MrBuggy 7 – functional specification

Introduction:

The goal of Mr. Buggy application is to efficiently manage Change Requests for multiple Providers.

Functionalities available for users:

Note:

On the state diagram all state transitions are numbered. If the functionality refers to particular transition, it will be marked with its number in the brackets (x).

Not logged in user

- Log in

Logged in Employees

- Change password
- Log out
- Edit profile
- Creation of new CR (1). New CR is created in state: **Draft.** Employees can modify it and save changes as long as it is not marked as ready. After marked as ready status of CR is changed to **New.**
- End CR edition (2) – CR is moved into read only mode.
- CR browsing – Employees can view only their own CRs in all states except **Archived.**
- Adding public comments to all visible CRs (public comment means, that it is visible to all users).
- Modification of CRs:
  - CRs in state **New** (3) and **Approved** (4) will return automatically to state **Draft.**
  - CRs in other states cannot be modified.
- Viewing CRs in state **To clarify** and:
  - After adding mandatory public comment Employees may process it to state **Clarified** (8) or **Rejected** (9).
- Deleting CRs in state **Draft.**

Logged in Admin

- Change password
- Log out
- CR browsing – Admin can view all CRs in all states
- Creation of new CR (1). New CR is created in state: **Draft.** Admin can modify it and save changes as long as it is not marked as ready.

- End CR edition (2) – CR is moved into read only mode.
- Adding public and private comments to all visible CRs (public comment means, that it is visible to all users, while private comment is visible only for Admins and Providers)
- Viewing all CRs in state **Draft** and:
    - End edition of CR (2) – CR is moved to read only mode.
- Viewing all CRs in state **New** and:
    - Approving CR (10).
    - Adding mandatory question in public comment and processing it into state **To clarify** (11).
    - Adding mandatory explanation in public comment and processing it into state **Rejected** (12).
    - If CRs must be processed by more than one Provider, Admin can clone it (30); new CR is created in state **Draft;** all data (except comments and history of state changes) from source CR is copied; CRs are linked together – in each of them there is a visible list of all linked CRs. In cloned CR, Provider cannot be the same as original.
- Viewing all CRs in state **Clarified** and:
    - Approving response (13).
    - Adding additional question and returning CR into state **To clarify** (14).
- Viewing all CRs in state **To clarify** and:
    - After adding mandatory public comment process it into state **Clarified** (8) or **Rejected** (9)
- Viewing all CRs in state **Priced** and:
    - Rejecting CR (26) – user must add the reason of rejection.
    - Approving CR (27) and processing it into state **To order**.
    - Note: if CR is linked to other CRs, action is possible only if all linked CRs are in state **Priced**; state is changed for all linked CRs
- Export of CRs:
    - Only CRs in states: **Approved** and **To order** can be exported.
    - Separate files are created for each Provider.
    - Export can be limited to chosen Provider.
    - Exported CRs are automatically processed:
        - CRs in state **Approved,** which weren't earlier in state **Process**, will be changed into **Forwarded** (15).
        - CRs in state **Approved**, which were earlier in state **Process**, will be changed directly into **Process** (31).
        - CRs from state **To order** will be changed into **Process** (28).
- Providers' dictionary management; for each Provider must be defined price for 1 MD. Change of price triggers price recalculation in CRs in all states except: **To order**, **Process**, **Finished**, **Archived**, **Rejected**
- Organization units' dictionary management
- User management
    - Create new user
    - Assign user to Provider
    - Change users' password
    - Block user

- Automatic archiving management – after defined time since last change, CRs in states: **Rejected** (16), **Draft** (17) and **Finished** (18) are automatically moved into state **Archived**; since then they will be visible only for Admins. Admin can:
  - Manually archive the CR.
  - Define after what time CRs will be archived (separately for each state).

Logged in Providers

- Change password
- Log out
- CR browsing – Providers can view only CRs raised with assigned to them in states: **Approved**, **To order**, **Forwarded**, **Process**, **Priced**.
- Adding public and private comments to all visible CRs (public comment means, that it is visible to all users, while private comment is visible only for Admins and Providers)
- Export of CRs:
  - Providers can export only his own CRS in states: **Approved** and **To order**
  - Exported CRs are automatically processed:
    - CRs in state **Approved,** which weren't earlier in state **Process**, will be changed into **Forwarded** (15).
    - CRs in state **Approved**, which were earlier in state **Process**, will be changed directly into **Process** (31).
    - CRs from state **To order** will be changed into **Process** (28).
- Adding mandatory question in public comment and processing CRs in states **Forwarded** (20) and **Process** (23) into state **To clarify.**
- Marking CRs in state **Forwarded** as **Priced** (22), valuation in MD must be provided.
- Marking CRs in state **Process** as **Finished** (25).

