jane.doe@gmail.com"**,** **new** User**(**"Jane Doe"**,** "save"**,** "jane.doe@gmail.com"**));**

//donations

Donation d1 **=** **new** Donation**(**demand**.**get**(**0**),** LocalDate**.**of**(**2022**,**5**,**30**),** getUserByEMail**(**"admin"**),**1**);**

Donation d2 **=** **new** Donation**(**demand**.**get**(**0**),** LocalDate**.**of**(**2022**,**6**,**10**),** getUserByEMail**(**"john.doe@gmail.com"**),**2**);**

Donation d3 **=** **new** Donation**(**demand**.**get**(**1**),** LocalDate**.**of**(**2022**,**5**,**27**),** getUserByEMail**(**"jane.doe@gmail.com"**),**1**);**

Donation d4 **=** **new** Donation**(**demand**.**get**(**1**),** LocalDate**.**of**(**2022**,**6**,**9**),** getUserByEMail**(**"admin"**),**3**);**

Donation d5 **=** **new** Donation**(**demand**.**get**(**2**),** LocalDate**.**of**(**2022**,**6**,**7**),** getUserByEMail**(**"john.doe@gmail.com"**),**4**);**

Donation d6 **=** **new** Donation**(**demand**.**get**(**2**),** LocalDate**.**of**(**2022**,**6**,**10**),** getUserByEMail**(**"jane.doe@gmail.com"**),**2**);**

donations**.**addAll**(**d1**,**d2**,**d3**,**d4**,**d5**,**d6**);**

**}**

/\*

------------------------Demand data------------------------

\*/

public ObservableList**<**DemandItem**>** getDemandItems**()** **{return** demand**;}**

public boolean demandIsLinkedToReceivingOffice**(**ReceivingOffice office**)** **{**

**for(**int i **=** 0**;** i **<** demand**.**size**();** i**++)** **{**

DemandItem d **=** demand**.**get**(**i**);**

ReceivingOffice currentOffice **=** d**.**getRelatedOffice**();**

**if(**currentOffice**.**equals**(**office**))** **{**

**return** **true;**

**}**

**}**

**return** **false;**

**}**

public void addDemand**(**DemandItem d**)** **{**demand**.**add**(**d**);}**

public void deleteDemand**(**DemandItem d**)** **{**demand**.**remove**(**d**);}**

public void updateArticle**(**DemandItem d**,** Article article**,** ReceivingOffice relatedOffice**,** Integer amount**)** **{**

d**.**setRelatedArticle**(**article**);**

d**.**setRelatedOffice**(**relatedOffice**);**

d**.**setAmount**(**amount**);**

**}**

public void reduceDemand**(**DemandItem d**,** Integer amount**)** **{**

d**.**setAmount**(**d**.**getAmount**()-**amount**);**

**}**

/\*

------------------------Donation data------------------------

\*/

public ObservableList**<**Donation**>** getDonations**()** **{return** donations**;}**

public void addDonation**(**Donation d**)** **{**

donations**.**add**(**d**);**

**}**

/\*

------------------------Article data------------------------

\*/

public ObservableList**<**Article**>** getArticles**()** **{**

**return** articles**;**

**}**

public void addArticle**(**Article a**)** **{**

articles**.**add**(**a**);**

**}**

public void deleteArticle**(**Article a**)** **{**

articles**.**remove**(**a**);**

**}**

public void updateArticle**(**Article a**,** String name**,** String description**,** Condition condition**,** Category category**)** **{**

a**.**setName**(**name**);**

a**.**setDescription**(**description**);**

a**.**setCondition**(**condition**);**

a**.**setCategory**(**category**);**

**}**

/\*

------------------------Offices data------------------------

\*/

public ObservableList**<**ReceivingOffice**>** getOffices**()** **{return** offices**;}**

public void setActiveOffice**(**ReceivingOffice o**)** **{**

activeOffice **=** o**;**

**}**

public ReceivingOffice getActiveOffice**()** **{**

**return** activeOffice**;**

**}**

public void addOffice**(**ReceivingOffice o**)** **{**offices**.**add**(**o**);}**

public void deleteOffice**(**ReceivingOffice o**)** **{**offices**.**remove**(**o**);}**

public void updateOffice**(**ReceivingOffice o**,** String name**,** FederalState federalState**,** String district**,**

String address**,** Status status**)** **{**

o**.**setName**(**name**);**

o**.**setFederalState**(**federalState**);**

o**.**setDistrict**(**district**);**

o**.**setAddress**(**address**);**

o**.**setStatus**(**status**);**

**}**

/\*

------------------------User data------------------------

\*/

public static HashMap**<**String**,** User**>** getUsers**()** **{**

**return** users**;**

**}**

public void addUser**(**String key**,** User user**)** **{**

users**.**put**(**key**,** user**);**

**}**

public User getUserByEMail**(**String email**)** **{**

**return** users**.**get**(**email**);**

**}**

public User getCurrentUser**()** **{**

**return** currentUser**;**

**}**

public void setCurrentUser**(**User user**)** **{**

currentUser **=** user**;**

**}**

**}**

## Verwaltungsanwendung

package at**.**fhooe**.**swe4**.**administration**;**

//File Administration.java

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**LoginScene**;**

**import** javafx**.**application**.**Application**;**

**import** javafx**.**stage**.**Stage**;**

public class Administration **extends** Application **{**

private Stage window**;**

@Override

public void start**(**Stage primaryStage**)** **throws** Exception **{**

window **=** primaryStage**;**

LoginScene loginScene **=** **new** LoginScene**(**window**);**

window**.**setScene**(**loginScene**.**getLoginScene**());**

window**.**setMinWidth**(**400**);**

window**.**setWidth**(**1000**);**

window**.**setHeight**(**800**);**

window**.**setMinHeight**(**400**);**

window**.**setTitle**(**"Pomagaju Annahmestellen Verwaltungsservice"**);**

window**.**show**();**

**}**

public static void main**(**String**[]** args**)** **{**

launch**(**args**);**

**}**

**}**

package at**.**fhooe**.**swe4**.**administration**.**views**;**

//file ArticleScene.java

**import** at**.**fhooe**.**swe4**.**Utilities**;**

**import** at**.**fhooe**.**swe4**.**administration**.**controller**.**ArticleSceneController**;**

**import** at**.**fhooe**.**swe4**.**model**.**Article**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** javafx**.**scene**.**Scene**;**

**import** javafx**.**scene**.**control**.**Button**;**

**import** javafx**.**scene**.**control**.**Label**;**

**import** javafx**.**scene**.**control**.**TableColumn**;**

**import** javafx**.**scene**.**control**.**TableView**;**

**import** javafx**.**scene**.**control**.**cell**.**PropertyValueFactory**;**

**import** javafx**.**scene**.**layout**.**HBox**;**

**import** javafx**.**scene**.**layout**.**Pane**;**

**import** javafx**.**scene**.**layout**.**VBox**;**

**import** javafx**.**stage**.**Stage**;**

public class ArticleScene **{**

//global scene management

private Stage window**;**

private final Scene manageArticleScene**;**

private Pane articlesPane**;**

//controller for this scene

ArticleSceneController controller**;**

//View nodes

private Button addArticleBtn**;**

private Button deleteArticleBtn**;**

private Button editArticleBtn**;**

public Button getAddArticleBtn**()** **{return** addArticleBtn**;}**

public Button getDeleteArticleBtn**()** **{return** deleteArticleBtn**;}**

private TableView**<**Article**>** articleTable**;**

//getter

public Button getEditArticleBtn**()** **{return** editArticleBtn**;}**

public Stage getWindow**()** **{return** window**;}**

public TableView**<**Article**>** getArticleTable**()** **{return** articleTable**;}**

public Scene getManageArticleScene**()** **{return** **this.**manageArticleScene**;}**

public ArticleScene**(**Stage window**)** **{**

**this.**window **=** window**;**

articlesPane **=** **new** VBox**();**

articlesPane**.**getChildren**().**add**(**Utilities**.**createMenuBar**(**window**));**

articlesPane**.**getChildren**().**add**(**createMainPane**());**

articlesPane**.**setId**(**"articles-pane"**);**

manageArticleScene **=** **new** Scene**(**articlesPane**,** 600**,**600**);**

manageArticleScene**.**getStylesheets**().**add**(**getClass**().**getResource**(**"/administration.css"**).**toString**());**

controller **=** **new** ArticleSceneController**(this);**

**}**

private TableView**<**Article**>** createArticleTable**()** **{**

TableView**<**Article**>** articleTable **=** **new** TableView**<>();**

articleTable**.**setId**(**"article-table"**);**

articleTable**.**setColumnResizePolicy**(**TableView**.**CONSTRAINED\_RESIZE\_POLICY**);**

articleTable**.**setItems**(**dbMock**.**getInstance**().**getArticles**());**

TableColumn**<**Article**,** Integer**>** idCol **=** **new** TableColumn**<>(**"ID"**);**

TableColumn**<**Article**,** String**>** nameCol **=** **new** TableColumn**<>(**"Name"**);**

TableColumn**<**Article**,** String**>** descCol **=** **new** TableColumn**<>(**"Beschreibung"**);**

TableColumn**<**Article**,** String**>** condCol **=** **new** TableColumn**<>(**"Zustand"**);**

TableColumn**<**Article**,** String**>** catCol **=** **new** TableColumn**<>(**"Kategorie"**);**

idCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"id"**));**

nameCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"name"**));**

descCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"description"**));**

condCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"condition"**));**

catCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"category"**));**

idCol**.**setMinWidth**(**40**);**

nameCol**.**setMinWidth**(**80**);**

descCol**.**setMinWidth**(**120**);**

condCol**.**setMinWidth**(**80**);**

catCol**.**setMinWidth**(**80**);**

articleTable**.**getColumns**().**add**(**idCol**);**

articleTable**.**getColumns**().**add**(**nameCol**);**

articleTable**.**getColumns**().**add**(**descCol**);**

articleTable**.**getColumns**().**add**(**condCol**);**

articleTable**.**getColumns**().**add**(**catCol**);**

**return** articleTable**;**

**}**

protected Pane createMainPane**()** **{**

Label articlesHL **=** **new** Label**(**"Übersicht über Hilfsgüter"**);**

articlesHL**.**setId**(**"headline"**);**

articleTable **=** createArticleTable**();**

addArticleBtn **=** Utilities**.**createTextButton**(**"add-article"**,** "+"**);**

addArticleBtn**.**setId**(**"standard-button"**);**

deleteArticleBtn **=** Utilities**.**createTextButton**(**"delete-article"**,** "löschen"**);**

deleteArticleBtn**.**setId**(**"standard-button"**);**

editArticleBtn **=** Utilities**.**createTextButton**(**"edit-article"**,** "ändern"**);**

editArticleBtn**.**setId**(**"standard-button"**);**

HBox articleButtonPane **=** **new** HBox**(**addArticleBtn**,** deleteArticleBtn**,** editArticleBtn**);**

articleButtonPane**.**setId**(**"article-buttons-pane"**);**

VBox articlesPane **=** **new** VBox**(**articlesHL**,** articleTable**,** articleButtonPane**);**

articlesPane**.**setId**(**"articles-pane-content"**);**

**return** articlesPane**;**

**}**

**}**

package at**.**fhooe**.**swe4**.**administration**.**controller**;**

//file ArticleSceneController.java

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**ArticleScene**;**

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**ManageArticlesDialog**;**

**import** at**.**fhooe**.**swe4**.**model**.**Article**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** javafx**.**event**.**ActionEvent**;**

public class ArticleSceneController **{**

private ArticleScene view**;**

public ArticleSceneController**(**ArticleScene view**)** **{**

**this.**view **=** view**;**

setView**();**

**}**

private void setView**()** **{**

view**.**getAddArticleBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleAddArticleEvent**(**e**));**

view**.**getDeleteArticleBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleDeleteArticleEvent**(**e**));**

view**.**getEditArticleBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleEditArticleEvent**(**e**));**

**}**

private void handleAddArticleEvent**(**ActionEvent e**)** **{**

ManageArticlesDialog dialog **=** **new** ManageArticlesDialog**(**view**.**getWindow**(),** view**.**getArticleTable**());**

dialog**.**showAddDialog**();**

**}**

private void handleEditArticleEvent**(**ActionEvent e**)** **{**

Article selectedArticle **=** view**.**getArticleTable**().**getSelectionModel**().**getSelectedItem**();**

**if** **(**selectedArticle **!=** **null)** **{**

ManageArticlesDialog dialog **=** **new** ManageArticlesDialog**(**view**.**getWindow**(),** view**.**getArticleTable**());**

dialog**.**showEditDialog**(**selectedArticle**);**

**}**

**}**

private void handleDeleteArticleEvent**(**ActionEvent e**)** **{**

Article selectedArticle **=** view**.**getArticleTable**().**getSelectionModel**().**getSelectedItem**();**

**if** **(**selectedArticle **!=** **null)** **{**

dbMock**.**getInstance**().**deleteArticle**(**selectedArticle**);**

**}**

**}**

**}**

package at**.**fhooe**.**swe4**.**administration**.**views**;**

//file DemandScene.java

**import** at**.**fhooe**.**swe4**.**administration**.**controller**.**DemandSceneController**;**

**import** at**.**fhooe**.**swe4**.**model**.\*;**

**import** at**.**fhooe**.**swe4**.**Utilities**;**

**import** javafx**.**beans**.**property**.**SimpleStringProperty**;**

**import** javafx**.**beans**.**value**.**ObservableValue**;**

**import** javafx**.**scene**.**Scene**;**

**import** javafx**.**scene**.**control**.\*;**

**import** javafx**.**scene**.**control**.**cell**.**PropertyValueFactory**;**

**import** javafx**.**scene**.**layout**.**HBox**;**

**import** javafx**.**scene**.**layout**.**Pane**;**

**import** javafx**.**scene**.**layout**.**TilePane**;**

**import** javafx**.**scene**.**layout**.**VBox**;**

**import** javafx**.**stage**.**Stage**;**

**import** javafx**.**util**.**Callback**;**

**import** java**.**time**.**LocalDate**;**

public class DemandScene **{**

//global scene management

private Stage window**;**

private final Scene mainScene**;**

private Pane mainPane**;**

//controller for this scene

DemandSceneController controller**;**

//View nodes

//Tables

private TableView**<**DemandItem**>** demandTable**;**

private TableView**<**Donation**>** donationsTable**;**

//Buttons and input fields

private Button addDemandBtn**;**

private Button deleteDemandBtn**;**

private Button editDemandBtn**;**

private Button deleteFiltersBtn**;**

private Button changeActiveOfficeBtn**;**

private TextField textSearchField**;**

private DatePicker datePicker**;**

public Stage getWindow**()** **{return** window**;}**

public TableView**<**DemandItem**>** getDemandTable**()** **{**

**return** demandTable**;**

**}**

public TableView**<**Donation**>** getDonationsTable**()** **{**

**return** donationsTable**;**

**}**

public Button getAddDemandBtn**()** **{**

**return** addDemandBtn**;**

**}**

public Button getDeleteDemandBtn**()** **{**

**return** deleteDemandBtn**;**

**}**

public Button getEditDemandBtn**()** **{**

**return** editDemandBtn**;**

**}**

public Button getChangeActiveOfficeBtn**()** **{return** changeActiveOfficeBtn**;}**

public Button getDeleteFiltersBtn**()** **{return** deleteFiltersBtn**;}**

public TextField getTextSearchField**()** **{return** textSearchField**;}**

public DatePicker getDatePicker**()** **{return** datePicker**;}**

public DemandScene**(**Stage window**)** **{**

**this.**window **=** window**;**

mainPane **=** **new** VBox**();**

mainPane**.**getChildren**().**add**(**Utilities**.**createMenuBar**(**window**));**

mainPane**.**getChildren**().**add**(**createMainPane**());**

mainPane**.**setId**(**"demand-pane"**);**

mainScene **=** **new** Scene**(**mainPane**,** 600**,**600**);**

mainScene**.**getStylesheets**().**add**(**getClass**().**getResource**(**"/administration.css"**).**toString**());**

controller **=** **new** DemandSceneController**(this);**

**}**

public Scene getMainScene**()** **{**

**return** mainScene**;**

**}**

private TableView**<**DemandItem**>** createDemandTable**()** **{**

TableView**<**DemandItem**>** demandTable **=** **new** TableView**<>();**

demandTable**.**setId**(**"demand-table"**);**

demandTable**.**setColumnResizePolicy**(**TableView**.**CONSTRAINED\_RESIZE\_POLICY**);**

