Software Requirements Specification

For "Umelie Ruchki"

Prepared by:

Alena Freidline

Alena Shonina

Nikolai Tarasiuk

Organisation "BA Trio"

Created on 08/06/2019

Table of Contents

Table of Contents …… 2
Revision History …… 3
1. Introduction…… 3
1.1 Purpose…… 3
1.2 Document Convention…… 3
1.3 Project Scope …… 3
1.4 References …… 3
2. Overall Description …… 4
2.1 Product Perspective …… 4
2.2 Major Features …… 4
2.3 User Classes…… 4
2.4 User Documentation…… 5
3. Software Specifications …… 5
3.1 Create User Account …… 5
3.2 Link a card to account …… 8
3.3 Log in …… 11
3.4 Submit feedback …… 13
3.5 View My orders…… 15
3.6 Response to User…… 17
3.7 Add tool to catalog…… 19
3.8 Block user…… 21
3.9 Add a new post…… 23
3.10 User Income Report Generation…… 27
3.11 Manage notifications…… 31
4. Non-functional requirements …… 33
4.1 Performance requirements …… 33
4.2 Safety requirements …… 34
4.3 Security requirements …… 34
4.4 Availability requirements …… 34
4.5 Usability requirements …… 34
4.6 Reliability requirements …… 34
4.7 Scalability requirements …… 34
4.8 Efficiency requirements …… 34
5. Business Rules …… 35
6. Appendices …… 35
6.1 CRUD Matrix …… 35
6.2 State Machine Diagram …… 36

Revision History

Name	Date	Reason For Changes	Version
Alena Freidline Alena Shonina Nikolai Tarasiuk	07/31/2019	Draft creation	1.0
Alena Freidline Alena Shonina Nikolai Tarasiuk	08/08/2019	Final Version	1.1

1. Introduction

1.1 Purpose

The objective of this document is to outline the main features and system requirements for the platform Umelie Ruchki. It will show what platform will do and what requirements are set for its effective functioning. This document is intended for both the stakeholders and the developers of the platform.

1.2 Document Convention

This Document was created based on the IEEE Template for System Requirement Specification Documents.

1.3 Project Scope

Vision and Scope is defined in Vision and Scope documentation link.

1.4 References

#	Source	Link
1	IEEE Template for System Requirement Specification Documents	SRS_Template
2	Project Guidelines	Umelie_Ruchki_Case_1
3	Vision and Scope Document	Vision_and_Scope_Document
4	Android Guidelines	Android Guidelines, Build on Android

5	Prototype	Prototype
6	Webportal	Web Portal for Admin
7	Data Protection Regulations 2019	Data_2019

2. Overall Description

2.1 Product Perspective

The platform Umelie Ruchki is unique to Belarusian market as well as to other markets. There is no similar product that can provide similar sets of features in one place. The system is expected to evolve over at least 4 releases ultimately allowing for complete streamlining of rental process, notifications and other features specified in its Vision and Scope Document.

2.2 Major Features

- ❏ MF-01: Order Management
- ❏ MF-02: Payment Management
- ❏ MF-03: Reporting
- ❏ MF-04: Advertisement Management
- ❏ MF-05: Notification Management
- ❏ MF-06: User Management
- ❏ MF-07: Catalogue Management
- ❏ MF-08: Commission Management

2.3 User Classes

User classes and characteristics are as follows:

User	Person who downloads Umelie Ruchki app on their device, creates an account, assigns a card to the account and confirms their identity
Manager	Employee/partner/subcontractor who is assigned a type of an access to the platform though web application
Administrator	Employee/Product Owner of the platform who creates an account on the web app and has permissions to manage managers and users as well as their roles and overall app maintenance

2.4 User Documentation

After official approval of the solution, detailed user guide manual will be created and made available for training and implementation (before 3rd release).

3. Software Specifications

3.1. Create a User Account

Specification ID - 00001

Title: Create a User Account

Epic: Manage User Accounts

Status: BA In progress

Customer: Roman Palchikov

Created By: BA TRIO

Business Objective

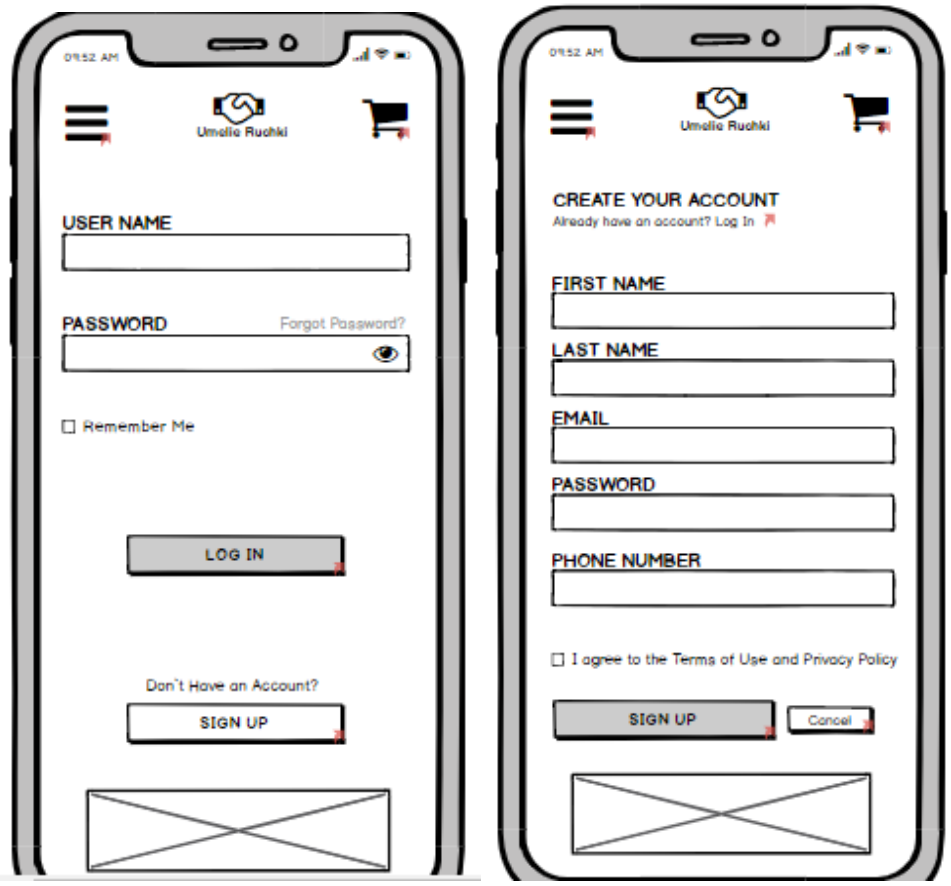
Customer account is used to receive access to the platform and be able to use its major features.

