

Assignment 1	Project Summary
Course	Fullstack Application Development with Node.js + Express.js + React.js - 2020

Project author		
№	Pseudonym	Face-to-face/ online
1	Stanko1v9	online

Project name	Payments Tracker
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### 1. Short project description (Business needs and system features)

These days we make a ton of payments both online and offline and at the end of the month when you do not know where you spent your money you are angry and wished you had kept track of you spendings. The **Payments Tracker** provides ability for users to track their spendings, add subscriptions to different services create custom categories. The system's front end will be implemented using **React.js** as front-end, and **Node.js + express** as backend technologies. Routing between pages will be done client side using **React Router**. The backend will be implemented as a **REST/JSON API** using JSON data serialization. The DB will be MongoDB. The main user roles (actors in UML) are:

- *Anonymous User - can see only the Register and About screen*
- *Registered User – can add payments to their ledger, create custom categories for their ledger, add monthly subscriptions (automatic monthly additions to their ledger), create group ledgers with other Registered Users, add custom categories to their group ledgers.*
- *Administrator (extends Registered User) – can manage (create, edit user data and delete) all Registered Users, as well as creating base categories for all types of ledgers.*

### 2. Main Use Cases / Scenarios

Use case name	Brief Descriptions	Actors Involved
2.1. Register	<i>Anonymous User</i> can register in the system by providing a valid e-mail address, username, and choosing password.	<i>Anonymous User, Administrator</i>

<b>2.2. Change User Data</b>	<i>Registered User can view and edit their personal User Data.</i> <i>Administrator can view and edit User Data of all Users.</i>	<i>Registered User, Administrator</i>
<b>2.3. Create Ledger</b>	<i>Registered User can create a personal or collaborative ledger.</i>	<i>Registered User</i>
<b>2.4. Add Payments to Ledger</b>	<i>Registered User can add payments to a personal or collaborative ledger.</i>	<i>Registered User</i>
<b>2.5. Add Subscriptions to Ledger</b>	<i>Registered User can add subscriptions to a personal or collaborative ledger.</i>	<i>Registered User</i>
<b>2.6. Add subcategory for a Ledger</b>	<i>Registered User can add subcategory to a personal or collaborative ledger.</i>	<i>Registered User</i>
<b>2.7. Add base category</b>	<i>Administrator can add base categories to the system.</i>	<i>Administrator</i>
<b>2.8. Delete Ledger</b>	<i>Registered User can delete a personal or collaborative ledger.</i>	<i>Registered User</i>
<b>2.9. Delete Payments from a Ledger</b>	<i>Registered User can delete payments from a personal or collaborative ledger.</i>	<i>Registered User</i>
<b>2.10. Delete Subscriptions from a Ledger</b>	<i>Registered User can delete subscriptions from a personal or collaborative ledger.</i>	<i>Registered User</i>
<b>2.11. Delete subcategory from a Ledger</b>	<i>Registered User can delete a subcategory from a personal or collaborative ledger.</i>	<i>Registered User</i>
<b>2.12. Delete base category</b>	<i>Administrator can delete base categories to the system.</i>	<i>Administrator</i>
<b>2.13. View Graphical Data for a Ledger</b>	<i>Registered User can view the graphical data for a personal or collaborative ledger.</i>	<i>Registered User</i>

3. Main Views		
View name	Brief Descriptions	URI
3.1. Home	Presents the introductory information for the purpose of the system as well as detailed instructions how to start using it. Prominently offers ability to register.	/
3.2. About	Presents information about the <i>Payments Tracker</i> project and his owner.	/about
3.3. User Registration	Presents a view allowing the <i>Anonymous Users</i> to register in <i>Payments Tracker</i> system.	/register
3.4. Login	Presents a view allowing the users to login.	/login
3.5. User Data	Presents ability to view and edit personal <i>User Dat</i>	/personal
3.6. Users	Presents ability to manage (CRUD) Users and their User Data (available for <i>Administrators</i> only).	/users
3.7. Ledger	Presents ability to manage a ledger.	/ledger/:id
3.8. Ledger Creation	Presents ability to create a ledger.	/ledger
3.9. Add subcategories to a Ledger	Presents ability to add subcategories to a ledger.	/ledger
3.10. Add items to a Ledger	Presents ability to add payments to a ledger.	/ledger

4. API Resources (Node.js Backend)		
View name	Brief Descriptions	URI
4.1. Users	GET <i>User Data</i> for all users, and POST new <i>User Data</i> . Available only for <i>Administrators</i> .	/api/users
4.2. User Data	GET, PUT, DELETE <i>User Data</i> for <i>User</i> with specified <i>userId</i> .	/api/users/:userId
4.3. Login	POST <i>User Credentials</i> (e-mail address and password) and receive a valid <i>Security Token</i> to use in subsequent API requests.	/api/login
4.4. Logout	POST a logout request for ending the active session with <i>Payments Tracker</i> system, and invalidating the issued <i>Security Token</i> .	/api/logout
4.5. Ledger	GET, DELETE ledge	/ledger/:id

<b>4.6. Ledger Creation</b>	PUT ledger. Create ledger.	<i>/ledger</i>
<b>4.7. Add Items to a Ledger</b>	UPDATE ledger. Adding payments	<i>/ledger/:id/payments</i>
<b>4.8. Add subcategories to a Ledger</b>	UPDATE ledger. Adding subcategories.	<i>/ledger/:id/subcategories</i>
<b>4.9. About</b>	GET about information	<i>/api/about</i>