TableColumn**<**DemandItem**,** Integer**>** idCol **=** **new** TableColumn**<>(**"ID"**);**

TableColumn**<**DemandItem**,** String**>** articleCol **=** **new** TableColumn**<>(**"Hilfsgut"**);**

TableColumn**<**DemandItem**,** Integer**>** amountCol **=** **new** TableColumn**<>(**"Menge"**);**

idCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"id"**));**

articleCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"relatedArticle"**));**

amountCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"amount"**));**

idCol**.**setMinWidth**(**40**);**

amountCol**.**setMinWidth**(**20**);**

articleCol**.**setMinWidth**(**400**);**

demandTable**.**getColumns**().**add**(**idCol**);**

demandTable**.**getColumns**().**add**(**amountCol**);**

demandTable**.**getColumns**().**add**(**articleCol**);**

**return** demandTable**;**

**}**

private HBox createActiveOfficePane**()** **{**

Label activeOfficeLabel **=** **new** Label**(**"aktive Annahmestelle:"**);**

Label activeOffice **=** **new** Label**(**dbMock**.**getInstance**().**getActiveOffice**().**getId**().**toString**()** **+** ": " **+**

dbMock**.**getInstance**().**getActiveOffice**().**getName**());**

VBox activeOfficeInfo **=** **new** VBox**(**activeOfficeLabel**,** activeOffice**);**

activeOfficeInfo**.**setId**(**"active-office-info"**);**

changeActiveOfficeBtn **=** **new** Button**(**"Annahmestelle ändern"**);**

changeActiveOfficeBtn**.**setId**(**"standard-button"**);**

HBox activeOfficeControlBox **=** **new** HBox**(**activeOfficeInfo**,** changeActiveOfficeBtn**);**

**return** activeOfficeControlBox**;**

**}**

private VBox createDemandOverview**()** **{**

Label demandHL **=** **new** Label**(**"Bedarfsübersicht"**);**

demandHL**.**setId**(**"headline"**);**

demandTable **=** createDemandTable**();**

addDemandBtn **=** Utilities**.**createTextButton**(**"add-demand"**,** "+"**);**

addDemandBtn**.**setId**(**"standard-button"**);**

deleteDemandBtn **=** Utilities**.**createTextButton**(**"delete-demand"**,** "löschen"**);**

deleteDemandBtn**.**setId**(**"standard-button"**);**

editDemandBtn **=** Utilities**.**createTextButton**(**"edit-demand"**,** "ändern"**);**

editDemandBtn**.**setId**(**"standard-button"**);**

HBox demandButtonsPane **=** **new** HBox**(**addDemandBtn**,** deleteDemandBtn**,** editDemandBtn**);**

demandButtonsPane**.**setId**(**"demand-buttons-pane"**);**

VBox demandPane **=** **new** VBox**(**demandHL**,** demandTable**,** demandButtonsPane**);**

demandPane**.**setId**(**"demand-pane-content"**);**

**return** demandPane**;**

**}**

private VBox createDonationsOverview**(){**

Label donationsHL **=** **new** Label**(**"Spendenankündigungen"**);**

donationsHL**.**setId**(**"headline"**);**

VBox filters **=** createDonationsFilterPane**();**

donationsTable **=** createDonationsTable**();**

VBox donationsBox **=** **new** VBox**(**donationsHL**,** filters**,** donationsTable**);**

donationsBox**.**setId**(**"donations-pane-content"**);**

**return** donationsBox**;**

**}**

private TableView**<**Donation**>** createDonationsTable**()** **{**

TableView**<**Donation**>** donationTable **=** **new** TableView**<>();**

donationTable**.**setId**(**"donations-table"**);**

donationTable**.**setColumnResizePolicy**(**TableView**.**CONSTRAINED\_RESIZE\_POLICY**);**

TableColumn**<**Donation**,** Article**>** articleCol **=** **new** TableColumn**(**"Hilfsgut"**);**

TableColumn**<**Donation**,** Integer**>** amountCol **=** **new** TableColumn**(**"Menge"**);**

TableColumn**<**Donation**,** LocalDate**>** dateCol **=** **new** TableColumn**(**"Abgabedatum"**);**

TableColumn**<**Donation**,** User**>** userCol **=** **new** TableColumn**<>(**"E-Mail SpenderIn"**);**

TableColumn**<**Donation**,** ReceivingOffice**>** officeCol **=** **new** TableColumn**<>(**"Annahemstelle"**);**

articleCol**.**setCellValueFactory**(new** Callback**<**TableColumn**.**CellDataFeatures**<**Donation**,** Article**>,** ObservableValue**<**Article**>>()** **{**

@Override

public ObservableValue call**(**TableColumn**.**CellDataFeatures**<**Donation**,** Article**>** param**)** **{**

**return** **new** SimpleStringProperty**(**param**.**getValue**().**getRelatedDemand**().**getRelatedArticle**().**getName**());**

**}**

**});**

amountCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"amount"**));**

dateCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"date"**));**

userCol**.**setCellValueFactory**(new** Callback**<**TableColumn**.**CellDataFeatures**<**Donation**,** User**>,** ObservableValue**<**User**>>()** **{**

@Override

public ObservableValue call**(**TableColumn**.**CellDataFeatures**<**Donation**,** User**>** param**)** **{**

**return** **new** SimpleStringProperty**(**param**.**getValue**().**getUser**().**getEmail**());**

**}**

**});**

officeCol**.**setCellValueFactory**(new** Callback**<**TableColumn**.**CellDataFeatures**<**Donation**,** ReceivingOffice**>,** ObservableValue**<**ReceivingOffice**>>()** **{**

@Override

public ObservableValue call**(**TableColumn**.**CellDataFeatures**<**Donation**,** ReceivingOffice**>** param**)** **{**

**return** **new** SimpleStringProperty**(**param**.**getValue**().**getRelatedDemand**().**getRelatedOffice**().**getName**());**

**}**

**});**

articleCol**.**setMinWidth**(**100**);**

amountCol**.**setMinWidth**(**40**);**

dateCol**.**setMinWidth**(**60**);**

userCol**.**setMinWidth**(**100**);**

officeCol**.**setMinWidth**(**100**);**

donationTable**.**getColumns**().**addAll**(**articleCol**,** amountCol**,** dateCol**,** userCol**,** officeCol**);**

**return** donationTable**;**

**}**

private VBox createDonationsFilterPane**()** **{**

textSearchField **=** **new** TextField**();**

textSearchField**.**setId**(**"text-search-field"**);**

VBox textSearch **=** **new** VBox**(new** Label**(**"Textsuche:"**),** textSearchField**);**

datePicker **=** **new** DatePicker**();**

VBox datePickerFilter **=** **new** VBox**(new** Label**(**"Abgabedatum:"**),** datePicker**);**

datePickerFilter**.**setId**(**"date-search-field"**);**

TilePane filterSelection **=** **new** TilePane**(**textSearch**,** datePickerFilter**);**

filterSelection**.**setId**(**"filter-tile-pane"**);**

deleteFiltersBtn **=** **new** Button**(**"Filter löschen"**);**

deleteFiltersBtn**.**setId**(**"standard-button"**);**

VBox filters **=** **new** VBox**(**filterSelection**,** deleteFiltersBtn**);**

filters**.**setId**(**"filters-pane"**);**

**return** filters**;**

**}**

private Pane createMainPane**()** **{**

HBox activeOfficeControlBox **=** createActiveOfficePane**();**

activeOfficeControlBox**.**setId**(**"activeOfficeControl-hbox"**);**

VBox demandPane **=** createDemandOverview**();**

VBox donationsPane **=** createDonationsOverview**();**

VBox mainPane **=** **new** VBox**(**activeOfficeControlBox**,** **new** Separator**(),** demandPane**,** **new** Separator**(),** donationsPane**);**

mainPane**.**setId**(**"demand-pane-content"**);**

**return** mainPane**;**

**}**

**}**

package at**.**fhooe**.**swe4**.**administration**.**controller**;**

//file DemandSceneController.java

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**DemandScene**;**

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**LoginScene**;**

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**ManageDemandDialog**;**

**import** at**.**fhooe**.**swe4**.**model**.**DemandItem**;**

**import** at**.**fhooe**.**swe4**.**model**.**Donation**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** javafx**.**collections**.**transformation**.**FilteredList**;**

**import** javafx**.**event**.**ActionEvent**;**

**import** java**.**time**.**LocalDate**;**

**import** java**.**util**.**function**.**Predicate**;**

public class DemandSceneController **{**

private DemandScene view**;**

private FilteredList**<**DemandItem**>** filteredDemand **=** **new** FilteredList**<>(**dbMock**.**getInstance**().**getDemandItems**());**

private FilteredList**<**Donation**>** filteredDonations **=** **new** FilteredList**<>(**dbMock**.**getInstance**().**getDonations**());**

private LocalDate dateFilter**;**

private String textFilter**;**

public DemandSceneController**(**DemandScene view**)** **{**

**this.**view **=** view**;**

setView**();**

**}**

public void setView**()** **{**

view**.**getDemandTable**().**setItems**(**filteredDemand**);**

view**.**getDonationsTable**().**setItems**(**filteredDonations**);**

filteredDemand**.**setPredicate**(**

demandItem **->** demandItem**.**getRelatedOffice**().**equals**(**dbMock**.**getInstance**().**getActiveOffice**())**

**);**

filteredDonations**.**setPredicate**(**

donationItem **->** donationItem**.**getRelatedDemand**().**getRelatedOffice**().**equals**(**dbMock**.**getInstance**().**getActiveOffice**())**

**);**

view**.**getAddDemandBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleAddDemandEvent**(**e**));**

view**.**getDeleteDemandBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleDeleteDemandEvent**(**e**));**

view**.**getEditDemandBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleEditDemandEvent**(**e**));**

view**.**getChangeActiveOfficeBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleChangeActiveOfficeEvent**(**e**));**

view**.**getDeleteFiltersBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleDeleteFiltersEvent**(**e**));**

view**.**getTextSearchField**().**textProperty**().**addListener **((**observable**,** oldValue**,** newValue**)->** **{**

textFilter **=** newValue**.**toLowerCase**();**

filterDonations**();**

**});**

view**.**getDatePicker**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handlePickDateEvent**(**e**));**

**}**

private void filterDonations**()** **{**

Predicate**<**Donation**>** stringPredicate **=** donationItem **->** textFilter**.**equals**(**""**)** **||** donationItem**.**toString**().**toLowerCase**().**contains**(**textFilter**);**

Predicate**<**Donation**>** datePredicate **=** donationItem **->** dateFilter **==** **null** **||** donationItem**.**getDate**().**equals**(**dateFilter**);**

Predicate**<**Donation**>** officePredicate **=** donationItem **->** donationItem**.**getRelatedDemand**().**getRelatedOffice**().**equals**(**dbMock**.**getInstance**().**getActiveOffice**());**

filteredDonations**.**setPredicate**(**datePredicate**.**and**(**stringPredicate**).**and**(**officePredicate**));**

**}**

private void handlePickDateEvent**(**ActionEvent e**)** **{**

dateFilter **=** view**.**getDatePicker**().**getValue**();**

filterDonations**();**

**}**

private void handleDeleteFiltersEvent**(**ActionEvent e**)** **{**

view**.**getTextSearchField**().**clear**();**

view**.**getDatePicker**().**setValue**(null);**

filteredDonations**.**setPredicate**(null);**

filteredDonations**.**setPredicate**(**

donationItem **->** donationItem**.**getRelatedDemand**().**getRelatedOffice**().**equals**(**dbMock**.**getInstance**().**getActiveOffice**())**

**);**

**}**

private void handleChangeActiveOfficeEvent**(**ActionEvent e**)** **{**

double x **=** view**.**getWindow**().**getWidth**();**

double y **=** view**.**getWindow**().**getHeight**();**

view**.**getWindow**().**setWidth**(**x**);**

view**.**getWindow**().**setHeight**(**y**);**

LoginScene loginScene **=** **new** LoginScene**(**view**.**getWindow**());**

view**.**getWindow**().**setScene**(**loginScene**.**getLoginScene**());**

**}**

private void handleDeleteDemandEvent**(**ActionEvent e**)** **{**

DemandItem demandI **=** view**.**getDemandTable**().**getSelectionModel**().**getSelectedItem**();**

**if** **(**demandI **!=** **null)** **{**

dbMock**.**getInstance**().**deleteDemand**(**demandI**);**

**}**

**}**

private void handleAddDemandEvent**(**ActionEvent e**)** **{**

ManageDemandDialog dialog **=** **new** ManageDemandDialog**(**view**.**getWindow**(),** view**.**getDemandTable**());**

dialog**.**showAddDialog**();**

**}**

private void handleEditDemandEvent**(**ActionEvent e**)** **{**

DemandItem demandI **=** view**.**getDemandTable**().**getSelectionModel**().**getSelectedItem**();**

