Java Web Development Basics

Java EE Workshop – JavaServer Faces

PANDA

PANDA (Package Acceptance and National Delivery Application) is a platform for package deliveries, which is a fast-rising Start-Up, which lacks a web application. You have been employed by the KFC (Kung-Fu-Chicken) Corporation to implement a web platform for **PANDA**.

1. Database Requirements

The **Database** of the **PANDA** application needs to support **3 entities**:

User

- Has an Id a UUID String or an Integer.
- Has an **Username**
- Has a Password
- Has an Email
- Has an Role can be one of the following values ("User", "Admin")

Package

- Has an Id a UUID String or an Integer.
- Has a **Description** a string.
- Has a Weight a floating-point number.
- Has a **Shipping Address** a string.
- Has a Status can be one of the following values ("Pending", "Shipped", "Delivered", "Acquired")
- Has an Estimated Delivery Date A LocalDateTime object.
- Has a **Recipient** a **User** object.

Receipt

- Has an Id a UUID String or an Integer.
- Has a **Fee** a decimal number.
- Has an **Issued On** a **LocalDateTime** object.
- Has a **Recipient** a **User** object.
- Has a Package a Package object.

Implement the entities with the correct datatypes.

2. Template Requirements

Guest Templates

These are the templates and functionalities, accessible by Guests (logged out users).











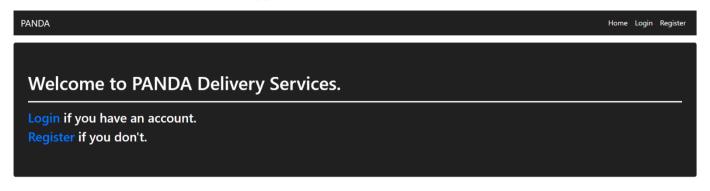






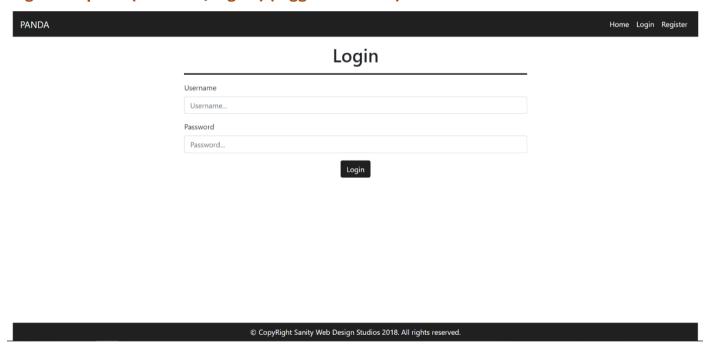


Index Template (route = "/") (logged out user)



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Login Template (route = "/login") (logged out user)















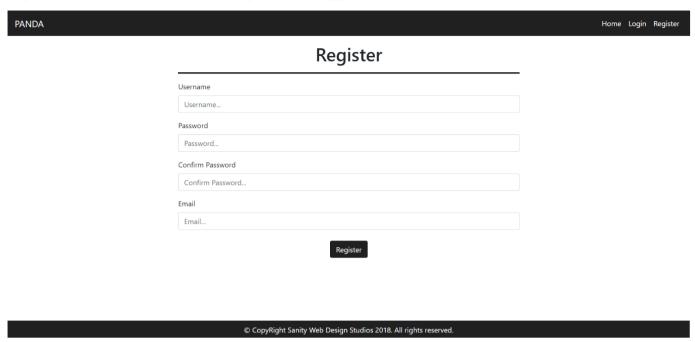








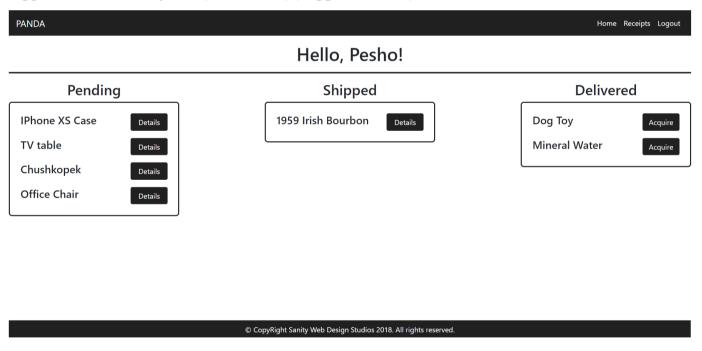
Register Template (route = "/register") (logged out user)



User Templates

These are the templates and functionalities, accessible by Users (logged in users with Role - User).