Attributes

Element	Description	Mandatory Y/N	Alterable Y/N
Sign up button	Clicking this button information about User can be entered	Y	N
Name	It allows Format Latin/ Cyrillic letters. No digits	Y	Y

Phone number	The fields accepts only numbers. Seen as (XXX)-XXX-XX-63	Y	Y
E-mail	Only Latin letters, digits, special character @ are accepted. Limited # 30	Y	Y
Password	Only Latin letters, digits, special character @ are accepted. Limited # 30	Y	Y
Confirm password	Only Latin letters, digits, special character @ are accepted. Limited # 30 Must be identical to password entered previously	Y	Y
Button Sign up	Confirm all the input information.	Y	N
Checkbox User Agreement	Comply and agree with user agreement for using the app.	Y	N
Button Cancel	Cancel all the input information.	Y	N

Prototype



Flow

1. Clicking the “Sign up” button the system must open the window with registration form to be filled in.
2. The system must inform a user about incorrect data if he enters numbers in Name or Last Name fields.
3. The system must inform user if phone number doesn't include area code.
4. The system must prompt user to agree with the Terms of Use and Privacy Policy before enabling “Sign Up” button.
5. The system must clear all input data once the “Cancel” button is pressed.
6. The system must notify user if username is not unique.
7. City must be chosen from a drop-down list
8. The system must create a user profile upon the click on the “Sign up” button. This button is disabled until all the required fields are filled in.

Acceptance Criteria:

AC1: The user manages to create an account
AC2: The user chooses not to create an account and no their personal data is stored on servers
AC3: Every customer with a regular set of information (phone/ email) can become a member
AC4: Sign Up button is not active until The agreement is clicked
AC5: After pressing “sign up”, user is taken to the home page.

3.2 Link a card to account

Specification ID - 00002

Title: Link a card to the account

Epic: Manage User Account

Status: BA In progress

Customer: Roman Palchikov

Created By: Alena Freidline, BA in Training

Business Objective

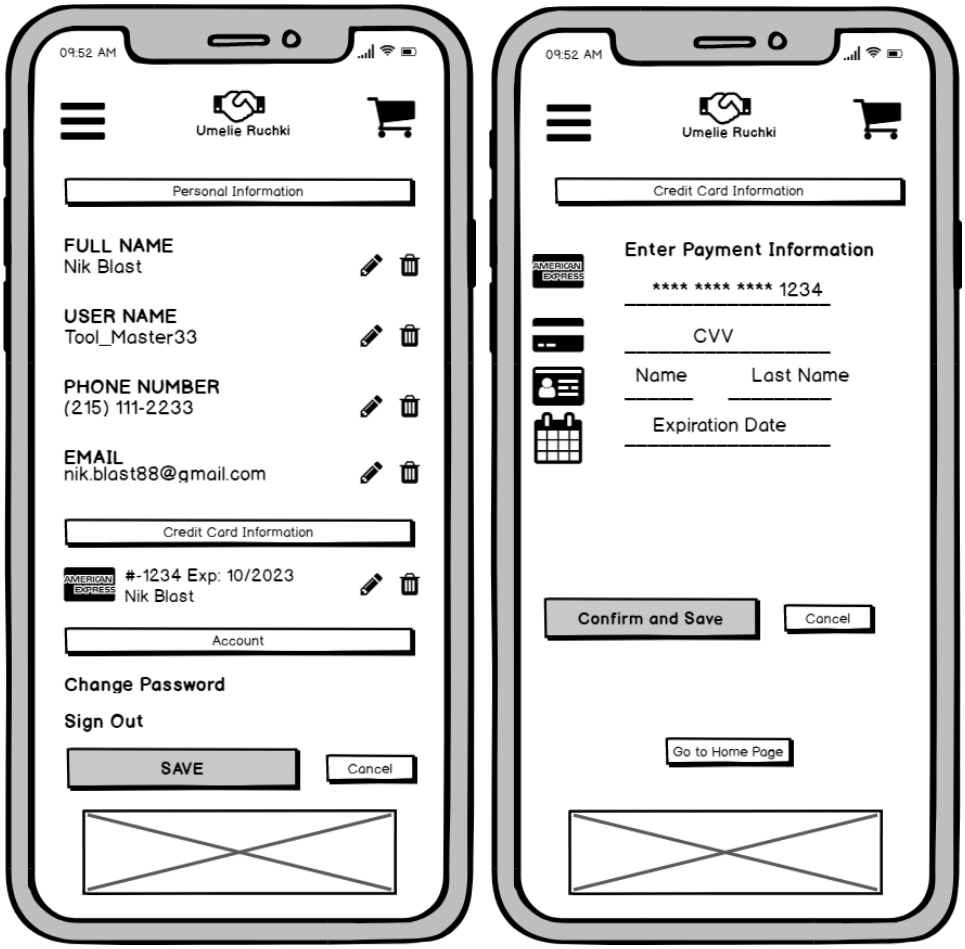
Customer Credit/Debit card is used to assure the person is real, to authorise the rental transaction and as a proof of damaged covered if caused during the rental process.

Attributes

Element	Description	Mandatory Y/N	Alterable Y/N
Card Number	16-digit number of a card. Present as: **** **** **** 1234	Y	Y
CVV	Card verification value - is a 3 digit number located on the back of a payment card	Y	Y
Cardholder Name	User’s First Name as seen on the card Format Latin/ Cyrillic letters.	Y	Y

Cardholder Last name	User's Last Name as seen on the card Format Latin/ Cyrillic letters.	Y	Y
Expiration date	4-digit number that stands for 2 digits for a month and 2 digits for a year	Y	Y
Confirm and save button	Save recently entered credit card info and link it to the account	Y	N
Button Cancel	Stops the process of adding a card or editing a card and takes the user back to account summary tab.	Y	N

Prototype



Flow

1. By Clicking the Credit Card Button, the system shall open a window to fill in payment information;
2. The system shall notify user if credit card number is in the wrong format;
3. The system shall link the credit card to the account as soon as the Save and Confirm Button is pressed;
4. The system shall clear all input data once the "Cancel" button is pressed;
5. The system shall take user to the Save account info tab as as soon as the Save and Confirm Button is pressed in Payment Tab.

Acceptance Criteria:

AC1: The user manages to link a credit/ debit card to an account
AC2: The button "Confirm and Save" Should not be active until all fields are filled in
AC3: The system notifies user if the name on the card doesn't match the name on the account
AC4: The system notifies user if input data is not confirmed by the billing system

Limitations and Exclusions

LE1: User should link a payment card that was issued strictly in his name as it is used as an extra verification tool
LE2: Out-of-County credit cards and cards in foreign currency are not permitted

3.3 Log in

Specification ID - 00003

Title: Log in

Epic: Manage User Account

Status: BA In progress

Customer: Roman Palchikov

Created By: Alena Freidline, BA in Training

Business Objective

Log in procedure allows to authorise user and open access to the portal to be able to either search for a tool or rent one if needed.