**if** **(**demandI **!=** **null)** **{**

ManageDemandDialog dialog **=** **new** ManageDemandDialog**(**view**.**getWindow**(),** view**.**getDemandTable**());**

dialog**.**showEditDialog**(**demandI**);**

**}**

**}**

**}**

package at**.**fhooe**.**swe4**.**administration**.**views**;**

//file LoginScene.java

**import** at**.**fhooe**.**swe4**.**Utilities**;**

**import** at**.**fhooe**.**swe4**.**administration**.**controller**.**LoginSceneController**;**

**import** at**.**fhooe**.**swe4**.**model**.**ReceivingOffice**;**

**import** javafx**.**scene**.**Scene**;**

**import** javafx**.**scene**.**control**.\*;**

**import** javafx**.**scene**.**layout**.**Pane**;**

**import** javafx**.**scene**.**layout**.**VBox**;**

**import** javafx**.**scene**.**text**.**Text**;**

**import** javafx**.**stage**.**Stage**;**

public class LoginScene **{**

private Stage window**;**

private Scene loginScene**;**

private LoginSceneController controller**;**

private TableView**<**ReceivingOffice**>** officeTable**;**

private Button startButton**;**

public Stage getWindow**()** **{**

**return** window**;**

**}**

public Button getStartButton**()** **{**

**return** startButton**;**

**}**

public TableView**<**ReceivingOffice**>** getOfficeTable**()** **{**

**return** officeTable**;**

**}**

public Scene getLoginScene**()** **{**

**return** loginScene**;**

**}**

public LoginScene**(**Stage window**)** **{**

**this.**window **=** window**;**

Pane loginPane **=** **new** VBox**(**createLoginPane**());**

loginPane**.**setId**(**"login-pane"**);**

loginScene **=** **new** Scene**(**loginPane**,** 600**,**600**);**

loginScene**.**getStylesheets**().**add**(**getClass**().**getResource**(**"/administration.css"**).**toString**());**

controller **=** **new** LoginSceneController**(this);**

**}**

private Pane createLoginPane**(){**

Text loginInfo **=** **new** Text**(**"Bitte wählen Sie Ihre Annahmestelle aus."**);**

loginInfo**.**setId**(**"login-pane-info-text"**);**

loginInfo**.**setWrappingWidth**(**300**);**

startButton **=** Utilities**.**createTextButton**(**"button-login"**,** "Login"**);**

officeTable **=** Utilities**.**createOfficesTable**();**

VBox startPane **=** **new** VBox**(**loginInfo**,** officeTable**,** startButton**);**

startPane**.**setId**(**"login-screen-start-pane"**);**

**return** startPane**;**

**}**

**}**

package at**.**fhooe**.**swe4**.**administration**.**controller**;**

//file LoginSceneController.java

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**DemandScene**;**

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**LoginScene**;**

**import** at**.**fhooe**.**swe4**.**model**.**ReceivingOffice**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** javafx**.**event**.**ActionEvent**;**

public class LoginSceneController **{**

private LoginScene view**;**

public LoginSceneController**(**LoginScene view**)** **{**

**this.**view **=** view**;**

setView**();**

**}**

private void setView**()** **{**

view**.**getStartButton**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleLoginButtonEvent**(**e**));**

**}**

private void handleLoginButtonEvent**(**ActionEvent e**)** **{**

ReceivingOffice selectedOffice **=** view**.**getOfficeTable**().**getSelectionModel**().**getSelectedItem**();**

**if(**selectedOffice **!=** **null)** **{**

dbMock**.**getInstance**().**setActiveOffice**(**selectedOffice**);**

double x **=** view**.**getWindow**().**getWidth**();**

double y **=** view**.**getWindow**().**getHeight**();**

view**.**getWindow**().**setWidth**(**x**);**

view**.**getWindow**().**setHeight**(**y**);**

DemandScene demandScene **=** **new** DemandScene**(**view**.**getWindow**());**

view**.**getWindow**().**setScene**(**demandScene**.**getMainScene**());**

**}**

**}**

**}**

package at**.**fhooe**.**swe4**.**administration**.**views**;**

//file ManageArticlesDialog.java

**import** at**.**fhooe**.**swe4**.**Utilities**;**

**import** at**.**fhooe**.**swe4**.**administration**.**controller**.**ManageArticlesDialogController**;**

**import** at**.**fhooe**.**swe4**.**model**.**Article**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**Category**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**Condition**;**

**import** javafx**.**scene**.**Scene**;**

**import** javafx**.**scene**.**control**.\*;**

**import** javafx**.**scene**.**layout**.**GridPane**;**

**import** javafx**.**scene**.**layout**.**HBox**;**

**import** javafx**.**stage**.**Stage**;**

**import** javafx**.**stage**.**Window**;**

public class ManageArticlesDialog **{**

private Window owner**;**

private Stage dialogStage**;**

private ManageArticlesDialogController controller**;**

private TableView**<**Article**>** articlesTable**;**

private TextField nameInput**;**

private TextArea descriptionInput**;**

private ChoiceBox conditionInput**;**

private ChoiceBox categoryInput**;**

Button addArticleBtn **=** **new** Button**(**"Hilfsgut hinzufügen"**);**

Button editArticlesDialog **=** **new** Button**(**"Speichern"**);**

public TextField getNameInput**()** **{return** nameInput**;}**

public TextArea getDescriptionInput**()** **{return** descriptionInput**;}**

public ChoiceBox getConditionInput**()** **{return** conditionInput**;}**

public ChoiceBox getCategoryInput**()** **{return** categoryInput**;}**

public Button getAddArticleBtn**()** **{return** addArticleBtn**;}**

public Button getEditArticlesDialog**()** **{return** editArticlesDialog**;}**

public TableView**<**Article**>** getArticlesTable**()** **{return** articlesTable**;}**

public ManageArticlesDialog**(**Window owner**,** TableView**<**Article**>** articlesTable**)** **{**

dialogStage **=** **new** Stage**();**

**this.**owner **=** owner**;**

**this.**articlesTable **=** articlesTable**;**

**}**

private GridPane createInputGrid**()** **{**

GridPane inputGrid **=** **new** GridPane**();**

inputGrid**.**setId**(**"article-input-grid"**);**

inputGrid**.**add**(new** Label**(**"Name: "**),**0**,**0**);**

nameInput **=** **new** TextField**();**

inputGrid**.**add**(**nameInput**,**1**,**0**);**

inputGrid**.**add**(new** Label**(**"Beschreibung: "**),**0**,**1**);**

descriptionInput **=** **new** TextArea**();**

inputGrid**.**add**(**descriptionInput**,**1**,**1**);**

inputGrid**.**add**(new** Label**(**"Zustand: "**),**0**,**2**);**

conditionInput **=** **new** ChoiceBox**();**

conditionInput**.**getItems**().**addAll**(**Condition**.**values**());**

inputGrid**.**add**(**conditionInput**,**1**,**2**);**

inputGrid**.**add**(new** Label**(**"Kategorie: "**),**0**,**3**);**

categoryInput **=** **new** ChoiceBox**();**

categoryInput**.**getItems**().**addAll**(**Category**.**values**());**

inputGrid**.**add**(**categoryInput**,**1**,**3**);**

**return** inputGrid**;**

**}**

private void addArticleDialog**()** **{**

addArticleBtn**.**setId**(**"button-add-article"**);**

HBox buttonBar **=** **new** HBox**(**20**);**

buttonBar**.**setId**(**"button-bar"**);**

buttonBar**.**getChildren**().**add**(**addArticleBtn**);**

GridPane inputGrid **=** createInputGrid**();**

inputGrid**.**add**(**buttonBar**,**0**,**4**,**3**,**1**);**

Scene dialogScene **=** **new** Scene**(**inputGrid**);**

dialogScene**.**getStylesheets**().**add**(**getClass**().**getResource**(**"/administration.css"**).**toExternalForm**());**

Utilities**.**sceneSetup**(**owner**,** dialogStage**,** dialogScene**,** "Hilfsgut hinzufügen"**);**

controller **=** **new** ManageArticlesDialogController**(this);**

**}**

private void editArticlesDialog**(**Article selectedItem**){**

editArticlesDialog**.**setId**((**"button-save"**));**

HBox buttonBar **=** **new** HBox**(**20**);**

buttonBar**.**setId**(**"button-bar"**);**

buttonBar**.**getChildren**().**add**(**editArticlesDialog**);**

GridPane inputGrid **=** createInputGrid**();**

inputGrid**.**add**(**buttonBar**,**0**,**4**,**3**,**1**);**

nameInput**.**setText**(**selectedItem**.**getName**());**

descriptionInput**.**setText**(**selectedItem**.**getDescription**());**

conditionInput**.**setValue**(**selectedItem**.**getCondition**());**

categoryInput**.**setValue**(**selectedItem**.**getCategory**());**

Scene dialogScene **=** **new** Scene**(**inputGrid**);**

dialogScene**.**getStylesheets**().**add**(**getClass**().**getResource**(**"/administration.css"**).**toExternalForm**());**

Utilities**.**sceneSetup**(**owner**,** dialogStage**,** dialogScene**,** "Hilfsgut verwalten"**);**

controller **=** **new** ManageArticlesDialogController**(this);**

**}**

public void showAddDialog**()** **{**

**this.**addArticleDialog**();**

dialogStage**.**show**();**

**}**

public void showEditDialog**(**Article selectedItem**)** **{**

**this.**editArticlesDialog**(**selectedItem**);**

dialogStage**.**show**();**

**}**

**}**

package at**.**fhooe**.**swe4**.**administration**.**controller**;**

//file ManageArticlesDialogController.java

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**ManageArticlesDialog**;**

**import** at**.**fhooe**.**swe4**.**model**.**Article**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**Category**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**Condition**;**

**import** javafx**.**event**.**ActionEvent**;**

**import** java**.**util**.**Random**;**

public class ManageArticlesDialogController **{**

private ManageArticlesDialog view**;**

public ManageArticlesDialogController**(**ManageArticlesDialog view**)** **{**

**this.**view **=** view**;**

setView**();**

**}**

private void setView**()** **{**

view**.**getAddArticleBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleAddArticle**(**e**));**

view**.**getEditArticlesDialog**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleEditArticle**(**e**));**

**}**

private void handleEditArticle**(**ActionEvent e**)** **{**

Article selectedItem **=** view**.**getArticlesTable**().**getSelectionModel**().**getSelectedItem**();**

dbMock**.**getInstance**().**updateArticle**(**

selectedItem**,** view**.**getNameInput**().**getText**(),**

view**.**getDescriptionInput**().**getText**(),(**Condition**)** view**.**getConditionInput**().**getValue**(),**

**(**Category**)** view**.**getCategoryInput**().**getValue**());**

view**.**getArticlesTable**().**refresh**();**

**}**

private void handleAddArticle**(**ActionEvent e**)** **{**

String name **=** view**.**getNameInput**().**getText**();**

String desc **=** view**.**getDescriptionInput**().**getText**();**

Condition cond **=** **(**Condition**)** view**.**getConditionInput**().**getValue**();**

Category categ **=** **(**Category**)** view**.**getCategoryInput**().**getValue**();**

**if(**name**.**length**()** **>** 0 **&&** desc**.**length**()** **>** 0 **&&** cond **!=** **null** **&&** categ **!=** **null)** **{**

Random rand **=** **new** Random**();**

Integer id **=** rand**.**nextInt**(**10000**);**

dbMock**.**getInstance**().**addArticle**(new** Article**(**id**,** name**,** desc**,** cond**,** categ**));**

view**.**getNameInput**().**clear**();**

view**.**getDescriptionInput**().**clear**();**

view**.**getConditionInput**().**setValue**(null);**

view**.**getCategoryInput**().**setValue**(null);**

**}**

**}**

**}**

package at**.**fhooe**.**swe4**.**administration**.**views**;**

//file ManageDemandDialog.java

**import** at**.**fhooe**.**swe4**.**Utilities**;**

**import** at**.**fhooe**.**swe4**.**administration**.**controller**.**ManageDemandDialogController**;**

**import** at**.**fhooe**.**swe4**.**model**.**DemandItem**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** javafx**.**scene**.**Scene**;**

**import** javafx**.**scene**.**control**.\*;**

**import** javafx**.**scene**.**layout**.**GridPane**;**

**import** javafx**.**scene**.**layout**.**HBox**;**

**import** javafx**.**stage**.**Stage**;**

**import** javafx**.**stage**.**Window**;**

public class ManageDemandDialog **{**

private Window owner**;**

private Stage dialogStage**;**

private ManageDemandDialogController dialogController**;**

private ChoiceBox articleDropDown**;**

private ChoiceBox officeDropDown**;**

private TextField inputAmount**;**

private TableView**<**DemandItem**>** demandTable**;**

private Button addDemandBtn **=** **new** Button**(**"Bedarf hinzufügen"**);;**

private Button editDemandBtn **=** **new** Button**(**"Speichern"**);**

public Button getAddDemandBtn**()** **{return** addDemandBtn**;}**

public ChoiceBox getArticleDropDown**()** **{return** articleDropDown**;}**

public TextField getInputAmount**()** **{return** inputAmount**;}**

public ChoiceBox getOfficeDropDown**()** **{return** officeDropDown**;}**

public Button getEditDemandBtn**()** **{return** editDemandBtn**;}**

public TableView**<**DemandItem**>** getDemandTable**()** **{return** demandTable**;}**

public ManageDemandDialog**(**Window owner**,** TableView**<**DemandItem**>** demandTable**)** **{**

dialogStage **=** **new** Stage**();**

**this.**owner **=** owner**;**

**this.**demandTable **=** demandTable**;**

**}**

private GridPane createInputGrid**()** **{**

GridPane inputGrid **=** **new** GridPane**();**

inputGrid**.**setId**(**"add-demand-input-grid"**);**

inputGrid**.**add**(new** Label**(**"Benötigtes Spendengut: "**),**0**,**0**);**

articleDropDown **=** **new** ChoiceBox**();**

articleDropDown**.**getItems**().**addAll**(**dbMock**.**getInstance**().**getArticles**());**

inputGrid**.**add**(**articleDropDown**,**1**,**0**);**

inputGrid**.**add**(new** Label**(**"Menge: "**),**0**,**1**);**

inputAmount **=** **new** TextField**();**

inputAmount**.**setId**(**"manage-demand-input-amount"**);**

inputGrid**.**add**(**inputAmount**,** 1**,**1**);**

inputGrid**.**add**(new** Label**(**"zuständige Annahmestelle: "**),**0**,**2**);**

officeDropDown **=** **new** ChoiceBox**();**

officeDropDown**.**getItems**().**addAll**(**dbMock**.**getInstance**().**getOffices**());**

officeDropDown**.**setValue**(**dbMock**.**getInstance**().**getActiveOffice**());**

inputGrid**.**add**(**officeDropDown**,**1**,**2**);**

**return** inputGrid**;**

**}**

private void addDemandDialog**()** **{**

addDemandBtn**.**setId**(**"button-add-demand"**);**

HBox buttonBar **=** **new** HBox**(**20**);**

buttonBar**.**setId**(**"button-bar"**);**

buttonBar**.**getChildren**().**add**(**addDemandBtn**);**

GridPane inputGrid **=** createInputGrid**();**

inputGrid**.**add**(**buttonBar**,**0**,**4**,**3**,**1**);**

Scene dialogScene **=** **new** Scene**(**inputGrid**);**

dialogScene**.**getStylesheets**().**add**(**getClass**().**getResource**(**"/administration.css"**).**toExternalForm**());**