LoggedIn Index Template (route="/") (logged in user)





















Package Details Template (route="/packages/details?id={id}") (logged in user)

	Package Detai	s
Address	Status	Estimated Delivery Date
ul. Korab-Planina 1	Pending	N/A
We	eight	Recipient
5.6	4 KG	Ivo

© CopyRight Sanity Web Design Studios 2018. All rights reserved. Package Details Package Details Estimated Delivery Date Estimated Delivery Date ul. Korab-Planina 1 Shipped 26/09/2019 ul. Korab-Planina 1 Delivered Weight Recipient Weight Recipient 5.64 KG Ivo Description Description IPhone XS Case IPhone XS Case

NOTE:

- If the package's status is Pending, it should NOT have an Estimated Delivery Date, and "N/A" should be presented.
- If the package's status is **Shipped**, it will have an **Estimated Delivery Date**. In that case the **date** should presented instead of "N/A". (Example: "29/02/2016").
- If the **package's status** is **Delivered** or **Acquired**, instead of the **date**, "**Delivered**" should be presented.



















Receipts Template (route="/receipts") (logged in user)

PANDA Home Recei							
My Receipts							
Id	Fee	Issued On	Recipient	Actions			
fbb536f4-7463-41d2-8650-4d1c87de722b	\$15.06	26/09/2019	Ivo	Details			
7c62da68-3875-44ba-815d-99518039b946	\$1344.72	15/11/2018	Ivo	Details			

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Receipt Details Template (route="/receipts/details?id={id}") (logged in user)

PANDA	Home Receipts Logout				
Receipt Details					
Receipt Number:	fbb536f4-7463-41d2-8650-4d1c87de722b				
Issued On:	26/09/2019				
Delivery Address:	ul. Korab-Planina 1				
Package Weight (KG):	5.64				
Package Description:	IPhone XS Case				
Recipient:	Ivo				

Total: \$15.06

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Admin Templates

These are the templates and functionalities, accessible by Admins (logged in users with Role - Admin).













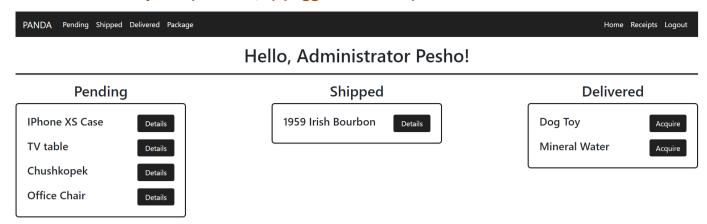








Admin Index Template (route="/") (logged in admin)

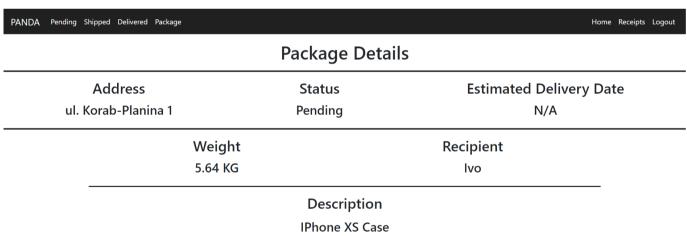


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The navigation links above should lead to:

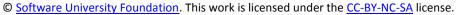
- [Pending] Pending Packages
- [Shipped] Shipped Packages
- [Delivered] Delivered Packages
- [Package] Create Package

Package Details Admin Template (route="/packages/details?id={id}") (logged in admin)



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PANDA Pending Shipped Delivered Package		Home Receipts Logout	PANDA Pending Shipped	Delivered Package		Home Receipts Logout
	Package Details	;			Package Deta	ils
Address ul. Korab-Planina 1	Status Shipped	Estimated Delivery Date 26/09/2019		dress o-Planina 1	Status Acquired	Estimated Delivery Date Delivered
Weig 5.64		Recipient Ivo		Weight 5.64 KG		Recipient Ivo
	Description IPhone XS Case				Description IPhone XS Case	
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NOTE:

- If the package's status is Pending, it should NOT have an Estimated Delivery Date, and "N/A" should be presented.
- If the package's status is **Shipped**, it will have an **Estimated Delivery Date**. In that case the **date** should presented instead of "N/A". (Example: "29/02/2016").
- If the package's status is **Delivered** or **Acquired**, instead of the **date**, "**Delivered**" should be presented.