Attributes

Element	Description	Mandatory Y/N	Alterable Y/N
User Name	Only Latin symbols, digits, special characters *_$. Length 15. Shall not match real name	Y	N
Password	Only [A-z; 0-9] incl ! # (). Length 15.	Y	N
Eye Sign	By clicking it, user can unhide the entered password and check for discrepancies	N	N
Remember me button	By clicking it, the system shall save Username for further log-ins.	N	N

Login Button	Automatically confirms id the user exits in the database and whether the login info is correct.	Y	N
Sign Up Button	Takes User to the Create Account screen of the app	Y	N

Prototype



Acceptance Criteria:

AC1: The user manages to log in to the app
AC2: The system notifies user if the login and password combination doesn't exist in the user database

3.4 Submit Feedback

Specification ID - 00004

Title: Submit a Feedback

Epic: Manage Notifications

Status: BA In progress

Customer: Roman Palchikov

Created By: Alena Freidline, BA in Training

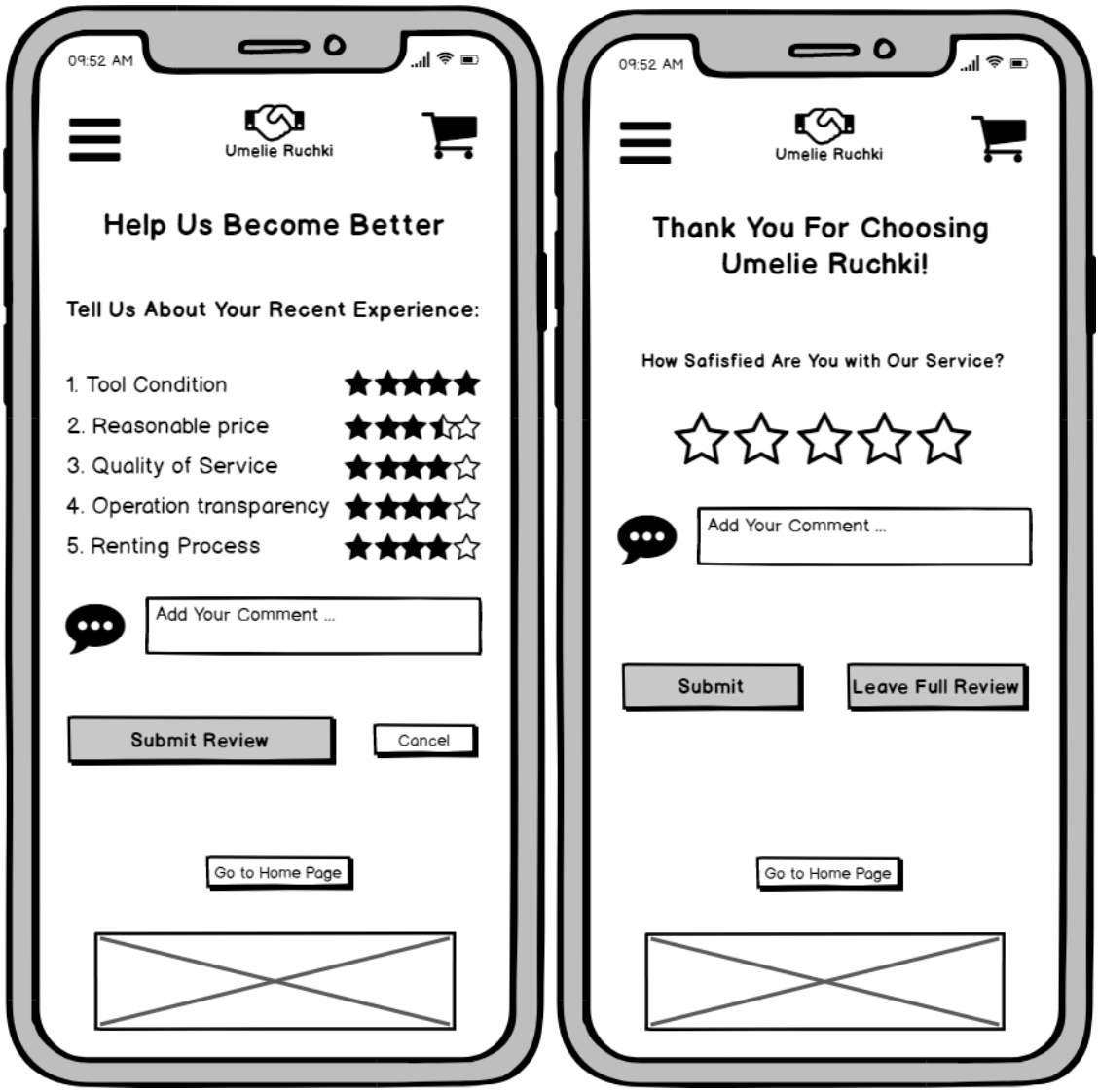
Business Objective

Feedback field is created to receive first-hand user satisfaction data in different areas. Added manual text input widens the input of data that cannot be measured quantitatively.

Attributes

Element	Description	Mandatory Y/N	Alterable Y/N
Star Ranking	Measures experience by clicking appropriate number of stars. 1 star is a must to submit the review	Y	Y
Add Comment Field	Allows to input both digits and text up to 1000 symbols.	N	Y
Submit Button	By clicking it, the system shall save rankings provided by the user	Y	N
Cancel Button	Takes User back to the Home Page	Y	N
Leave Full Review Button	Takes User to a separate screen to provide detailed experience breakdown and upload pictures	Y	N

Prototype



Acceptance Criteria:

AC1: The user submits feedback
AC2: The user submits ranks the app
AC3: The user can submit the rankings without adding a comment
AC4: The user shall choose at least one star to activate Submit Review

3.5 View My Orders

Specification ID - 00005

Title: View My Orders

Epic: Order Management

Status: BA In progress

Customer: Roman

Created By: Alena Freidline, BA in Training

Business Objective
My Orders function allows user to view, get additional info and reorder the items he previously ordered

Attributes

Element	Description	Mandatory Y/N	Alterable Y/N
My Orders	Takes User to the Page with purchase History	Y	N
Info Button	Refers to the Tool Order Info	Y	N
Clickable Button	Gives User the option to add items to the cart	Y	Y
Order Again	Confirms Users desire to reorder the chosen items	Y	N
Write a Review	Takes User to A review Page.	Y	N
Browse all Inventory	Takes User to the Original Search Tools Page	Y	N

Prototype



Flow

1. By Clicking My Orders Button, the system shall open a window displaying all completed and pending orders from newest to oldest within 6 months period;
2. The system shall notify user if the tool is currently unavailable to reorder.

Acceptance Criteria:

AC1: The Order again button should remain inactive until an item is clicked for reorder.

AC2: After pressing Browse all inventory, the system shall take user to the Search window where tools will be presented by association to the last viewed until other parameters are entered.
AC2: The system notifies user if the searched item does not exist in the database