Utilities**.**sceneSetup**(**owner**,** dialogStage**,** dialogScene**,** "Bedarfsmeldung hinzufügen"**);**

dialogController **=** **new** ManageDemandDialogController**(this);**

**}**

private void editDemandDialog**(**DemandItem selectedItem**){**

editDemandBtn**.**setId**((**"button-save"**));**

HBox buttonBar **=** **new** HBox**(**20**);**

buttonBar**.**setId**(**"button-bar"**);**

buttonBar**.**getChildren**().**add**(**editDemandBtn**);**

GridPane inputGrid **=** createInputGrid**();**

inputGrid**.**add**(**buttonBar**,**0**,**4**,**3**,**1**);**

articleDropDown**.**setValue**(**selectedItem**.**getRelatedArticle**());**

inputAmount**.**setText**(**selectedItem**.**getAmount**().**toString**());**

officeDropDown**.**setValue**(**selectedItem**.**getRelatedOffice**());**

Scene dialogScene **=** **new** Scene**(**inputGrid**);**

dialogScene**.**getStylesheets**().**add**(**getClass**().**getResource**(**"/administration.css"**).**toExternalForm**());**

Utilities**.**sceneSetup**(**owner**,** dialogStage**,** dialogScene**,** "Bedarfsmeldung ändern"**);**

dialogController **=** **new** ManageDemandDialogController**(this);**

**}**

public void showAddDialog**()** **{**

**this.**addDemandDialog**();**

dialogStage**.**show**();**

**}**

public void showEditDialog**(**DemandItem selectedItem**)** **{**

**this.**editDemandDialog**(**selectedItem**);**

dialogStage**.**show**();**

**}**

**}**

package at**.**fhooe**.**swe4**.**administration**.**controller**;**

//file ManageDemandDialogController.java

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**ManageDemandDialog**;**

**import** at**.**fhooe**.**swe4**.**model**.**Article**;**

**import** at**.**fhooe**.**swe4**.**model**.**DemandItem**;**

**import** at**.**fhooe**.**swe4**.**model**.**ReceivingOffice**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** javafx**.**event**.**ActionEvent**;**

**import** java**.**util**.**Random**;**

public class ManageDemandDialogController **{**

private ManageDemandDialog view**;**

public ManageDemandDialogController**(**ManageDemandDialog view**)** **{**

**this.**view **=** view**;**

setView**();**

**}**

public void setView**()** **{**

view**.**getAddDemandBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleAddDemand**(**e**));**

view**.**getEditDemandBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleEditDemand**(**e**));**

**}**

private void handleEditDemand**(**ActionEvent e**)** **{**

DemandItem selectedItem **=** view**.**getDemandTable**().**getSelectionModel**().**getSelectedItem**();**

String amount **=** view**.**getInputAmount**().**getText**();**

Integer intAmount **=** Integer**.**parseInt**(**amount**);**

selectedItem**.**setRelatedArticle**((**Article**)** view**.**getArticleDropDown**().**getValue**());**

selectedItem**.**setAmount**(**intAmount**);**

selectedItem**.**setRelatedOffice**((**ReceivingOffice**)**view**.**getOfficeDropDown**().**getValue**());**

view**.**getDemandTable**().**refresh**();**

**}**

private void handleAddDemand**(**ActionEvent e**)** **{**

Article article **=** **(**Article**)**view**.**getArticleDropDown**().**getValue**();**

ReceivingOffice office **=** **(**ReceivingOffice**)**view**.**getOfficeDropDown**().**getValue**();**

String amount **=** view**.**getInputAmount**().**getText**();**

**try** **{**

Integer intAmount **=** Integer**.**parseInt**(**amount**);**

**if(**article **!=** **null** **&&** intAmount **>** 0**)** **{**

Random rand **=** **new** Random**();**

Integer id **=** rand**.**nextInt**(**10000**);**

dbMock**.**getInstance**().**addDemand**(new** DemandItem**(**id**,** article**,** office**,** intAmount**));**

view**.**getInputAmount**().**setStyle**(null);**

view**.**getInputAmount**().**clear**();**

view**.**getArticleDropDown**().**setValue**(null);**

**}**

**}** **catch(**NumberFormatException error**)** **{**

view**.**getInputAmount**().**setStyle**(**"-fx-border-color: red; -fx-border-width: 1;"**);**

**}**

**}**

**}**

package at**.**fhooe**.**swe4**.**administration**.**views**;**

//file ManageOfficesDialog.java

**import** at**.**fhooe**.**swe4**.**Utilities**;**

**import** at**.**fhooe**.**swe4**.**administration**.**controller**.**ManageOfficesDialogController**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**FederalState**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**Status**;**

**import** at**.**fhooe**.**swe4**.**model**.**ReceivingOffice**;**

**import** javafx**.**scene**.**Scene**;**

**import** javafx**.**scene**.**control**.\*;**

**import** javafx**.**scene**.**layout**.**GridPane**;**

**import** javafx**.**scene**.**layout**.**HBox**;**

**import** javafx**.**stage**.**Stage**;**

**import** javafx**.**stage**.**Window**;**

public class ManageOfficesDialog **{**

private Window owner**;**

private Stage dialogStage**;**

private ManageOfficesDialogController controller**;**

private TextField nameInput**;**

private ChoiceBox fedStateInput**;**

private TextField distInput**;**

private TextField addressInput**;**

private ChoiceBox statInput**;**

private TableView**<**ReceivingOffice**>** officesTable**;**

Button addOfficeBtn **=** **new** Button**(**"Annahmestelle hinzufügen"**);**

Button editOfficeBtn **=** **new** Button**(**"Speichern"**);**

public ChoiceBox getFedStateInput**()** **{**

**return** fedStateInput**;**

**}**

public TextField getNameInput**()** **{**

**return** nameInput**;**

**}**

public TextField getDistInput**()** **{**

**return** distInput**;**

**}**

public TextField getAddressInput**()** **{**

**return** addressInput**;**

**}**

public ChoiceBox getStatInput**()** **{**

**return** statInput**;**

**}**

public TableView**<**ReceivingOffice**>** getOfficesTable**()** **{**

**return** officesTable**;**

**}**

public Button getAddOfficeBtn**()** **{**

**return** addOfficeBtn**;**

**}**

public Button getEditOfficeBtn**()** **{**

**return** editOfficeBtn**;**

**}**

public ManageOfficesDialog**(**Window owner**,** TableView**<**ReceivingOffice**>** officesTable**)** **{**

**this.**owner **=** owner**;**

**this.**dialogStage **=** **new** Stage**();**

**this.**officesTable **=** officesTable**;**

**}**

private GridPane createInputGrid**()** **{**

GridPane inputGrid **=** **new** GridPane**();**

inputGrid**.**setId**(**"offices-input-grid"**);**

inputGrid**.**add**(new** Label**(**"Name"**),** 0**,** 0**);**

nameInput **=** **new** TextField**();**

inputGrid**.**add**(**nameInput**,**1**,**0**);**

inputGrid**.**add**(new** Label**(**"Bundesland: "**),**0**,**1**);**

fedStateInput **=** **new** ChoiceBox**();**

fedStateInput**.**getItems**().**addAll**(**FederalState**.**values**());**

inputGrid**.**add**(**fedStateInput**,**1**,**1**);**

inputGrid**.**add**(new** Label**(**"Bezirk"**),** 0**,** 2**);**

distInput **=** **new** TextField**();**

inputGrid**.**add**(**distInput**,**1**,**2**);**

inputGrid**.**add**(new** Label**(**"Adresse"**),** 0**,** 3**);**

addressInput **=** **new** TextField**();**

inputGrid**.**add**(**addressInput**,**1**,**3**);**

inputGrid**.**add**(new** Label**(**"Status: "**),**0**,**4**);**

statInput **=** **new** ChoiceBox**();**

statInput**.**getItems**().**addAll**(**Status**.**values**());**

inputGrid**.**add**(**statInput**,**1**,**4**);**

**return** inputGrid**;**

**}**

private void addOfficeDialog**()** **{**

addOfficeBtn**.**setId**(**"button-add-office"**);**

HBox buttonBar **=** **new** HBox**(**20**);**

buttonBar**.**setId**(**"button-bar"**);**

buttonBar**.**getChildren**().**add**(**addOfficeBtn**);**

GridPane inputGrid **=** createInputGrid**();**

inputGrid**.**add**(**buttonBar**,**0**,**5**,**3**,**1**);**

Scene dialogScene **=** **new** Scene**(**inputGrid**);**

dialogScene**.**getStylesheets**().**add**(**getClass**().**getResource**(**"/administration.css"**).**toExternalForm**());**

Utilities**.**sceneSetup**(**owner**,** dialogStage**,** dialogScene**,** "Annahmestelle hinzufügen"**);**

controller **=** **new** ManageOfficesDialogController**(this);**

**}**

private void editDemandDialog**(**ReceivingOffice selectedItem**){**

editOfficeBtn**.**setId**((**"button-save"**));**

HBox buttonBar **=** **new** HBox**(**20**);**

buttonBar**.**setId**(**"button-bar"**);**

buttonBar**.**getChildren**().**add**(**editOfficeBtn**);**

GridPane inputGrid **=** createInputGrid**();**

inputGrid**.**add**(**buttonBar**,**0**,**5**,**3**,**1**);**

nameInput**.**setText**(**selectedItem**.**getName**());**

fedStateInput**.**setValue**(**selectedItem**.**getFederalState**());**

distInput**.**setText**(**selectedItem**.**getDistrict**());**

addressInput**.**setText**(**selectedItem**.**getAddress**());**

statInput**.**setValue**(**selectedItem**.**getStatus**());**

Scene dialogScene **=** **new** Scene**(**inputGrid**);**

dialogScene**.**getStylesheets**().**add**(**getClass**().**getResource**(**"/administration.css"**).**toExternalForm**());**

Utilities**.**sceneSetup**(**owner**,** dialogStage**,** dialogScene**,** "Annahmestelle verwalten"**);**

controller **=** **new** ManageOfficesDialogController**(this);**

**}**

public void showAddDialog**()** **{**

**this.**addOfficeDialog**();**

dialogStage**.**show**();**

**}**

public void showEditDialog**(**ReceivingOffice selectedItem**)** **{**

**this.**editDemandDialog**(**selectedItem**);**

dialogStage**.**show**();**

**}**

**}**

package at**.**fhooe**.**swe4**.**administration**.**controller**;**

//file ManageOfficesDialogController.java

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**ManageOfficesDialog**;**

**import** at**.**fhooe**.**swe4**.**model**.**ReceivingOffice**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**FederalState**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**Status**;**

**import** javafx**.**event**.**ActionEvent**;**

**import** java**.**util**.**Random**;**

public class ManageOfficesDialogController **{**

private ManageOfficesDialog view**;**

public ManageOfficesDialogController**(**ManageOfficesDialog view**)** **{**

**this.**view **=** view**;**

setView**();**

**}**

private void setView**()** **{**

view**.**getAddOfficeBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleAddOffice**(**e**));**

view**.**getEditOfficeBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleEditOffice**(**e**));**

**}**

private void handleAddOffice**(**ActionEvent e**)** **{**

String name **=** view**.**getNameInput**().**getText**();**

FederalState fedState **=** **(**FederalState**)**view**.**getFedStateInput**().**getValue**();**

String dist **=** view**.**getDistInput**().**getText**();**

String addr **=** view**.**getAddressInput**().**getText**();**

Status stat **=** **(**Status**)**view**.**getStatInput**().**getValue**();**

**if(**name**.**length**()>**0 **&&** fedState **!=** **null** **&&** dist**.**length**()>**0 **&&** addr**.**length**()>**0 **&&** stat **!=** **null)** **{**

Random rand **=** **new** Random**();**

Integer id **=** rand**.**nextInt**(**10000**);**

dbMock**.**getInstance**().**addOffice**(new** ReceivingOffice**(**id**,** name**,** fedState**,** dist**,** addr**,** stat**));**

view**.**getNameInput**().**clear**();**

view**.**getFedStateInput**().**setValue**(null);**

view**.**getDistInput**().**clear**();**

view**.**getAddressInput**().**clear**();**

view**.**getStatInput**().**setValue**(null);**

**}**

**}**

private void handleEditOffice**(**ActionEvent e**)** **{**

ReceivingOffice selectedItem **=** view**.**getOfficesTable**().**getSelectionModel**().**getSelectedItem**();**

dbMock**.**getInstance**().**updateOffice**(**

selectedItem**,** view**.**getNameInput**().**getText**(),**

**(**FederalState**)**view**.**getFedStateInput**().**getValue**(),** view**.**getDistInput**().**getText**(),**

view**.**getAddressInput**().**getText**(),** **(**Status**)**view**.**getStatInput**().**getValue**());**

view**.**getOfficesTable**().**refresh**();**

**}**

**}**

package at**.**fhooe**.**swe4**.**administration**.**views**;**

//file OfficesScene.java

**import** at**.**fhooe**.**swe4**.**Utilities**;**

**import** at**.**fhooe**.**swe4**.**administration**.**controller**.**OfficesSceneController**;**

**import** at**.**fhooe**.**swe4**.**model**.**ReceivingOffice**;**

**import** javafx**.**scene**.**Scene**;**

**import** javafx**.**scene**.**control**.**Button**;**

**import** javafx**.**scene**.**control**.**Label**;**

**import** javafx**.**scene**.**control**.**TableView**;**

**import** javafx**.**scene**.**layout**.**HBox**;**

**import** javafx**.**scene**.**layout**.**Pane**;**

**import** javafx**.**scene**.**layout**.**VBox**;**

**import** javafx**.**stage**.**Stage**;**

public class OfficesScene **{**

private Stage window**;**

private final Scene manageOfficesScene**;**

private Pane mainPane**;**

//controller for scene

private OfficesSceneController controller**;**

private TableView**<**ReceivingOffice**>** officesTable**;**

private Button addOfficeBtn**;**

private Button editOfficeBtn**;**

private Button deleteOfficeBtn**;**

public Stage getWindow**()** **{return** window**;}**

public Button getAddOfficeBtn**()** **{return** addOfficeBtn**;}**

public Button getEditOfficeBtn**()** **{return** editOfficeBtn**;}**

public Button getDeleteOfficeBtn**()** **{return** deleteOfficeBtn**;}**

public TableView**<**ReceivingOffice**>** getOfficesTable**()** **{return** officesTable**;}**