Receipts Admin Template (route="/receipts") (logged in admin)

PANDA Pending Shipped Delivered Package Home Reco							
My Receipts							
Id	Fee	Issued On	Recipient	Actions			
fbb536f4-7463-41d2-8650-4d1c87de722b	\$15.06	26/09/2019	Ivo	Details			
7c62da68-3875-44ba-815d-99518039b946	\$1344.72	15/11/2018	Ivo	Details			

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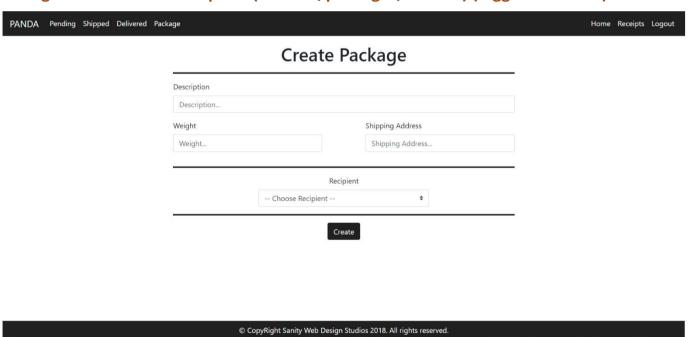


Receipt Details Admin Template (route="/receipts/details?id={id}") (logged in admin)



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Package Create Admin Template (route="/packages/create") (logged in admin)



NOTE: The **Recipients** field is a **dropdown menu**, with **all the registered users** in the **application** (including **yourself**). The **primarily selected option** should be "-- **Choose Recipient** --" and it should be **disabled**, so that it **cannot** be **selected**.



















Pending Packages Admin Template (route="/packages/pending") (logged in admin)

PANDA Pending Shipped Delivered Package Home Receipts Logout **Pending Shipment** # Description Weight **Shipping Address** Recipient **Actions** 1 **IPhone XS Case** 5.64 KG ul. Korab-Planina 1 Ship 503.64 KG ul. Tintyava 15-17 2 Mineral Water Pesho Ship

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Shipped Packages Admin Template (route="/packages/shipped") (logged in admin)

Shipped						
#	Description	Weight	Estimated Delivery Date	Recipient	Actions	
1	IPhone XS Case	5.64 KG	25/09/2019	lvo	Deliver	
2	Mineral Water	503.64 KG	12/11/2018	Pesho	Deliver	

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PANDA Pending Shipped Delivered Package

















Home Receipts Logout

Delivered Packages Admin Template (route="/packages/delivered") (logged in admin)

PANDA Pending Shipped Delivered Package Home Receipts Logo						
Delivered						
#	Description	Weight	Shipping Address	Recipient	Actions	
1	IPhone XS Case	5.64 KG	ul. Korab-Planina 1	Ivo	Details	
2	Mineral Water	503.64 KG	ul. Tintyava 15-17	Pesho	Details	

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All of the templates will be given to you in the form of HTML files, so make sure you implement your pages correctly.

NOTE: The templates should look **EXACTLY** as shown above.

NOTE: The templates do **NOT require additional CSS**. Only **bootstrap** and the given **style.css** are enough.

NOTE: In the given **style.css** you'll see some helpful classes "**bg-panda**", "**text-panda**", "**border-panda**". "border-panda" will help you with the border of the blocks on the Index Pages.

3. Functional Requirements

The Functionality Requirements describe the functionality that the Application must support.

The application should provide Guest (not logged in) users with the functionality to:

- Login
- Register
- View the Guest Index page

The **application** should provide **Users** (logged in) with the functionality to:

- Logout
- View their Packages
- View details about a Package
- View their Receipts
- View details about a Receipt

The application should provide Admins (logged in, with role - Admin) with the functionality to:

- Logout
- View their Packages
- View details about a Package
- View their Receipts



















- View details about a Receipt
- View all Pending Packages
- View all Shipped Packages
- View all Delivered Packages
- View details about all Delivered Packages
- Ship Packages
- Deliver Packages

Users

The first registered User should be assigned a role - "Admin". Every User after that, should have a role - "User".