3.6 Respond to user

Specification ID - 00006

Title: Respond to User

Epic: Manage User Message

Status: BA In progress

Customer: Roman Palchikov

Creator: Nikolai Tarasiuk

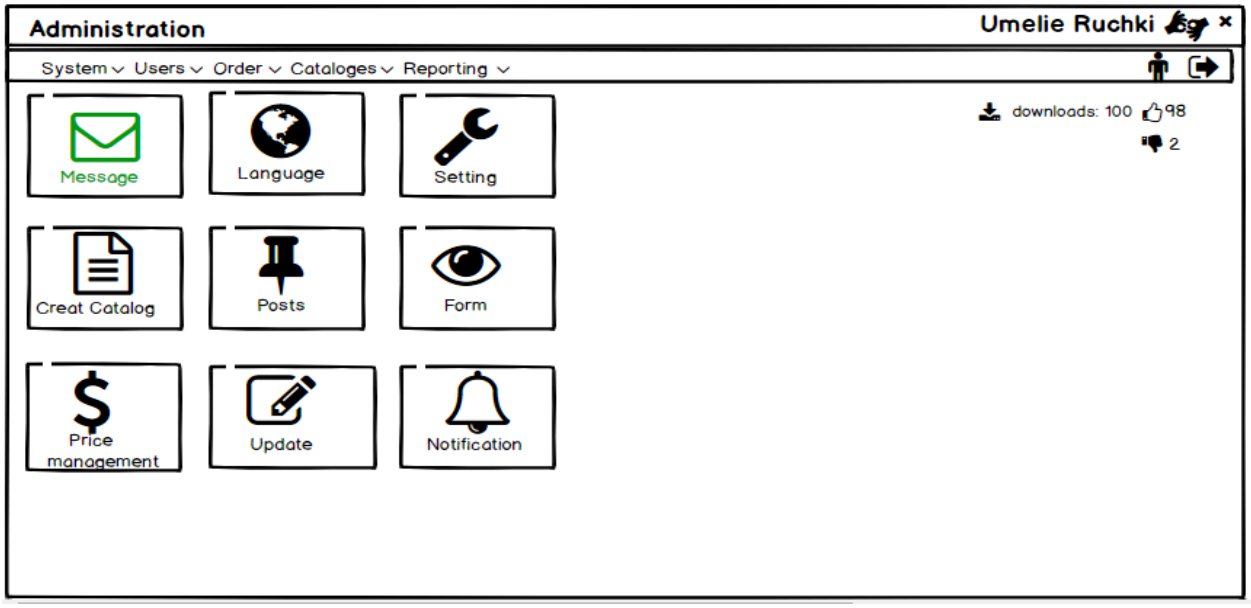
Rationale

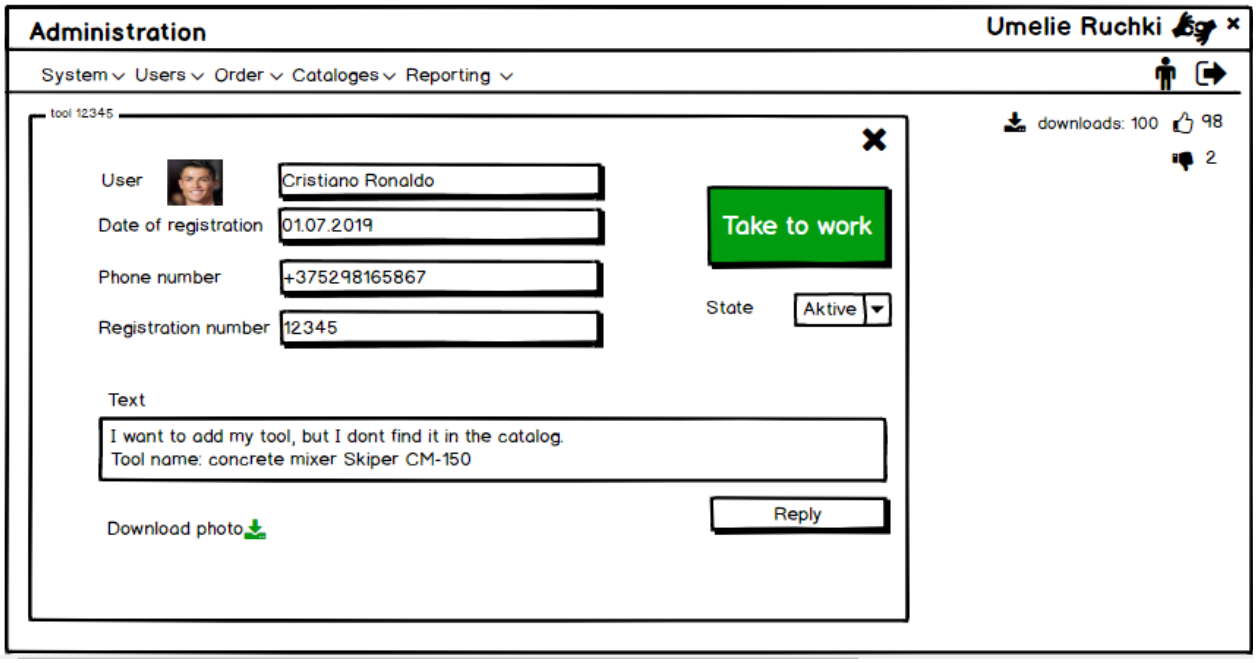
This Specification describes how an administrator responds to a user message

Attributes and controls

Element	Description	Mandatory Y/N	Alterable Y/N
Button message	By clicking on this button, admin can look at the incoming message	Y	N
Button take to work	By clicking on this button, admin can reply to the message	Y	N
State	The field shows whether the user has closed his message	Y	Y
Download photo	By clicking on this button, you can download the client's photo. Form: jpg, png, gif	Y	Y
Button reply	By clicking on this button, admin can send a response to the client. Word count:unlimited	Y	Y
Button Cancel	Closes the message; the status doesn't change	Y	N

Prototype





Flow

1. Clicking the “Message” button the system must open message flow window
2. The system must show messages by time of arrival
3. The system must show user information
4. The system must show the message text
5. The system must show the state of the message

6. The system must show the added file, if there is no file, continue to work without the file.
7. After clicking the “Take to work” button, the system must allow to respond to the message
8. After replying to the client’s message, the system must allow changing the state of the message
9. After pressing the “Close” button , the system should return to the original menu

Acceptance Criteria:

AC1: Only the administrator can see the message
AC2: Only the administrator can reply to the message
AC3: Only administrator can download photo
AC4: The replay button is unavailable until the administrator has accepted the message for work
AC5: Administrator can change the status of a message only after replying to the message.

3.7 Add a tool to catalog

Specification ID - 00007

Title: Add a tool to catalog

Epic: Manage Catalog

Status: BA In progress

Customer: Roman Palchikov

Creator: Nikolai Tarasiuk

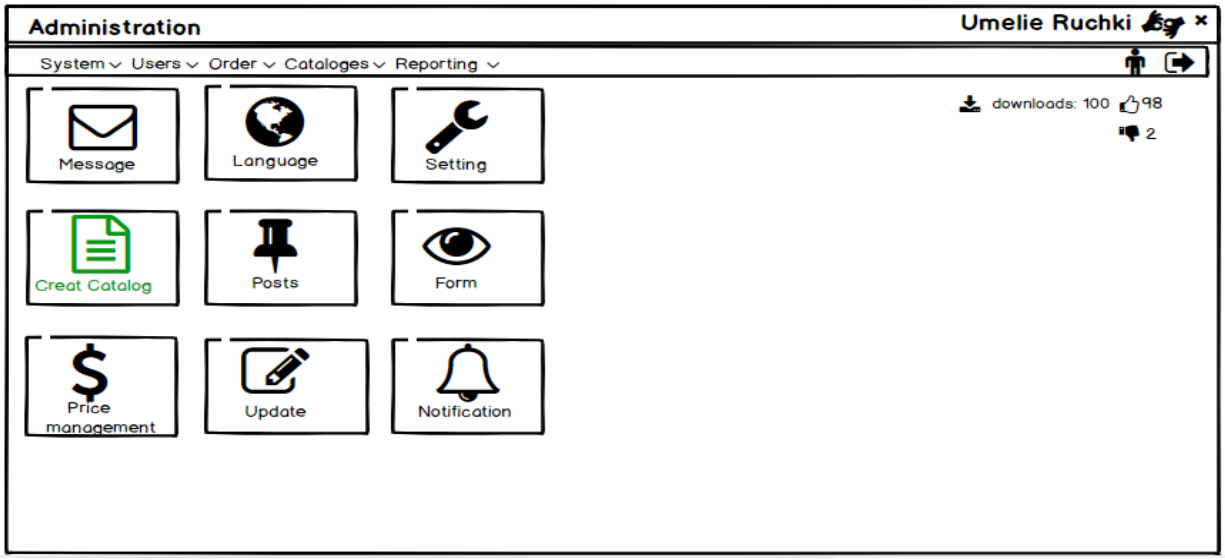
Rationale

As a Administrator I want to add a tool to catalog

Attributes and controls

Element	Description	Mandatory Y/N	Alterable Y/N
Button catalog	By clicking on this button, admin can add the tool to the catalog.	Y	N
Tool Name	Enter tool full designation	N	N
Specifications	Basic and advanced tool parameters	N	N
Photo	Add photo uploaded by client	N	N
Button save	Saved after filling in the parameters	Y	N
Code	Add a unique code	N	N
Button Cancel	Closes the window without saving	Y	N