public Scene getOfficesScene**()** **{return** **this.**manageOfficesScene**;}**

public OfficesScene**(**Stage window**)** **{**

**this.**window **=** window**;**

mainPane **=** **new** VBox**();**

mainPane**.**getChildren**().**add**(**Utilities**.**createMenuBar**(**window**));**

mainPane**.**getChildren**().**add**(**createMainPane**());**

mainPane**.**setId**(**"offices-pane"**);**

manageOfficesScene **=** **new** Scene**(**mainPane**,** 600**,**600**);**

manageOfficesScene**.**getStylesheets**().**add**(**getClass**().**getResource**(**"/administration.css"**).**toString**());**

controller **=** **new** OfficesSceneController**(this);**

**}**

protected Pane createMainPane**()** **{**

Label articlesHL **=** **new** Label**(**"Übersicht über Annahmestellen"**);**

articlesHL**.**setId**(**"headline"**);**

officesTable **=** Utilities**.**createOfficesTable**();**

addOfficeBtn **=** Utilities**.**createTextButton**(**"add-office"**,** "+"**);**

addOfficeBtn**.**setId**(**"standard-button"**);**

editOfficeBtn **=** Utilities**.**createTextButton**(**"edit-office"**,** "ändern"**);**

editOfficeBtn**.**setId**(**"standard-button"**);**

deleteOfficeBtn **=** Utilities**.**createTextButton**(**"delete-office"**,** "löschen"**);**

deleteOfficeBtn**.**setId**(**"standard-button"**);**

HBox officesButtonPane **=** **new** HBox**(**addOfficeBtn**,** deleteOfficeBtn**,** editOfficeBtn**);**

officesButtonPane**.**setId**(**"offices-buttons-pane"**);**

VBox articlesPane **=** **new** VBox**(**articlesHL**,** officesTable**,** officesButtonPane**);**

articlesPane**.**setId**(**"offices-pane-content"**);**

**return** articlesPane**;**

**}**

**}**

package at**.**fhooe**.**swe4**.**administration**.**controller**;**

//file OfficesSceneController.java

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**ManageOfficesDialog**;**

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**OfficesScene**;**

**import** at**.**fhooe**.**swe4**.**model**.**ReceivingOffice**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** javafx**.**event**.**ActionEvent**;**

public class OfficesSceneController **{**

private OfficesScene view**;**

public OfficesSceneController**(**OfficesScene view**)** **{**

**this.**view **=** view**;**

setView**();**

**}**

private void setView**()** **{**

view**.**getAddOfficeBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleAddOfficeEvent**(**e**));**

view**.**getEditOfficeBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleEditOfficeEvent**(**e**));**

view**.**getDeleteOfficeBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleDeleteOfficeEvent**(**e**));**

**}**

private void handleAddOfficeEvent**(**ActionEvent e**)** **{**

ManageOfficesDialog dialog **=** **new** ManageOfficesDialog**(**view**.**getWindow**(),** view**.**getOfficesTable**());**

dialog**.**showAddDialog**();**

**}**

private void handleDeleteOfficeEvent**(**ActionEvent e**)** **{**

ReceivingOffice office **=** view**.**getOfficesTable**().**getSelectionModel**().**getSelectedItem**();**

**if** **(**office **!=** **null** **&&** **!**dbMock**.**getInstance**().**demandIsLinkedToReceivingOffice**(**office**))** **{**

dbMock**.**getInstance**().**deleteOffice**(**office**);**

**}**

**}**

private void handleEditOfficeEvent**(**ActionEvent e**)** **{**

ReceivingOffice office **=** view**.**getOfficesTable**().**getSelectionModel**().**getSelectedItem**();**

**if** **(**office **!=** **null)** **{**

ManageOfficesDialog dialog **=** **new** ManageOfficesDialog**(**view**.**getWindow**(),** view**.**getOfficesTable**());**

dialog**.**showEditDialog**(**office**);**

**}**

**}**

**}**

## Spendenanwendung

package at**.**fhooe**.**swe4**.**donationsApp**;**

//File DonationsApp.java

**import** at**.**fhooe**.**swe4**.**donationsApp**.**views**.**LoginSceneDonations**;**

**import** javafx**.**application**.**Application**;**

**import** javafx**.**stage**.**Stage**;**

public class DonationsApp **extends** Application **{**

private Stage window**;**

@Override

public void start**(**Stage primaryStage**)** **throws** Exception **{**

window **=** primaryStage**;**

LoginSceneDonations LoginSceneDonations **=** **new** LoginSceneDonations**(**window**);**

window**.**setScene**(**LoginSceneDonations**.**getLoginScene**());**

window**.**setMinWidth**(**200**);**

window**.**setMinHeight**(**450**);**

window**.**setWidth**(**470**);**

window**.**setHeight**(**750**);**

window**.**setTitle**(**"Pomagaju - Hilfe für die Ukraine"**);**

window**.**show**();**

**}**

public static void main**(**String**[]** args**)** **{**

launch**(**args**);**

**}**

**}**

package at**.**fhooe**.**swe4**.**donationsApp**.**views**;**

//File: DonationsScene.java

**import** at**.**fhooe**.**swe4**.**donationsApp**.**controller**.**DonationSceneController**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**Category**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**FederalState**;**

**import** at**.**fhooe**.**swe4**.**model**.**DemandItem**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** javafx**.**collections**.**transformation**.**FilteredList**;**

**import** javafx**.**scene**.**Scene**;**

**import** javafx**.**scene**.**control**.\*;**

**import** javafx**.**scene**.**layout**.\*;**

**import** javafx**.**stage**.**Stage**;**

**import** java**.**util**.**HashMap**;**

public class DonationsScene **{**

private Stage window**;**

private final Scene donationScene**;**

private Pane mainPane**;**

private DonationSceneController controller**;**

private FilteredList**<**DemandItem**>** filteredDemand **=** **new** FilteredList**<>(**dbMock**.**getInstance**().**getDemandItems**());**

private VBox filteredResults **=** **new** VBox**();**

private TextField textSearchField**;**

private ChoiceBox federalStatesDropDown**;**

private TextField addressSearchField**;**

private ChoiceBox categoryDropDown**;**

private Button addDonationButton**;**

private Button deleteFiltersBtn**;**

public Stage getWindow**()** **{**

**return** window**;**

**}**

public Button getDeleteFiltersBtn**()** **{**

**return** deleteFiltersBtn**;**

**}**

public FilteredList**<**DemandItem**>** getFilteredDemand**()** **{**

**return** filteredDemand**;**

**}**

public TextField getTextSearchField**()** **{**

**return** textSearchField**;**

**}**

public ChoiceBox getFederalStatesDropDown**()** **{**

**return** federalStatesDropDown**;**

**}**

public TextField getAddressSearchField**()** **{**

**return** addressSearchField**;**

**}**

public ChoiceBox getCategoryDropDown**()** **{**

**return** categoryDropDown**;**

**}**

public Button getAddDonationButton**()** **{**

**return** addDonationButton**;**

**}**

public DonationsScene**(**Stage window**)** **{**

**this.**window **=** window**;**

mainPane **=** **new** VBox**(**createMainPane**());**

mainPane**.**setId**(**"donations-pane"**);**

filteredResults**.**setId**(**"filtered-results-vbox"**);**

updateResults**();**

donationScene **=** **new** Scene**(**mainPane**,** 270**,**550**);**

donationScene**.**getStylesheets**().**add**(**DonationsScene**.**class**.**getResource**(**"/donationsApp.css"**).**toString**());**

controller **=** **new** DonationSceneController**(this);**

**}**

public Scene getDonationScene**()** **{return** donationScene**;}**

private Pane createFilterPane**()** **{**

textSearchField **=** **new** TextField**();**

textSearchField**.**setId**(**"text-search-field"**);**

VBox textSearch **=** **new** VBox**(new** Label**(**"Textsuche:"**),** textSearchField**);**

federalStatesDropDown **=** **new** ChoiceBox**();**

federalStatesDropDown**.**getItems**().**add**(null);**

federalStatesDropDown**.**getItems**().**addAll**(**FederalState**.**values**());**

VBox federalStateSearch **=** **new** VBox**(new** Label**(**"Bundesland"**),** federalStatesDropDown**);**

federalStateSearch**.**setId**(**"filter-vBox"**);**

addressSearchField **=** **new** TextField**();**

VBox addressSearch **=** **new** VBox**(new** Label**(**"Adresse"**),** addressSearchField**);**

addressSearch**.**setId**(**"filter-vBox"**);**

categoryDropDown **=** **new** ChoiceBox**();**

categoryDropDown**.**getItems**().**add**(null);**

categoryDropDown**.**getItems**().**addAll**(**Category**.**values**());**

VBox categorySearch **=** **new** VBox**(new** Label**(**"Kategorie"**),** categoryDropDown**);**

categorySearch**.**setId**(**"filter-vBox"**);**

TilePane filterSelection **=** **new** TilePane**(**federalStateSearch**,** addressSearch**,** categorySearch**);**

filterSelection**.**setId**(**"filter-tile-pane"**);**

deleteFiltersBtn **=** **new** Button**(**"Filter löschen"**);**

deleteFiltersBtn**.**setId**(**"standard-button"**);**

VBox filters **=** **new** VBox**(**textSearch**,** filterSelection**,** deleteFiltersBtn**);**

filters**.**setId**(**"filters-pane"**);**

**return** filters**;**

**}**

public HashMap**<**Button**,** DemandItem**>** demandButtonHelperStructure **=** **new** HashMap**<>();**

public HashMap**<**Button**,** DemandItem**>** getDemandButtonHelperStructure**()** **{**

**return** demandButtonHelperStructure**;**

**}**

public VBox createDemandTile**(**DemandItem d**)** **{**

GridPane resultGrid **=** **new** GridPane**();**

resultGrid**.**setId**(**"donations-grid"**);**

resultGrid**.**add**(new** Label**(**"Kategorie:"**),**0**,**0**);**

String temp **=** d**.**getRelatedArticle**().**getCategory**().**toString**();**

resultGrid**.**add**(new** Label**(**temp**),**1**,**0**);**

resultGrid**.**add**(new** Label**(**"benötigte Menge:"**),**0**,**1**);**

String amount **=** d**.**getAmount**().**toString**();**

Label amountLabel **=** **new** Label**(**amount**);**

resultGrid**.**add**(**amountLabel**,**1**,**1**);**

resultGrid**.**add**(new** Label**(**"Hilfsgut:"**),**0**,**2**);**

temp **=** d**.**getRelatedArticle**().**getName**();**

resultGrid**.**add**(new** Label**(**temp**),**1**,**2**);**

resultGrid**.**add**(new** Label**(**"Beschreibung:"**),**0**,**3**);**

temp **=** d**.**getRelatedArticle**().**getDescription**();**

resultGrid**.**add**(new** Label**(**temp**),**1**,**3**);**

resultGrid**.**add**(new** Label**(**"Zustand:"**),**0**,**4**);**

temp **=** d**.**getRelatedArticle**().**getCondition**().**toString**();**

resultGrid**.**add**(new** Label**(**temp**),**1**,**4**);**

resultGrid**.**add**(new** Label**(**"Annahmestelle:"**),**0**,**5**);**

temp **=** d**.**getRelatedOffice**().**getName**();**

resultGrid**.**add**(new** Label**(**temp**),**1**,**5**);**

resultGrid**.**add**(new** Label**(**"Adresse:"**),**0**,**6**);**

temp **=** d**.**getRelatedOffice**().**getAddress**()** **+** " (" **+** d**.**getRelatedOffice**().**getDistrict**()** **+** ")"**;**

resultGrid**.**add**(new** Label**(**temp**),**1**,**6**);**

addDonationButton **=** **new** Button**(**"jetzt spenden"**);**

addDonationButton**.**setId**(**"button-donate"**);**

demandButtonHelperStructure**.**put**(**addDonationButton**,** d**);**

VBox demandDetailTile **=** **new** VBox**(**resultGrid**,** addDonationButton**);**

demandDetailTile**.**setId**(**"demand-tile-vbox"**);**

**return** demandDetailTile**;**

**}**

private Pane createMainPane**()** **{**

Label curUser **=** **new** Label**(**"Benutzer: " **+** dbMock**.**getInstance**().**getCurrentUser**().**getName**());**

Button myDonationsButton **=** **new** Button**();**

myDonationsButton**.**setId**(**"my-donations-button"**);**

HBox myDonations **=** **new** HBox**(**curUser**,** myDonationsButton**);**

myDonations**.**setId**(**"myDonations-pane"**);**

Pane filters **=** createFilterPane**();**

ScrollPane scrollArea **=** **new** ScrollPane**();**

scrollArea**.**setId**(**"donation-scene-scroll-area"**);**

scrollArea**.**setContent**(**filteredResults**);**

VBox donationsPane **=** **new** VBox**(**myDonations**,** **new** Separator**(),** filters**,** **new** Separator**(),** scrollArea**);**

donationsPane**.**setId**(**"donations-pane-content"**);**

**return** donationsPane**;**

**}**

public void updateResults**()** **{**

filteredResults**.**getChildren**().**clear**();**

demandButtonHelperStructure**.**clear**();**

**for(**int i **=** 0**;** i **<** filteredDemand**.**size**();** i**++)** **{**

VBox demandTile **=** createDemandTile**(**filteredDemand**.**get**(**i**));**

filteredResults**.**getChildren**().**add**(**demandTile**);**

**}**

**}**

**}**

package at**.**fhooe**.**swe4**.**donationsApp**.**controller**;**

//File: DonationsSceneController.java

**import** at**.**fhooe**.**swe4**.**donationsApp**.**views**.**DonationsScene**;**

**import** at**.**fhooe**.**swe4**.**donationsApp**.**views**.**MakeDonationDialog**;**

**import** at**.**fhooe**.**swe4**.**model**.**DemandItem**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**Category**;**