Users have Packages, which are created and controlled for them, by an Administrator.

Users can view Details about their own Packages.

When a Package is delivered, a User can acquire it, at which point a Receipt is created with that Package and that User.

Users can view their Receipts, and details about each Receipt.

Administrators (role = "Admin") are essentially like normal Users. They can also have Packages, which are delivered, acquired and they also have Receipts.

Administrators can also create Packages for a specific User.

- They can also view all **Pending Packages**, and they can **Ship** them.
- They can also view all Shipped Packages, and they can Deliver them.
- They can also view all Delivered Packages, and they can view Details about them.

Packages

When Packages are created, they are created with a Description, a Weight, a Shipping Address and a Recipient User.

- Upon creation, the **Status** of a **Package** should be set to **Pending**.
- Upon creation, the **Estimated Delivery Date** of a **Package** should be set to **NULL**.

Functionality

Pending Packages

A Pending Package, can be Shipped by an Administrator, by clicking on the [Ship] button from the Pending Packages Page. At that moment the Package Status becomes "Shipped" and the Estimated Delivery Date is to be set to a random of 20-40 days from then.

- All Pending Packages are presented on the Pending Packages Page.
- A **User** can view his **Pending Packages** on his **Index Page** in the **Pending** rectangular block.
- A User can view details about each one of his Pending Packages from his Index Page, by clicking on the [Details] button.

Shipped Packages

A Shipped Package, can be Delivered by an Administrator, by clicking on the [Deliver] button from the Shipped Packages Page. At that moment the Package Status becomes "Delivered".

All Shipped Packages are presented on the Shipped Packages Page.



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- A User can view his Shipped Packages on his Index Page in the Shipped rectangular block.
- A User can view details about each one of his Shipped Packages from his Index Page, by clicking on the [**Details**] button.

Delivered Packages

A Delivered Package, can be Acquired by the Package's Recipient, by clicking on the [Acquire] button from his Index Page. At that moment the Package Status becomes "Acquired" and a Receipt is generated to the **User** for that **Package**.

- All Delivered Packages are presented on the Delivered Packages Page.
- A **User** can view his **Delivered Packages** on his **Index Page** in the **Delivered** rectangular block.
- A User can Acquire each one of his Delivered Packages from his Index Page, by clicking on the [Acquire] button.

NOTE: The INDEX PAGE visualizes ONLY the CURRENTLY LOGGED IN USER / ADMIN'S PACKAGES.

NOTE: Acquired Packages are viewable only by Administrators on the Delivered Packages Page.

NOTE: Administrators can view details about ALL Delivered / Acquired Packages from the **Delivered Packages Page**, by clicking on the [**Details**] button.

Receipts

Receipts are just data entities. They are created when a Package is Acquired by its Recipient User. A Receipt should be created with a Package and a Recipient User.

Upon creation, a Receipt's Fee should be set to the Package's Weight multiplied (*) by 2.67.

Upon creation, a **Receipt**'s **IssuedOn** should be set to the **current moment**.

4. Security Requirements

The **Security Requirements** are mainly access requirements. Configurations about which users can access specific functionalities and pages.

- Guest (not logged in) users can access Index page and functionality.
- **Guest** (not logged in) users can access **Login** page and functionality.
- Guest (not logged in) users can access Register page and functionality.
- Users (logged in) can access User LoggedIn Index page and functionality.
- **Users** (logged in) can access **User Package Details** page and functionality.
- Users (logged in) can access User Receipts page and functionality.
- **Users** (logged in) can access **User Receipt Details** page and functionality.
- Users (logged in) can access User Package Acquire functionality.
- Users (logged in) can access Logout functionality.
- **Admins** (logged in) can access **every functionality** a **normal** logged in **User** can.
- Admins (logged in) can access Admin LoggedIn Index page and functionality.
- Admins (logged in) can access the Admin Package Create page and functionality.
- Admins (logged in) can access the Admin Pending Packages page and functionality.
- Admins (logged in) can access the Admin Shipped Packages page and functionality.
- Admins (logged in) can access the Admin Delivered Packages page and functionality.
- **Admins** (logged in) can access the **Admin Package Ship** functionality.
- **Admins** (logged in) can access the **Admin Package Deliver** functionality.

