Prototype





Flow

1. Clicking the “Great catalog” button the system must open a window where can add a tool
2. The system must notify the user if all fields are empty;
3. The system should notify the user if the photo isn't uploaded;
4. The system must assign a unique tool code;
5. After pressing the button “Save” the system adds the tool to the catalog

Acceptance Criteria:

AC1: Only administrator can create a catalog
AC2: Can save the tool in the catalog by filling out all the attributes
AC3: The system notifies the administrator if the save was successful

3.8 Block user

Specification ID - 00008

Title: Block User

Epic: Manage User

Status: BA In progress

Customer: Roman Palchikov

Creator: Nikolai Tarasiuk

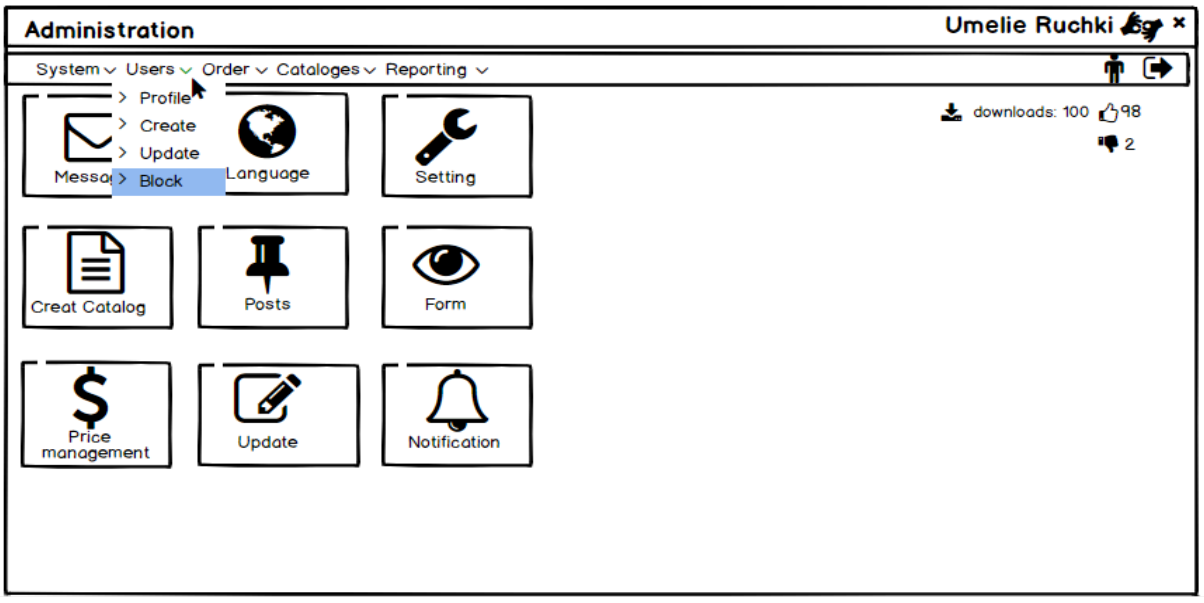
Rationale

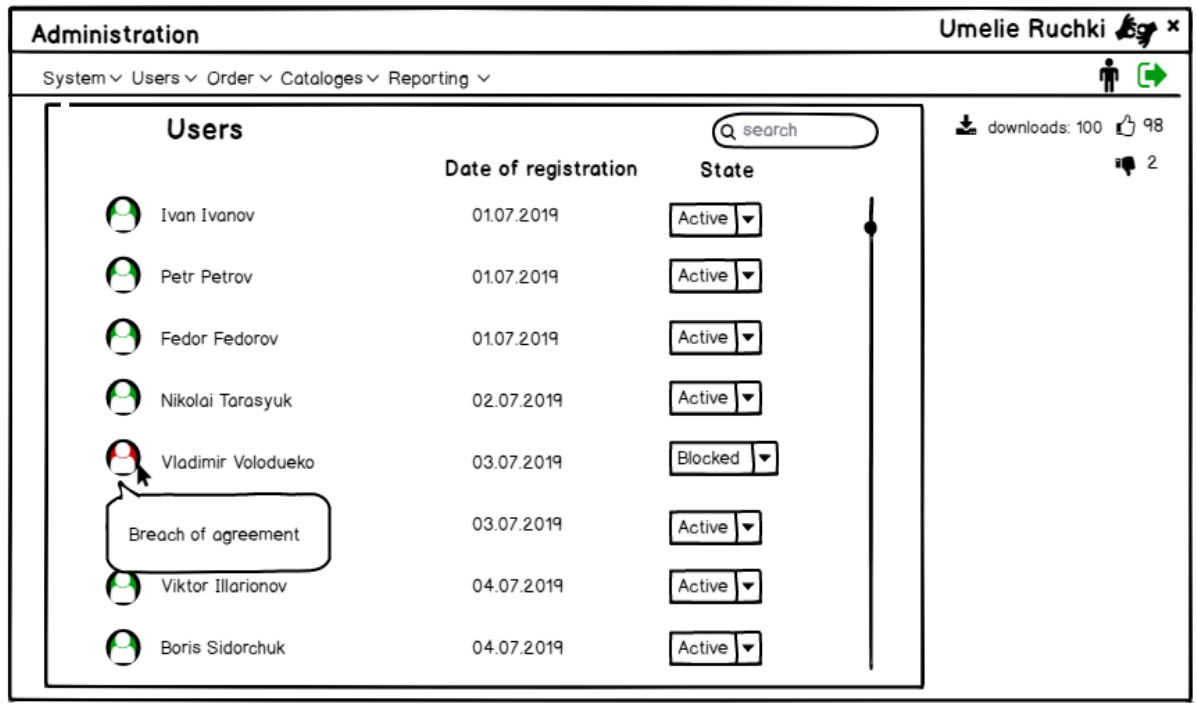
As a Administrator I want to block users who violated the terms of the agreement

Attributes and controls

Element	Description	Mandatory Y/N	Alterable Y/N
List user	Specifications: Name, Surname, Date of registration	Y	N
State button	Active or Blocked	Y	Y
Search window	To find a user, must enter a name and surname	N	N
Button Cancel	Exit to the main menu	Y	N

Prototype





Flow

1. User must be chosen from a drop-down list
2. To find a user, must enter a name and surname, if no matches are found, the system displays a message “repeat input”
3. The system must request a reason for the block, if the reason isn't specified, the user cannot be blocked
4. The system must transfer the blocked user to a separate list