**import** at**.**fhooe**.**swe4**.**model**.**enums**.**FederalState**;**

**import** javafx**.**collections**.**ListChangeListener**;**

**import** javafx**.**collections**.**transformation**.**FilteredList**;**

**import** javafx**.**event**.**ActionEvent**;**

**import** javafx**.**scene**.**control**.**Button**;**

**import** java**.**util**.**Set**;**

**import** java**.**util**.**function**.**Predicate**;**

public class DonationSceneController **{**

private DonationsScene view**;**

private FilteredList**<**DemandItem**>** filteredDemand **=** **new** FilteredList**<>(**dbMock**.**getInstance**().**getDemandItems**());**

private String textFilter**;**

private String addressFilter**;**

private Category categoryFilter**;**

private FederalState federalStateFilter**;**

public DonationSceneController**(**DonationsScene view**)** **{**

**this.**view **=** view**;**

setView**();**

**}**

public void addEventListenersToResultList**(){**

Set**<**Button**>** keySet **=** view**.**getDemandButtonHelperStructure**().**keySet**();**

**for(**Button b **:** keySet**)** **{**

b**.**addEventHandler**(**ActionEvent**.**ACTION**,** e **->** handleAddDonationEvent**(**e**,** view**.**getDemandButtonHelperStructure**().**get**(**b**)));**

**}**

**}**

private void setView**()** **{**

addEventListenersToResultList**();**

//EventListener for completely deleted demandItem

dbMock**.**getInstance**().**getDemandItems**().**addListener**(new** ListChangeListener**<**DemandItem**>()** **{**

@Override

public void onChanged**(**Change**<?** **extends** DemandItem**>** c**)** **{**

view**.**updateResults**();**

addEventListenersToResultList**();**

**}**

**});**

//EventListener for changes of amount of deamnd

**for(**int i **=** 0**;** i **<** dbMock**.**getInstance**().**getDemandItems**().**size**();** i**++)** **{**

dbMock**.**getInstance**().**getDemandItems**().**get**(**i**).**getObsAmount**().**addListener**((**observable**,** oldValue**,** newValue**)** **->** **{**

view**.**updateResults**();**

addEventListenersToResultList**();**

**});**

**}**

view**.**getTextSearchField**().**textProperty**().**addListener **((**observable**,** oldValue**,** newValue**)->** **{**

textFilter **=** newValue**.**toLowerCase**();**

filterDonations**();**

**});**

view**.**getAddressSearchField**().**textProperty**().**addListener **((**observable**,** oldValue**,** newValue**)->** **{**

addressFilter **=** newValue**.**toLowerCase**();**

filterDonations**();**

**});**

view**.**getCategoryDropDown**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**event **->** **{**

categoryFilter **=** **(**Category**)** view**.**getCategoryDropDown**().**getValue**();**

filterDonations**();**

**}));**

view**.**getFederalStatesDropDown**().**addEventHandler**(**ActionEvent**.**ACTION**,** e**->** **{**

federalStateFilter **=** **(**FederalState**)** view**.**getFederalStatesDropDown**().**getValue**();**

filterDonations**();**

**});**

view**.**getDeleteFiltersBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleDeleteFiltersEvent**(**e**));**

**}**

private void handleDeleteFiltersEvent**(**ActionEvent e**)** **{**

view**.**getTextSearchField**().**clear**();**

view**.**getAddressSearchField**().**clear**();**

view**.**getFederalStatesDropDown**().**setValue**(null);**

view**.**getCategoryDropDown**().**setValue**(null);**

view**.**getFilteredDemand**().**setPredicate**(null);**

addEventListenersToResultList**();**

**}**

private void handleAddDonationEvent**(**ActionEvent e**,** DemandItem demandItem**)** **{**

MakeDonationDialog dialog **=** **new** MakeDonationDialog**(**view**.**getWindow**(),** demandItem**,** view**);**

dialog**.**showDonationDialog**();**

**}**

private void filterDonations**()** **{**

Predicate**<**DemandItem**>** textPredicate **=** demandItem **->** textFilter **==** **null**

**||** demandItem**.**toString**().**toLowerCase**().**contains**(**textFilter**)**

**||** demandItem**.**getRelatedArticle**().**getDescription**().**toLowerCase**().**contains**(**textFilter**);**

Predicate**<**DemandItem**>** addressPredicate **=** demandItem **->** addressFilter **==** **null** **||** addressFilter**.**equals**(**""**)**

**||** demandItem**.**getRelatedOffice**().**getAddress**().**toLowerCase**().**contains**(**addressFilter**)**

**||** demandItem**.**getRelatedOffice**().**getDistrict**().**toLowerCase**().**contains**(**addressFilter**);**

Predicate**<**DemandItem**>** categoryPredicate **=** demandItem **->** categoryFilter **==** **null** **||**

demandItem**.**getRelatedArticle**().**getCategory**().**equals**(**categoryFilter**);**

Predicate**<**DemandItem**>** federalStatePredicate **=** demandItem **->** federalStateFilter **==** **null** **||**

demandItem**.**getRelatedOffice**().**getFederalState**().**equals**(**federalStateFilter**);**

view**.**getFilteredDemand**().**setPredicate**(**textPredicate**.**and**(**addressPredicate**).**

and**(**categoryPredicate**).**and**(**federalStatePredicate**));**

view**.**updateResults**();**

addEventListenersToResultList**();**

**}**

**}**

package at**.**fhooe**.**swe4**.**donationsApp**.**views**;**

//File: LoginDialog.java

**import** at**.**fhooe**.**swe4**.**Utilities**;**

**import** at**.**fhooe**.**swe4**.**donationsApp**.**controller**.**LoginDialogController**;**

**import** at**.**fhooe**.**swe4**.**model**.**User**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** javafx**.**event**.**ActionEvent**;**

**import** javafx**.**scene**.**Scene**;**

**import** javafx**.**scene**.**control**.**Button**;**

**import** javafx**.**scene**.**control**.**Label**;**

**import** javafx**.**scene**.**control**.**PasswordField**;**

**import** javafx**.**scene**.**control**.**TextField**;**

**import** javafx**.**scene**.**layout**.**VBox**;**

**import** javafx**.**stage**.**Stage**;**

public class LoginDialog **{**

private Stage window**;**

private Stage dialogStage**;**

private LoginDialogController controller**;**

private TextField email**;**

private PasswordField pw**;**

private Button loginButton**;**

public Stage getWindow**()** **{**

**return** window**;**

**}**

public TextField getEmail**()** **{**

**return** email**;**

**}**

public PasswordField getPw**()** **{**

**return** pw**;**

**}**

public Button getLoginButton**()** **{**

**return** loginButton**;**

**}**

public LoginDialog**(**Stage window**)** **{**

dialogStage **=** **new** Stage**();**

**this.**window **=** window**;**

**}**

private void loginDialog**()** **{**

email **=** **new** TextField**();**

email**.**setId**(**"user-input"**);**

VBox userBox **=** **new** VBox**(new** Label**(**"E-Mail Adresse:"**),** email**);**

pw **=** **new** PasswordField**();**

pw**.**setId**(**"password-input"**);**

VBox pwBox **=** **new** VBox**(new** Label**(**"Passwort:"**),** pw**);**

loginButton **=** **new** Button**(**"anmelden"**);**

loginButton**.**setId**(**"login-button"**);**

VBox loginPane **=** **new** VBox**(**userBox**,** pwBox**,** loginButton**);**

loginPane**.**setId**(**"loginBox-dialog"**);**

Scene dialogScene **=** **new** Scene**(**loginPane**);**

dialogScene**.**getStylesheets**().**add**(**getClass**().**getResource**(**"/donationsApp.css"**).**toExternalForm**());**

Utilities**.**sceneSetup**(**window**,** dialogStage**,** dialogScene**,** "Anmelden"**);**

controller **=** **new** LoginDialogController**(this);**

**}**

public void closeDialog**()** **{**

dialogStage**.**close**();**

**}**

public void showLoginDialog**()** **{**

**this.**loginDialog**();**

dialogStage**.**show**();**

**}**

**}**

package at**.**fhooe**.**swe4**.**donationsApp**.**controller**;**

//File: LoginDialogController.java

**import** at**.**fhooe**.**swe4**.**donationsApp**.**views**.**DonationsScene**;**

**import** at**.**fhooe**.**swe4**.**donationsApp**.**views**.**LoginDialog**;**

**import** at**.**fhooe**.**swe4**.**model**.**User**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** javafx**.**event**.**ActionEvent**;**

**import** javafx**.**scene**.**control**.**PasswordField**;**

**import** javafx**.**scene**.**control**.**TextField**;**

public class LoginDialogController **{**

private LoginDialog view**;**

public LoginDialogController**(**LoginDialog view**)** **{**

**this.**view **=** view**;**

setView**();**

**}**

private void setView**()** **{**

view**.**getLoginButton**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleLoginEvent**(**e**,** view**.**getEmail**(),** view**.**getPw**()));**

**}**

private void handleLoginEvent**(**ActionEvent e**,** TextField email**,** PasswordField pw**)** **{**

User user **=** dbMock**.**getInstance**().**getUserByEMail**(**email**.**getText**());**

**if(**user **==** **null)** **{**

email**.**setStyle**(**"-fx-border-color: red; -fx-border-width: 1px"**);**

**}** **else** **{**

email**.**setStyle**(null);**

**if** **(**user**.**getPassword**().**equals**(**pw**.**getText**()))** **{**

dbMock**.**getInstance**().**setCurrentUser**(**user**);**

view**.**closeDialog**();**

DonationsScene donationsScene **=** **new** DonationsScene**(**view**.**getWindow**());**

view**.**getWindow**().**setScene**(**donationsScene**.**getDonationScene**());**

**}** **else** **{**

pw**.**setStyle**(**"-fx-border-color: red; -fx-border-width: 1px"**);**

**}**

**}**

**}**

**}**

package at**.**fhooe**.**swe4**.**donationsApp**.**views**;**

//File: LoginSceneDonations.java

**import** at**.**fhooe**.**swe4**.**donationsApp**.**controller**.**LoginSceneDonationsController**;**

**import** javafx**.**scene**.**Scene**;**

**import** javafx**.**scene**.**control**.**Button**;**

**import** javafx**.**scene**.**control**.**Label**;**

**import** javafx**.**scene**.**layout**.**Pane**;**

**import** javafx**.**scene**.**layout**.**VBox**;**

**import** javafx**.**stage**.**Stage**;**

public class LoginSceneDonations **{**

private Stage window**;**

private Scene loginSceneDonations**;**

private Button registerBtn**;**

private Button loginBtn**;**

public Stage getWindow**()** **{**

**return** window**;**

**}**

public Button getRegisterBtn**()** **{**

**return** registerBtn**;**

**}**

public Button getLoginBtn**()** **{**

**return** loginBtn**;**

**}**

private LoginSceneDonationsController controller**;**

public LoginSceneDonations**(**Stage window**)** **{**

**this.**window **=** window**;**

Pane loginPane **=** **new** VBox**(**createLoginPane**());**

loginPane**.**setId**(**"login-pane"**);**

loginSceneDonations **=** **new** Scene**(**loginPane**,** 270**,**550**);**

loginSceneDonations**.**getStylesheets**().**add**(**getClass**().**getResource**(**"/donationsApp.css"**).**toString**());**

controller **=** **new** LoginSceneDonationsController**(this);**

**}**

public Scene getLoginScene**()** **{**

**return** loginSceneDonations**;**

**}**

private Pane createLoginPane**()** **{**

Label registerLabel **=** **new** Label**(**"Registriere dich jetzt"**);**

registerLabel**.**setId**(**"register-label"**);**

registerBtn **=** **new** Button**(**"Registrieren"**);**

registerBtn**.**setId**(**"register-button"**);**

VBox register **=** **new** VBox**(**registerLabel**,** registerBtn**);**

register**.**setId**(**"register-VBox"**);**

Label loginLabel **=** **new** Label**(**"Du hast schon einen Account?"**);**

loginLabel**.**setId**(**"login-label"**);**

loginBtn **=** **new** Button**(**"Anmelden"**);**

loginBtn**.**setId**(**"login-button"**);**

VBox login **=** **new** VBox**(**loginLabel**,** loginBtn**);**

login**.**setId**(**"login-VBox"**);**

VBox startScreen **=** **new** VBox**(**register**,** login**);**

startScreen**.**setId**(**"start-screen-VBox"**);**

**return** startScreen**;**

**}**

**}**

package at**.**fhooe**.**swe4**.**donationsApp**.**controller**;**

//File: LoginSceneDonationsController.java

**import** at**.**fhooe**.**swe4**.**donationsApp**.**views**.**LoginDialog**;**

**import** at**.**fhooe**.**swe4**.**donationsApp**.**views**.**LoginSceneDonations**;**

**import** at**.**fhooe**.**swe4**.**donationsApp**.**views**.**RegisterDialog**;**

**import** javafx**.**event**.**ActionEvent**;**

public class LoginSceneDonationsController **{**

private LoginSceneDonations view**;**

public LoginSceneDonationsController**(**LoginSceneDonations view**)** **{**

**this.**view **=** view**;**

setView**();**

**}**

private void setView**()** **{**

view**.**getRegisterBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**actionEvent **->** **{**

RegisterDialog diag **=** **new** RegisterDialog**(**view**.**getWindow**());**

diag**.**showRegisterDialog**();**

**}));**

view**.**getLoginBtn**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**actionEvent **->** **{**

LoginDialog diag **=** **new** LoginDialog**(**view**.**getWindow**());**

diag**.**showLoginDialog**();**

**}));**

**}**

**}**

package at**.**fhooe**.**swe4**.**donationsApp**.**views**;**

//File: MakeDonationDialog.java

**import** at**.**fhooe**.**swe4**.**Utilities**;**

**import** at**.**fhooe**.**swe4**.**donationsApp**.**controller**.**MakeDonationDialogController**;**

**import** at**.**fhooe**.**swe4**.**model**.**DemandItem**;**

**import** javafx**.**event**.**ActionEvent**;**

**import** javafx**.**scene**.**Scene**;**

**import** javafx**.**scene**.**control**.\*;**

**import** javafx**.**scene**.**layout**.**VBox**;**

**import** javafx**.**stage**.**Stage**;**

**import** javafx**.**stage**.**Window**;**

**import** java**.**time**.**LocalDate**;**

public class MakeDonationDialog **{**

private Window owner**;**

private Stage dialogStage**;**

private DemandItem selectedDemandItem**;**

private DonationsScene ownerScene**;**

private Scene dialogScene**;**

private VBox makeDonationVBox**;**

private MakeDonationDialogController controller**;**

private Button donateButton**;**

private DatePicker datePicker**;**

private TextField amount**;**

public DonationsScene getOwnerScene**()** **{**

**return** ownerScene**;**

**}**

public DemandItem getSelectedDemandItem**()** **{**

**return** selectedDemandItem**;**

**}**

public DatePicker getDatePicker**()** **{**

**return** datePicker**;**

**}**

public TextField getAmount**()** **{**

**return** amount**;**

**}**

public Button getDonateButton**()** **{**

**return** donateButton**;**

**}**

public MakeDonationDialog**(**Window owner**,** DemandItem demandItem**,** DonationsScene ownerScene**)** **{**

dialogStage **=** **new** Stage**();**

**this.**owner **=** owner**;**

**this.**selectedDemandItem **=** demandItem**;**

**this.**ownerScene **=** ownerScene**;**

**}**

private void makeDonationDialog**()** **{**

datePicker **=** **new** DatePicker**();**

datePicker**.**setId**(**"make-donation-DatePicker"**);**

//allow only future dates

datePicker**.**setDayCellFactory**(**param **->** **new** DateCell**()** **{**

@Override

public void updateItem**(**LocalDate date**,** boolean empty**)** **{**

**super.**updateItem**(**date**,**empty**);**

setDisable**(**empty **||** date**.**compareTo**(**LocalDate**.**now**())** **<** 0**);**

**}**

**});**

VBox dateBox **=** **new** VBox**(new** Label**(**"Abgabedatum:"**),** datePicker**);**

amount **=** **new** TextField**();**

amount**.**setId**(**"make-donation-amount-input"**);**

VBox amountBox **=** **new** VBox**(new** Label**(**"Menge" **+** " (" **+** selectedDemandItem**.**getAmount**().**toString**()** **+** " = max. Anzahl)"**),**amount**);**

VBox makeDonationInputVBox **=** **new** VBox**(**dateBox**,** amountBox**);**

makeDonationInputVBox**.**setId**(**"make-donation-input-VBox"**);**

donateButton **=** **new** Button**(**"Spende anmelden"**);**

donateButton**.**setId**(**"make-donation-button"**);**

makeDonationVBox **=** **new** VBox**(**makeDonationInputVBox**,** donateButton**);**

makeDonationVBox**.**setId**(**"make-donation-dialog"**);**

dialogScene **=** **new** Scene**(**makeDonationVBox**);**

dialogScene**.**getStylesheets**().**add**(**getClass**().**getResource**(**"/donationsApp.css"**).**toExternalForm**());**

Utilities**.**sceneSetup**(**owner**,** dialogStage**,** dialogScene**,** "Spende anmelden"**);**

controller **=** **new** MakeDonationDialogController**(this);**

**}**

public void showToken**()** **{**

Label intro **=** **new** Label **(**"Bitte zeigen Sie diesen Code bei der Abgabe der Spenden vor"**);**

intro**.**setId**(**"token-intro-label"**);**

intro**.**setPrefWidth**(**300**);**

intro**.**setWrapText**(true);**

Label token **=** **new** Label **(**"#r3kc7"**);**

token**.**setId**(**"token-label"**);**

Button closeBtn **=** **new** Button**(**"ist notiert! Fenster schließen"**);**

closeBtn**.**setId**(**"tokenClose-btn"**);**

closeBtn**.**addEventHandler**(**ActionEvent**.**ACTION**,** e **->** **{**

dialogStage**.**close**();**

**});**

VBox tokenBox **=** **new** VBox**(**intro**,** token**,** closeBtn**);**

tokenBox**.**setId**(**"token-VBox"**);**

makeDonationVBox**.**getChildren**().**clear**();**

makeDonationVBox**.**getChildren**().**add**(**tokenBox**);**

**}**

public void showDonationDialog**()** **{**

**this.**makeDonationDialog**();**

dialogStage**.**show**();**

**}**

**}**

package at**.**fhooe**.**swe4**.**donationsApp**.**controller**;**

//File: MakeDonationDialogController.java

**import** at**.**fhooe**.**swe4**.**donationsApp**.**views**.**MakeDonationDialog**;**

**import** at**.**fhooe**.**swe4**.**model**.**Donation**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** javafx**.**event**.**ActionEvent**;**

public class MakeDonationDialogController **{**

private MakeDonationDialog view**;**

public MakeDonationDialogController**(**MakeDonationDialog view**)** **{**

**this.**view **=** view**;**

setView**();**

**}**

private void setView**()** **{**

view**.**getDonateButton**().**addEventHandler**(**ActionEvent**.**ACTION**,** e **->** handleDonateButton**(**e**)** **);**

**}**

private void handleDonateButton**(**ActionEvent e**)** **{**

**if(**view**.**getDatePicker**().**getValue**()** **==** **null)** **{**

view**.**getDatePicker**().**setStyle**(**"-fx-border-color: red; -fx-border-width: 1"**);**

**}** **else** **{**

view**.**getDatePicker**().**setStyle**(null);**

**}**

**if(**view**.**getAmount**().**getText**().**equals**(**""**))** **{**

view**.**getAmount**().**setStyle**(**"-fx-border-color: red; -fx-border-width: 1"**);**

**}** **else** **{**

view**.**getDatePicker**().**setStyle**(null);**

**}**

**if((**view**.**getDatePicker**().**getValue**()** **!=** **null)** **&&** **(!**view**.**getAmount**().**getText**().**equals**(**""**)))** **{**

Integer intAmount **=** Integer**.**parseInt**(**view**.**getAmount**().**getText**());**

**if** **(**intAmount **>** 0 **&&** intAmount **<=** view**.**getSelectedDemandItem**().**getAmount**())** **{**

//if full demand is covered remove demand item from demand list

**if(**view**.**getSelectedDemandItem**().**getAmount**()** **-** intAmount **==** 0**)** **{**

dbMock**.**getInstance**().**deleteDemand**(**view**.**getSelectedDemandItem**());**

**}** **else** **{** //if not full demand is covered just reduce needed amount

dbMock**.**getInstance**().**reduceDemand**(**view**.**getSelectedDemandItem**(),** intAmount**);**

**}**

dbMock**.**getInstance**().**addDonation**(new** Donation**(**view**.**getSelectedDemandItem**(),** view**.**getDatePicker**().**getValue**(),**

dbMock**.**getInstance**().**getCurrentUser**(),** intAmount**));**

//update displayed list of owner window

view**.**showToken**();**

**}** **else** **{**

view**.**getAmount**().**setStyle**(**"-fx-border-color: red; -fx-border-width: 1"**);**

**}**

**}**

**}**

**}**

package at**.**fhooe**.**swe4**.**donationsApp**.**views**;**

//File: RegisterDialog.java

**import** at**.**fhooe**.**swe4**.**Utilities**;**

**import** at**.**fhooe**.**swe4**.**donationsApp**.**controller**.**RegisterDialogController**;**

**import** at**.**fhooe**.**swe4**.**model**.**User**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** javafx**.**event**.**ActionEvent**;**

**import** javafx**.**scene**.**Scene**;**

**import** javafx**.**scene**.**control**.**Button**;**

**import** javafx**.**scene**.**control**.**Label**;**

**import** javafx**.**scene**.**control**.**PasswordField**;**

**import** javafx**.**scene**.**control**.**TextField**;**

**import** javafx**.**scene**.**layout**.**VBox**;**

**import** javafx**.**stage**.**Stage**;**

**import** java**.**util**.**regex**.**Pattern**;**

public class RegisterDialog **{**

private Stage window**;**

private Stage dialogStage**;**

private RegisterDialogController controller**;**

private TextField name**;**

private TextField email**;**

private PasswordField pw**;**

private PasswordField pwConfirm**;**

private Button registerButton**;**

public Stage getWindow**()** **{**

**return** window**;**

**}**

public TextField getName**()** **{**

**return** name**;**

**}**

public TextField getEmail**()** **{**

**return** email**;**

**}**

public PasswordField getPw**()** **{**

**return** pw**;**

**}**

public PasswordField getPwConfirm**()** **{**

**return** pwConfirm**;**

**}**

public Button getRegisterButton**()** **{**

**return** registerButton**;**

**}**

public RegisterDialog**(**Stage window**)** **{**

dialogStage **=** **new** Stage**();**

**this.**window **=** window**;**

**}**

private void registerDialog**()** **{**

name **=** **new** TextField**();**

name**.**setId**(**"name-input"**);**

VBox nameBox **=** **new** VBox**(new** Label**(**"Name:"**),** name**);**

email **=** **new** TextField**();**

email**.**setId**(**"user-input"**);**

VBox userBox **=** **new** VBox**(new** Label**(**"E-Mail Adresse:"**),** email**);**

pw **=** **new** PasswordField**();**

pw**.**setId**(**"password-input"**);**

VBox pwBox **=** **new** VBox**(new** Label**(**"Passwort:"**),** pw**);**

pwConfirm **=** **new** PasswordField**();**

pwConfirm**.**setId**(**"password-input"**);**

VBox pwConfirmBox **=** **new** VBox**(new** Label**(**"Passwort bestätigen:"**),** pwConfirm**);**

registerButton **=** **new** Button**(**"Jetzt registieren"**);**

registerButton**.**setId**(**"register-button"**);**

VBox registerPane **=** **new** VBox**(**nameBox**,** userBox**,** pwBox**,** pwConfirmBox**,** registerButton**);**

registerPane**.**setId**(**"registerBox-dialog"**);**

Scene dialogScene **=** **new** Scene**(**registerPane**);**

dialogScene**.**getStylesheets**().**add**(**getClass**().**getResource**(**"/donationsApp.css"**).**toExternalForm**());**

Utilities**.**sceneSetup**(**window**,** dialogStage**,** dialogScene**,** "Registrieren"**);**

controller **=** **new** RegisterDialogController**(this);**

**}**

public void closeDialog**(){**

dialogStage**.**close**();**

**}**

public void showRegisterDialog**()** **{**

**this.**registerDialog**();**

dialogStage**.**show**();**

**}**

**}**

package at**.**fhooe**.**swe4**.**donationsApp**.**controller**;**

//File: RegisterDialogController.java

**import** at**.**fhooe**.**swe4**.**donationsApp**.**views**.**DonationsScene**;**

**import** at**.**fhooe**.**swe4**.**donationsApp**.**views**.**RegisterDialog**;**

**import** at**.**fhooe**.**swe4**.**model**.**User**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** javafx**.**event**.**ActionEvent**;**

**import** javafx**.**scene**.**control**.**PasswordField**;**

**import** javafx**.**scene**.**control**.**TextField**;**

**import** java**.**util**.**regex**.**Pattern**;**

public class RegisterDialogController **{**

private RegisterDialog view**;**

public RegisterDialogController**(**RegisterDialog view**)** **{**

**this.**view **=** view**;**

setView**();**

**}**

private void setView**()** **{**

view**.**getRegisterButton**().**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleRegisterEvent**(**e**,** view**.**getName**(),** view**.**getEmail**(),**

view**.**getPw**(),** view**.**getPwConfirm**()));**

**}**

private void handleRegisterEvent**(**ActionEvent e**,** TextField name**,** TextField email**,** PasswordField pw**,** PasswordField pwConfirm**)** **{**

boolean checkName **=** checkName**();**

boolean checkEmail **=** checkEMail**();**

boolean checkPW **=** checkPW**();**

**if(!**checkName**)** **{**

view**.**getName**().**setStyle**(**"-fx-border-color: red; -fx-border-width: 1px"**);**

**}** **else** **{**

view**.**getName**().**setStyle**(null);**

**}**

**if(!**checkEmail**)** **{**

view**.**getEmail**().**setStyle**(**"-fx-border-color: red; -fx-border-width: 1px"**);**

**}** **else** **{**

view**.**getEmail**().**setStyle**(null);**

**}**

**if(!**checkPW**)** **{**

view**.**getPw**().**setStyle**(**"-fx-border-color: red; -fx-border-width: 1px"**);**

view**.**getPwConfirm**().**setStyle**(**"-fx-border-color: red; -fx-border-width: 1px"**);**

**}** **else** **{**

view**.**getPw**().**setStyle**(null);**

view**.**getPwConfirm**().**setStyle**(null);**

**}**

**if(**checkName **&&** checkEmail **&&** checkPW**)** **{**

email**.**setStyle**(null);**

pw**.**setStyle**(null);**

pwConfirm**.**setStyle**(null);**

User newUser **=** **new** User**(**name**.**getText**(),** pw**.**getText**(),** email**.**getText**());**

dbMock**.**getInstance**().**addUser**(**email**.**getText**(),** newUser**);**

dbMock**.**getInstance**().**setCurrentUser**(**newUser**);**

view**.**closeDialog**();**

DonationsScene donationsScene **=** **new** DonationsScene**(**view**.**getWindow**());**

view**.**getWindow**().**setScene**(**donationsScene**.**getDonationScene**());**

**}**

**}**

private boolean checkEMail**()** **{**

String regexPattern **=** "^(?=.{1,64}@)[A-Za-z0-9\_-]+(\\.[A-Za-z0-9\_-]+)\*@"

**+** "[^-][A-Za-z0-9-]+(\\.[A-Za-z0-9-]+)\*(\\.[A-Za-z]{2,})$"**;**

**return** Pattern**.**compile**(**regexPattern**).**matcher**(**view**.**getEmail**().**getText**()).**matches**();**

**}**

private boolean checkName**()** **{**

TextField name **=** view**.**getName**();**

**return** name **!=** **null** **&&** **!**name**.**getText**().**equals**(**""**);**

**}**

private boolean checkPW**()** **{**

**return** view**.**getPw**().**getText**().**length**()>**4 **&&**

view**.**getPw**().**getText**().**equals**(**view**.**getPw**().**getText**());**

**}**

**}**

## Utilities

Code der in mehreren Views benötigt wurde.

package at**.**fhooe**.**swe4**;**

//File: Utilities.java

**import** at**.**fhooe**.**swe4**.**model**.**ReceivingOffice**;**

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**ArticleScene**;**

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**DemandScene**;**

**import** at**.**fhooe**.**swe4**.**administration**.**views**.**OfficesScene**;**

**import** at**.**fhooe**.**swe4**.**model**.**dbMock**;**

**import** javafx**.**event**.**ActionEvent**;**

**import** javafx**.**geometry**.**Insets**;**

**import** javafx**.**scene**.**Scene**;**

**import** javafx**.**scene**.**control**.\*;**

**import** javafx**.**scene**.**control**.**cell**.**PropertyValueFactory**;**

**import** javafx**.**stage**.**Modality**;**

**import** javafx**.**stage**.**Stage**;**

**import** javafx**.**stage**.**StageStyle**;**

**import** javafx**.**stage**.**Window**;**

public class Utilities **{**

public static Button createTextButton**(**String id**,** String caption**)** **{**

Button button **=** **new** Button**(**caption**);**

button**.**setId**(**id**);**

button**.**setPadding**(new** Insets**(**5**));**

button**.**setPrefSize**(**50**,**40**);**

button**.**setMinSize**(**50**,**40**);**

**return** button**;**

**}**

public static MenuBar createMenuBar**(**Stage window**)** **{**

MenuItem manageDemand **=** **new** MenuItem**(**"Bedarf verwalten"**);**

MenuItem manageReceivingOffices **=** **new** MenuItem**(**"Annahmestellen verwalten"**);**