Acceptance Criteria:

AC1: Only the administrator can view the list of users
AC2: Administrator can block a user only by writing a reason
AC3: Only the administrator can block the user
AC4: In the field search can enter only the name and surname of the user

3.9 Add a New Post

Specification - 00009

Name: Adding a new post

Status: BA In progress

Customer: CEO Roman Palchikov

Author: BA Alena Shonina

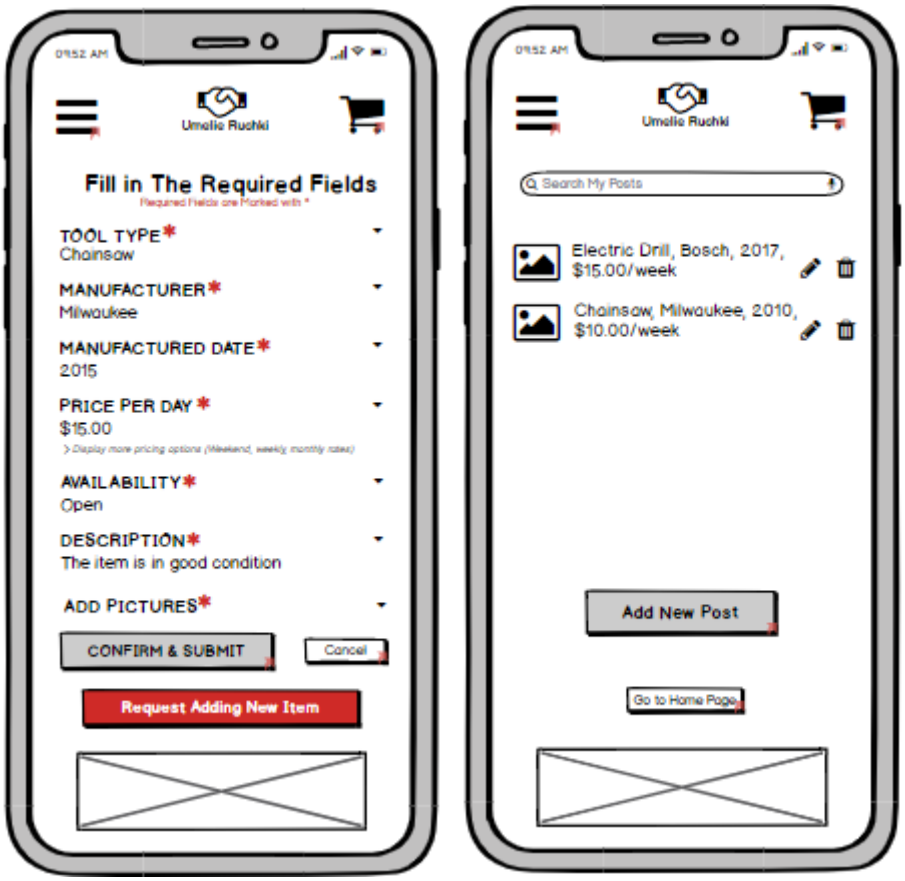
Business goal: A new post adds an item to the tools catalog so that the other users can view and make orders based on their needs and product characteristics.

Attributes of a post:

Name	Description	Comment	Required to be filled in	Editable
Tool type	Line, drop-down list	The field is not unique. User should choose only one position from the drop-down list	Yes	Yes
Manufacturer	Line, drop-down list	The field is not unique. User should choose only one position from the drop-down list	Yes	Yes
Manufactured date	Line, drop-down list. Number, 4.0	The field is not unique. User should choose only one position from the drop-down list	Yes	Yes
Price per day	Number, 12.2	Positive, mathematics rounding rules. Dollar sign must be added once the amount is set	Yes	Yes
Deposit amount	Number, 12.2	Positive, mathematics rounding rules. Dollar sign must be added once the amount is set	Yes	Yes

Availability	Listing of available post statuses	Default value - Open	Yes	Yes
Description	Line, drop-down list	The field is not unique. User should choose only one position from the drop-down list	Yes	Yes
Comment	Line	Field is available for filling in by user. Text, numbers and general punctuation marks can be used	No	Yes
Add pictures	Button	Opens browsing window upon push	Yes	Yes

Prototype



Flow:

1. The system shall save a post once “Confirm & Submit” button is pushed. The button is unavailable if not all required fields are filled in.
2. The system shall go to “My Posts” page once “Confirm & Submit” button is pushed.
3. The system shall add and display a newly added order in “My Posts” list.
4. The system shall go to “My Posts” page once “Cancel” button is pushed.
5. The system shall redirect User to “Contact Us” page once “Request Adding New Item” button is pushed.
6. The system shall display a warning message if User tries to save a new post when not all required fields are filled in.
7. The system shall allow User to choose items from the drop-down lists.
8. The system shall offer and display more pricing options fields once “Display more pricing options (Weekend, weekly, monthly rates)” link is clicked.

Limitations:

1. Adding a new post option is only available to User whose role has permission to add posts.
2. Only post`s author can make changes to it.
3. Only one pricing option can be chosen for one post.
4. Only post with pictures can be saved and added.
5. Only Jpeg, Gif and Png files of less than 1024 kb can be added as pictures.

3.10 User Income Report Generation

Specification - 00010

Name: User income report generation

Status: BA Approved

Customer: CEO Roman Palchikov

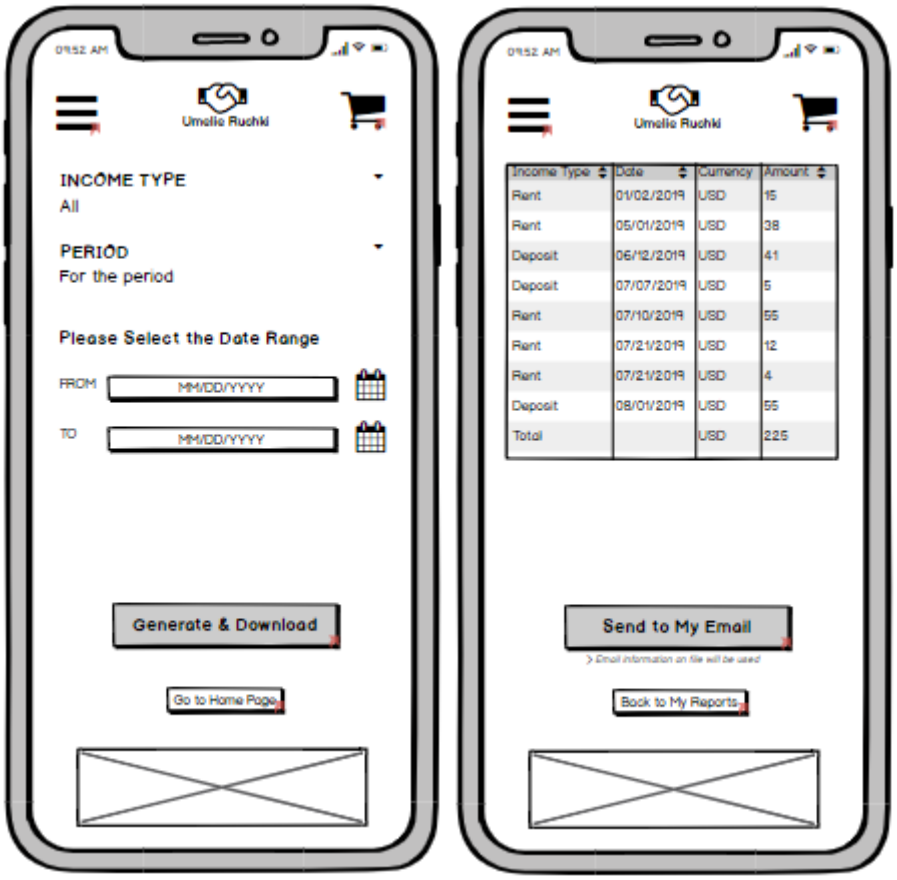
Author: BA Alena Shonina

Business goal: User can generate and download their income reports for the chosen dates/date ranges to facilitate reporting, statistics and filing tax returns to regulatory authorities.

Attributes of a report generation page:

Name	Description	Comment	Required to be filled in	Editable
Income type	Line, drop-down list	The field is not unique. User should choose only one position from the drop-down list. Default value - All	Yes	Yes
Period	Line, drop-down list	The field is not unique. User should choose only one position from the drop-down list. Default value – For the past three months	Yes	Yes
From	Date. Format: MM/DD/YY YY	Specified by User. Selected from the drop-down calendar. Default value – Filled by the system based on the current date	Yes	Yes
To	Date. Format: MM/DD/YY YY	Specified by User. Selected from the drop-down calendar. Default value – Filled by the system based on the current date	Yes	Yes

Prototype



Flow:

1. The system shall allow User to choose items from the drop-down lists.
2. The system shall display the option of date range selection if “Period” field value is “For the period”. The date range selection is unavailable if “Period” field value is different from “For the period” value.
3. The system shall display a warning message if “From” date is later than “To” date. “Generate & Download” button is unavailable until the dates are not chosen in the sequential order.
4. The system shall display a warning message if “To” date is later than the current date from the calendar. “Generate & Download” button is unavailable if “To” date exceeds the current date.
5. The system shall let User choose “From” date for the last 12 months preceding the current date.

6. The system shall display a warning message if “From” date goes beyond the period of last 12 months preceding the current date.
7. “Generate & Download” button is unavailable if information in any of the fields contains an error or missing.
8. The system shall start generating a report once “Generate & Download” button is pushed. The button is unavailable if not all required fields are filled in.
9. The system shall display the report data once report is generated.
10. The system shall send a newly generated report to User`s email once “Send to My Email” button is pushed.
11. The system shall redirect User to a “Thank you” page and display a message “Report has been sent” once report is sent successfully.
12. The system shall go to “Home Page” page once “Go to Home Page” button is pushed.
13. The system shall go back to “My Reports” page once “Back to My Reports” button is pushed.
14. The system shall display a message “No entries were found” if User had no incoming income entries for the chosen date range.
15. The system shall sort all entries found in the report by default by date in ascending order.

Limitations:

1. Viewing “My reports” page is only available to User whose role has permission to add posts.
2. Only report`s author can generate it and request sending to email.
3. Only User can be a report`s author themselves.
4. Email mentioned by User in “Email” section of “My Account” page is used by default.
5. Only one currency (USD) is available.

3.11 Manage notifications

Specification - 00011

Name: Manage notifications

Status: BA Drafted

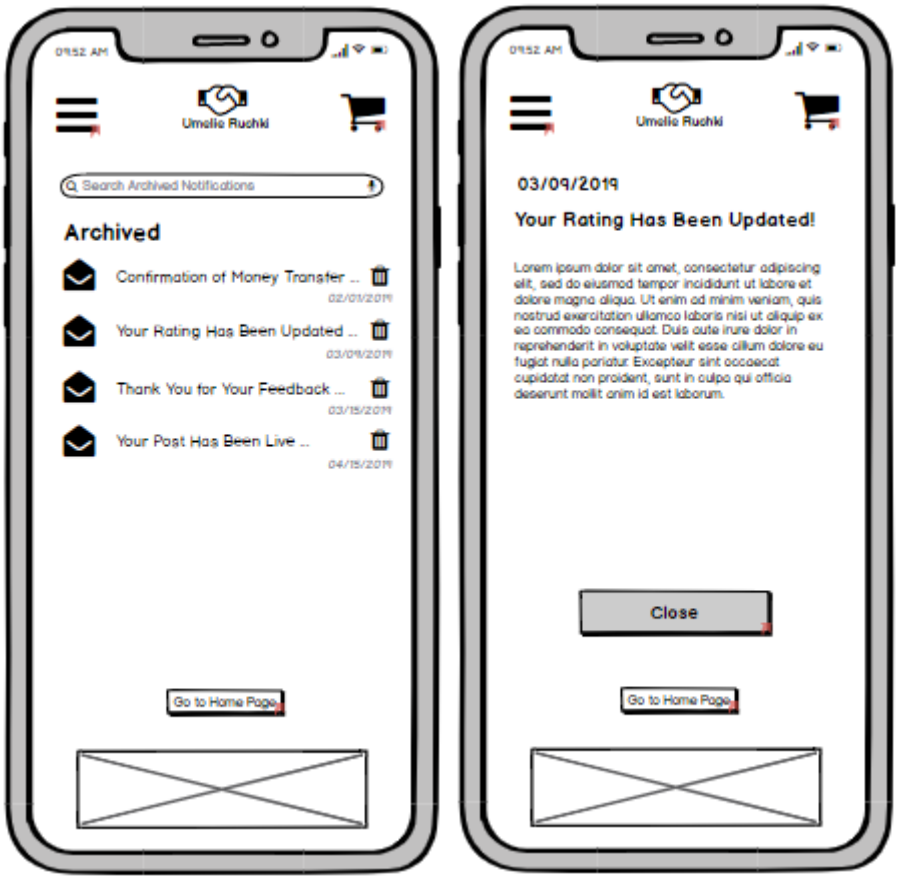
Customer: CEO Roman Palchikov

Author: BA Alena Shonina

Business goal: User can receive, read and delete their notifications in order to stay up-to-date, communicate to User support and get updates from other Users.

Prototype





Flow:

1. The system shall allow User to read notification messages.
2. The system shall open a message upon a click on its icon or message preview.
3. The system shall mark a new unread message as “Read” once it is open for the first time.
4. The system shall change message icon from a closed envelope to an open one once a new unread message is open for the first time.
5. The system shall move a new unread message from an “Unread” block to a “Read” block once it is open for the first time.
6. The system shall assign a date to the notification message using the calendar based on the date it is received. The receipt date shall be displayed at the bottom right corner of the message preview box.
7. The system shall move notification messages to “Archive” if their receipt date is more than 180 days prior to the current date.
8. The system shall allow User to delete messages.

9. The system shall confirm User`s intent to delete message once they click on a “Delete” icon (trash bin).
10. The system shall display a warning message “Do you want to delete the message?” once User clicks on a “Delete” icon and propose “Yes” and “No” answers (options). The system shall permanently delete the message if User clicks “Yes”. The system shall return User to the previous screen if User clicks “No”.
11. The system shall store all the notification messages received less than 180 days prior to the current date in the “Current notifications” folder.
12. The system shall store all the archived notification messages in the “Archived notifications” folder.
13. The system shall go to “Home Page” page once “Go to Home Page” button is pushed.
14. The system shall return User to the notification messages preview list from the notification message screen upon the click on the “Close” button.
15. The system shall generate a push notification once User receives a new message.
16. The system shall send an email to User's email notifying them of a new message received.
17. The system shall sort notification messages by default by the receipt date in chronological order (the newest messages first).