MenuItem manageArticles **=** **new** MenuItem**(**"Hilfsgüter verwalten"**);**

Menu adminMenu **=** **new** Menu**(**"Verwaltung"**);**

adminMenu**.**getItems**().**addAll**(**manageDemand**,** manageReceivingOffices**,** manageArticles**);**

manageArticles**.**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleManageArticlesEvent**(**e**,** window**));**

manageDemand**.**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleManageDemandEvent**(**e**,** window**));**

manageReceivingOffices**.**addEventHandler**(**ActionEvent**.**ACTION**,** **(**e**)** **->** handleManageOfficesEvent**(**e**,** window**));**

MenuBar menuBar **=** **new** MenuBar**();**

menuBar**.**getMenus**().**add**(**adminMenu**);**

**return** menuBar**;**

**}**

private static void handleManageOfficesEvent**(**ActionEvent e**,** Stage window**)** **{**

double x **=** window**.**getWidth**();**

double y **=** window**.**getHeight**();**

window**.**setWidth**(**x**);**

window**.**setHeight**(**y**);**

OfficesScene officesScene **=** **new** OfficesScene**(**window**);**

window**.**setScene**(**officesScene**.**getOfficesScene**());**

**}**

private static void handleManageDemandEvent**(**ActionEvent e**,** Stage window**)** **{**

double x **=** window**.**getWidth**();**

double y **=** window**.**getHeight**();**

window**.**setWidth**(**x**);**

window**.**setHeight**(**y**);**

DemandScene demandScene **=** **new** DemandScene**(**window**);**

window**.**setScene**(**demandScene**.**getMainScene**());**

**}**

private static void handleManageArticlesEvent**(**ActionEvent e**,** Stage window**)** **{**

double x **=** window**.**getWidth**();**

double y **=** window**.**getHeight**();**

window**.**setWidth**(**x**);**

window**.**setHeight**(**y**);**

ArticleScene articleScene **=** **new** ArticleScene**(**window**);**

window**.**setScene**(**articleScene**.**getManageArticleScene**());**

**}**

public static void sceneSetup**(**Window owner**,** Stage stage**,** Scene scene**,** String stageTitle**)** **{**

stage**.**setScene**(**scene**);**

stage**.**setTitle**(**stageTitle**);**

stage**.**setMinWidth**(**300**);**

stage**.**setMinHeight**(**300**);**

stage**.**initModality**(**Modality**.**WINDOW\_MODAL**);**

stage**.**initStyle**(**StageStyle**.**UTILITY**);**

stage**.**initOwner**(**owner**);**

**}**

public static TableView**<**ReceivingOffice**>** createOfficesTable**()** **{**

TableView**<**ReceivingOffice**>** officesTable **=** **new** TableView**<>();**

officesTable**.**setId**(**"offices-table"**);**

officesTable**.**setItems**(**dbMock**.**getInstance**().**getOffices**());**

officesTable**.**setColumnResizePolicy**(**TableView**.**CONSTRAINED\_RESIZE\_POLICY**);**

TableColumn**<**ReceivingOffice**,** Integer**>** idCol **=** **new** TableColumn**<>(**"ID"**);**

TableColumn**<**ReceivingOffice**,** String**>** nameCol **=** **new** TableColumn**<>(**"Name"**);**

TableColumn**<**ReceivingOffice**,** String**>** fedStateCol **=** **new** TableColumn**<>(**"Bundesland"**);**

TableColumn**<**ReceivingOffice**,** String**>** distCol **=** **new** TableColumn**<>(**"Bezirk"**);**

TableColumn**<**ReceivingOffice**,** String**>** addCol **=** **new** TableColumn**<>(**"Adresse"**);**

TableColumn**<**ReceivingOffice**,** String**>** statCol **=** **new** TableColumn**<>(**"Status"**);**

idCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"id"**));**

nameCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"name"**));**

fedStateCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"federalState"**));**

distCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"district"**));**

addCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"address"**));**

statCol**.**setCellValueFactory**(new** PropertyValueFactory**<>(**"status"**));**

idCol**.**setMinWidth**(**40**);**

nameCol**.**setMinWidth**(**150**);**

fedStateCol**.**setMinWidth**(**80**);**

distCol**.**setMinWidth**(**80**);**

addCol**.**setMinWidth**(**150**);**

statCol**.**setMinWidth**(**80**);**

officesTable**.**getColumns**().**add**(**idCol**);**

officesTable**.**getColumns**().**add**(**nameCol**);**

officesTable**.**getColumns**().**add**(**addCol**);**

officesTable**.**getColumns**().**add**(**fedStateCol**);**

officesTable**.**getColumns**().**add**(**distCol**);**

officesTable**.**getColumns**().**add**(**statCol**);**

**return** officesTable**;**

**}**

**}**

## Design

/\*File administration.css\*/

#demand-buttons-pane, #article-buttons-pane, #offices-buttons-pane{

**-**fx**-**padding**:** 10**;**

**-**fx**-**spacing**:** 10**;**

**}**

#standard-button{

**-**fx**-**min**-**width**:** 100**;**

**}**

#demand-table, #offices-table, #article-table, #donations-table{

**-**fx**-**max**-**width**:** 1500**;**

**-**fx**-**max**-**height**:** 400**;**

**-**fx**-**border**-**color**:** grey**;**

**}**

#headline{

**-**fx**-**font**-**weight**:** bold**;**

**-**fx**-**font**-**size**:** 20**;**

**-**fx**-**padding**:** 10**;**

**}**

#activeOfficeControl-hbox{

**-**fx**-**max**-**width**:** 700**;**

**-**fx**-**padding**:** 10**;**

**-**fx**-**spacing**:** 20**;**

**-**fx**-**hgap**:** 20**;**

**}**

#article-input-grid, #demand-input-grid, #offices-input-grid{

**-**fx**-**padding**:** 10**;**

**-**fx**-**hgap**:** 20**;**

**-**fx**-**vgap**:** 20**;**

**}**

#demand-screen-start-pane, #articles-scree-start-pane, #offices-screen-start-pane {

**-**fx**-**alignment**:** center**;**

**-**fx**-**spacing**:** 20**;**

**}**

#demand-pane-content, #articles-pane-content, #offices-pane-content{

**-**fx**-**padding**:** 10**;**

**}**

#add-demand-input-grid{

**-**fx**-**padding**:** 10**;**

**-**fx**-**hgap**:** 20**;**

**-**fx**-**vgap**:** 20**;**

**}**

#demand-amount-selection-pane{

**-**fx**-**hgap**:** 20**;**

**-**fx**-**vgap**:** 20**;**

**-**fx**-**spacing**:** 10**;**

**}**

#button-login {

**-**fx**-**padding**:** 5**;**

**-**fx**-**min**-**height**:** 35**;**

**-**fx**-**min**-**width**:** 100**;**

**-**fx**-**font**-**weight**:** bold**;**

**-**fx**-**text**-**fill**:** #FFD600**;**

**-**fx**-**background**-**color**:** #005BBC**;**

**-**fx**-**spacing**:** 10**;**

**}**

#button-login:hover {

**-**fx**-**background**-**color**:** #1B7EE8**;**

**}**

#login-pane{

**-**fx**-**padding**:** 10**;**

**}**

#login-screen-start-pane {

**-**fx**-**alignment**:** center**;**

**-**fx**-**spacing**:** 20**;**

**}**

#filters-pane{

**-**fx**-**padding**:** 10**;**

**-**fx**-**spacing**:** 10**;**

**-**fx**-**hgap**:** 20**;**

**-**fx**-**vgap**:** 20**;**

**}**

#filter-tile-pane{

**-**fx**-**hgap**:** 40**;**

**-**fx**-**vgap**:** 20**;**

**}**

#manage-demand-input-amount{

**-**fx**-**max**-**width**:** 150**;**

**}**

/\*donationsApp.css\*/

#my-donations-button{

**-**fx**-**graphic**:** url**(**'myDonations-button.png'**);**

**-**fx**-**background**-**color**:** none**;**

**-**fx**-**border**-**width**:** 0**;**

**}**

#my-donations-button:hover {

**-**fx**-**graphic**:** url**(**'myDonations-button\_hovered.png'**);**

**-**fx**-**background**-**color**:** none**;**

**-**fx**-**border**-**width**:** 0**;**

**}**

#myDonations-pane{

**-**fx**-**alignment**:** top**-**right**;**

**-**fx**-**padding**:** 5

**}**

#filters-pane {

**-**fx**-**spacing**:** 5**;**

**-**fx**-**padding**:** 10**;**

**}**

#filter-tile-pane{

**-**fx**-**padding**:** 5**;**

**-**fx**-**spacing**:** 5**;**

**-**fx**-**hgap**:** 20**;**

**-**fx**-**vgap**:** 5**;**

**}**

#standard-button{

**-**fx**-**min**-**width**:** 100**;**

**}**

#demand-tile-vbox{

**-**fx**-**border**-**radius**:** 2**;**

**-**fx**-**border**-**color**:** #005BBC**;**

**-**fx**-**border**-**width**:** 2**;**

**-**fx**-**padding**:** 10**;**

**-**fx**-**vgap**:** 5**;**

**}**

#text-search-field{

**-**fx**-**max**-**width**:** 200**;**

**}**

#button-donate, #register-button, #login-button,

#make-donation-button, #tokenClose-btn{

**-**fx**-**padding**:** 5**;**

**-**fx**-**min**-**height**:** 35**;**

**-**fx**-**min**-**width**:** 100**;**

**-**fx**-**font**-**weight**:** bold**;**

**-**fx**-**text**-**fill**:** #FFD600**;**

**-**fx**-**background**-**color**:** #005BBC**;**

**-**fx**-**spacing**:** 10**;**

**}**

#button-donate:hover, #register-button:hover, #login-button:hover,

#make-donation-button:hover, #tokenClose-btn:hover{

**-**fx**-**background**-**color**:** #4293EA**;**

**}**

#donation-scene-scroll-area{

**-**fx**-**padding**:** 10**;**

**-**fx**-**spacing**:** 10**;**

**-**fx**-**max**-**width**:** 440**;**

**}**

#donations-grid{

**-**fx**-**padding**:** 5**;**

**-**fx**-**spacing**:** 5**;**

**-**fx**-**hgap**:** 20**;**

**-**fx**-**vgap**:** 5**;**

**}**

#demand-tile-vbox{

**-**fx**-**alignment**:** center**;**

**-**fx**-**min**-**width**:** 400**;**

**-**fx**-**max**-**width**:** 601**;**

**-**fx**-**hgap**:** 100**;**

**}**

#filtered-results-vbox{

**-**fx**-**spacing**:** 10**;**

**-**fx**-**alignment**:** center**;**

**}**

#register-label, #login-label{

**-**fx**-**font**-**size**:** 18px**;**

**-**fx**-**font**-**weight**:** bold**;**

**}**

#login-VBox, #register-VBox{

**-**fx**-**alignment**:** center**;**

**-**fx**-**padding**:** 20**;**

**-**fx**-**spacing**:** 10**;**

**}**

#registerBox-dialog, #loginBox-dialog, #make-donation-dialog {

**-**fx**-**vgap**:** 15**;**

**-**fx**-**padding**:** 10**;**

**-**fx**-**hgap**:** 15**;**

**-**fx**-**spacing**:** 20**;**

**}**

#make-donation-input-VBox, #token-VBox{

**-**fx**-**spacing**:** 20**;**

**}**

#token-label{

**-**fx**-**font**-**size**:** 20**;**

**-**fx**-**font**-**weight**:** bold**;**

**}**

#token-label, #token-intro-label{

**-**fx**-**text**-**alignment**:** center**;**

**}**

#token-VBox{

**-**fx**-**alignment**:** center**;**

**}**

# Tests

Für das GUI ist es schwierig Unit-Tests zu schreiben. Ich habe daher Use-Cases definiert und dokumentiere diese mit Screenshots. Dadurch soll die Funktionalität der App gezeigt werden.

## Verwaltungsanwendung:

**Use Case 1: Bedarfsmeldung erstellen:**

|  |  |
| --- | --- |
|  | aktive Annahmestelle wird ausgewählt |
|  | Infos für ausgewählte Annahmestelle werden angezeigt.  User klickt auf + Button, um Bedarfsmeldung hinzuzufügen |
|  | Maske öffnet sich. Die aktive Annahmestelle ist vorausgewählt. |
|  | User vervollständigt die Maske |
|  | Der neu angelegte Bedarf wird nun angezeigt |

**Use Case 2: Löschen einer Annahmestelle:**

|  |  |
| --- | --- |
| Ein Bild, das Text enthält.  Automatisch generierte Beschreibung | User hat bereits eine Annahmestelle ausgewählt |
|  | Über die Menüleiste kann der User zur Maske für die Verwaltung der Annahmestellen navigieren. |
|  | User erhält hier die Übersicht über die Annahmestellen. Über die Buttons unterhalb können diese verwaltet werden. |
|  | Die Annahmestelle "Hilfe für die Ukraine" kann nicht gelöscht werden, weil es für diese noch Bedarfsmeldungen gibt. |
|  | Die Annahmestelle "Caritas Salzburg" konnte gelöscht werden, weil dafür keine Bedarfsmeldungen vorliegen. |

## Verwaltungsanwendung:

**Use Case 1:**

* Einen User Registrieren
* Bedarfsmeldungen im Bundesland Wien suchen
* Für eine Meldung eine Spendenanmeldung abgeben.

|  |  |
| --- | --- |
|  | Ein neuer User kann sich über "Registrieren" registrieren. |
|  | Der User muss seinen Namen, Email und Passwort eingeben. Das Passwort muss übereinstimmen und mindestens 5 Zeichen enthalten.  Die E-Mail-Adresse muss zumindest grob der Struktur einer richtigen E-Mail entsprechen (Regex-Überprüfung). |
|  | Der neu registrierte User sieht die Bedarfsmeldungen aller Annahmestellen. |
|  | Über die Filter kann eine Bedarfsmeldung gesucht werden. |
|  | Für die angezeigten Meldungen können Spendenanmeldungen abgegeben werden. Die Menge kann maximal 4 betragen (weil max. 4 Stück benötigt werden). |
|  | Dem User wird nun ein Token angezeigt (aktuell immer der selbe). |
|  | Der Bedarf ist nun um 2 reduziert (was der Menge der vorhin abgegebenen Spendenanmeldung entspricht). |
|  | Wenn der Filter gelöscht wird, werden wieder alle Bedarfsmeldungen angezeigt. |

Natürlich könnten noch weitere Use-Cases demonstriert werden aber bei 101 Seiten und 35 Stunden Aufwand kann man es auch mal gut sein lassen 😉