.**Limitations:**

1. All notification messages are available and stored in the appropriate folders unless User decides to delete them.
2. Only User may view, read and delete their messages.
3. Only System can move messages between folders.
4. The push notification message shall contain a message preview of maximum 50 symbols.
5. Email mentioned by User in “Email” section of “My Account” page is used by default.

4. Non-Functional Requirements

4.1 Performance Requirements

- ❏ PR-1: The system shall handle 500 unique users at any given moment
- ❏ PR-2: The system shall display search results within 5 seconds

- ❏ PR-3: The system shall calculate the final amount in under 2 seconds.

4.2 Safety Requirements

- ❏ SR-1: Application should not store any operational information on mobile device
- ❏ SR-2: Application should not affect any other application or harm device
- ❏ SR-3: System should comply with Data Safety 2019 standards.

4.3 Security Requirements

- ❏ SER-1: Only authorized users shall be permitted to work with the system
- ❏ SER-2: All network transaction that involved personal information shall be encrypted
- ❏ SER-3: User should be capable to control which data they provide and how data would be used.

4.4 Availability Requirements

- ❏ AR-1: From 12PM TO 6PM the system shall have 95% availability
- ❏ AR-2: From 3AM TO 4AM the system shall have scheduled maintenance every other day.

4.5 Usability Requirements

- ❏ UR-1: Users can start using the platform after confirmation of identity with no extra steps
- ❏ UR-2: The system should allow to process payment within 1 minute
- ❏ UR-3: The system shall allow user to switch to English in under 5 seconds.

4.6 Reliability Requirements

- ❏ RR-1: The system shall copy main operational data twice daily.

4.7 Scalability Requirements

- ❏ SCR-1: The system shall handle 1000 transactions a day within the first year after implementation.

4.8 Efficiency Requirements

- ❏ ER-1: The system shall use under 35% of system memory at any given moment.

5. Business rules

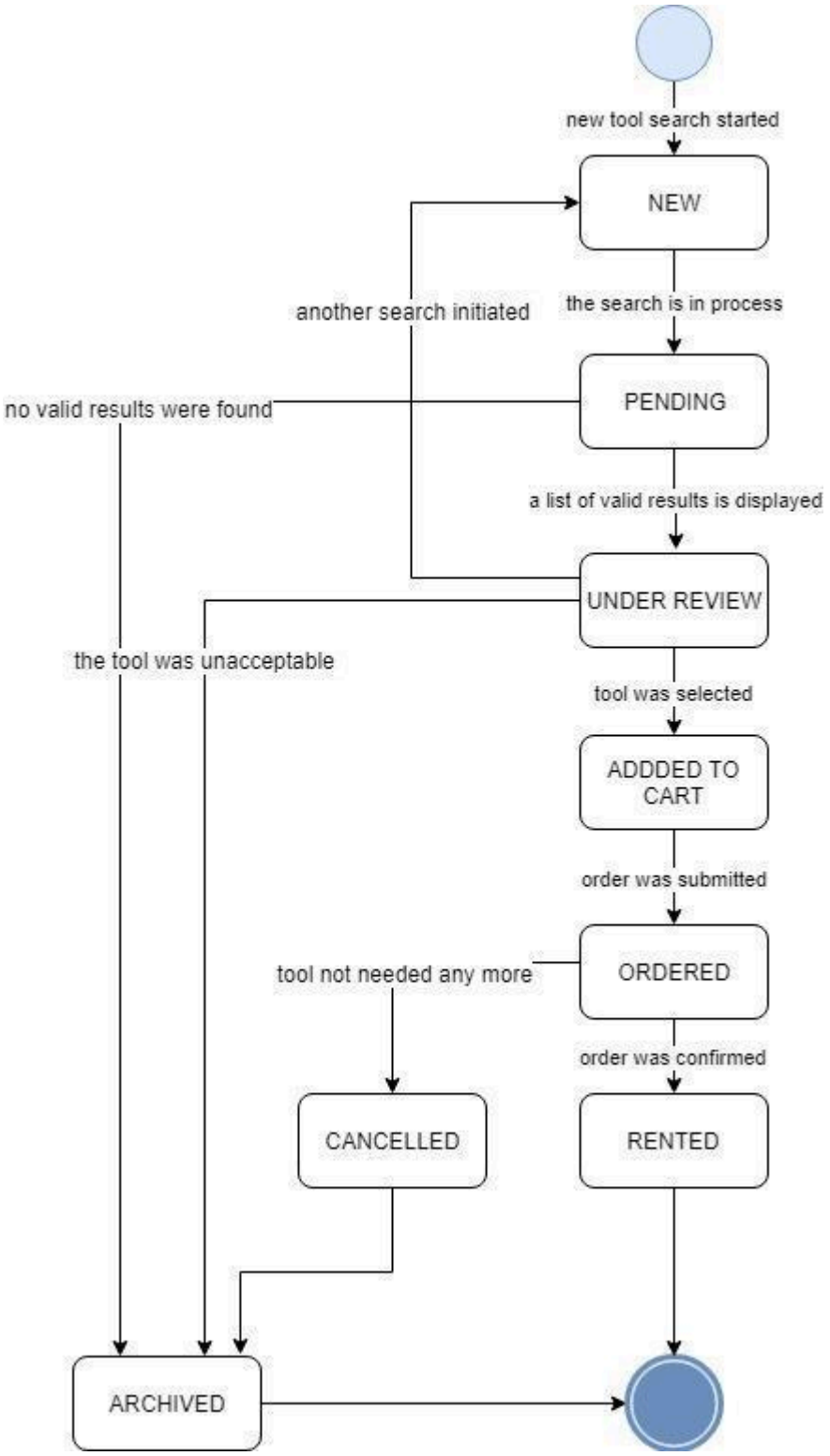
- ❏ BR-1: Every Order should be picked up by the rentee
- ❏ BR-2: The system shall not allow user to start new order unless the previous one was finalised
- ❏ BR-3: The system shall not allow item to be booked further that a month
- ❏ BR-4: The system shall not allow user to delete any personal or bank information until order is finalized
- ❏ BR-5: The system shall cancel the order if it wasn't picked up within 3 days.

6. Appendices

6.1 CRUD Matrix

	CEO	**Marketing Manager**	**Administrator**	**End User**
Tool catalog	**R**	**R**	**C R U D**	**C R**
Manufacturers catalog	**R**	**R**	**C R U D**	**C R**
Cities catalog	**R**	**R**	**C R U D**	**R**
Partners catalog	**R**	**C R U D**	**R**	
Price management	**R**	**R**	**R**	**C R U D**
Reporting	**C R**	**C R**	**C R U D**	**C R**
User/Renter	**R**	**R**	**C R U D**	**C R U D**
User/Rentee	**R**	**R**	**C R U D**	**C R U D**
Order	**R**	**R**	**R U D**	**C R U D**
Notification	**R**	**R**	**C R U D**	**R D**

6.2 State Machine Diagram



BA TRIO for "UMELIE RUCHKI", 2019