Available API

Functionalities accessible in GUI will be also available in API. List of all API's endpoints and methods:

1. [USER]

API methods:

GET

/user – users list

/user/ID – returns user data based on the provided number

/user/profile – data of logged in user

POST

/user/TYPE – creates new user of given TYPE (admin, employee, provider). Parameters that needs to be provided in HTTP body request:

- 'first_name',

- 'username',

- 'last_name',

- 'email',

- 'phone_number',

- 'password',

- 'unit_id'/'provider_id' required if new user has one of the 'employee'/'provider' role.

PUT

/user/ID – change user data based on the provided number. Parameters that needs to be provided in HTTP body request:

 - 'first_name',

 - 'username',

 - 'last_name',

 - 'email',

 - 'phone_number',

 - 'password',

 - 'unit_id'/'provider_id' (depends on edited user 'employee'/'provider' role);

/user/profile – change data of currently logged in user. Parameters that needs to be provided in HTTP body request:

 - 'first_name',

 - 'username',

 - 'last_name',

 - 'email',

 - 'phone_number',

 - 'password',

 - 'unit_id'/'provider_id' (depends on edited user 'employee'/'provider' role);

/user/ID/active – change user status to ACTIVE based on the provided number;

/user/ID/block - change user status to BLOCKED based on the provided number;

DELETE

/user/ID – delete user based on the provided number

2. [UNIT]

API methods:

GET

/unit – units list

/unit/ID – unit data based on the provided number

POST

/unit – new unit. Parameters that needs to be provided in HTTP body request:

- 'name';

PUT

/unit/ID – change data of unit based on the provided number. Parameters that needs to be provided in HTTP body request:

- 'name';

DELETE

/unit/ID – delete unit based on the provided number.

3. [PROVIDER]

API methods:

GET

/provider – providers list

/provider/ID – provider data based on the provided number

POST

/provider – new provider. Parameters that needs to be provided in HTTP body request:

- 'name',

- 'price';

PUT

/provider/ID – change provider data based on the provided number. Parameters that needs to be provided in HTTP body request:

- 'name',

- price;

DELETE

/provider/ID – delete provider based on the provided number.

4. [CR]

API methods:

GET

/cr – CR list

/cr/ID – CR details based on the provided number

/cr/ID/comments – CR comments based on the provided number

/cr/ID/history – CR history based on the ID number

/cr/ID/related – shows related CRs based on the provided number

POST

/cr - new cr. Parameters that needs to be provided in HTTP body request:

- 'number',

- 'name',

- 'description',

- 'reason',

- 'financial_sources',

- 'provider_id';

/cr/ID/clone – clone CR based on the provided ID number. Parameters that needs to be provided in HTTP body request:

- 'number',

- 'name',

- 'description',

- 'reason',

- 'financial_sources',

- 'provider_id';

/cr/ID/comment – add comment to CR based on the provided ID number. Parameters that needs to be provided in HTTP body request:
- 'content'
- 'private' - if the comment should be private (value: true/false)

PUT

/cr/ID – change data of given CR based on the ID number. Parameters that needs to be provided in HTTP body request:

- 'number',

- 'name',

- 'description',

- 'reason',

- 'financial_sources',

- 'provider_id';

/cr/ID/STATUS – change CR status with the given ID number to STATUS(new, approved, forwarded, to-order, process, finished, archived, received);

/cr/ID/reject – change CR status with the given ID number to STATUS Rejected with comment. Parameters that needs to be provided in HTTP body request:

- 'content';

/cr/ID/to-clarify – change CR status with the given ID number to STATUS ToClarify with comment. Parameters that needs to be provided in HTTP body request:

- 'content';

/cr/ID/complete – change CR status with the given ID number to Completed with all amendments and comment. Parameters that needs to be provided in HTTP body request:

- 'number',

- 'name',

- 'description',

- 'reason',

- 'financial_sources',

- 'provider_id'

- 'content';

/cr/ID/valuation – change CR status with the given ID number to Priced with man-days value.

Parameters that needs to be provided in HTTP body request:
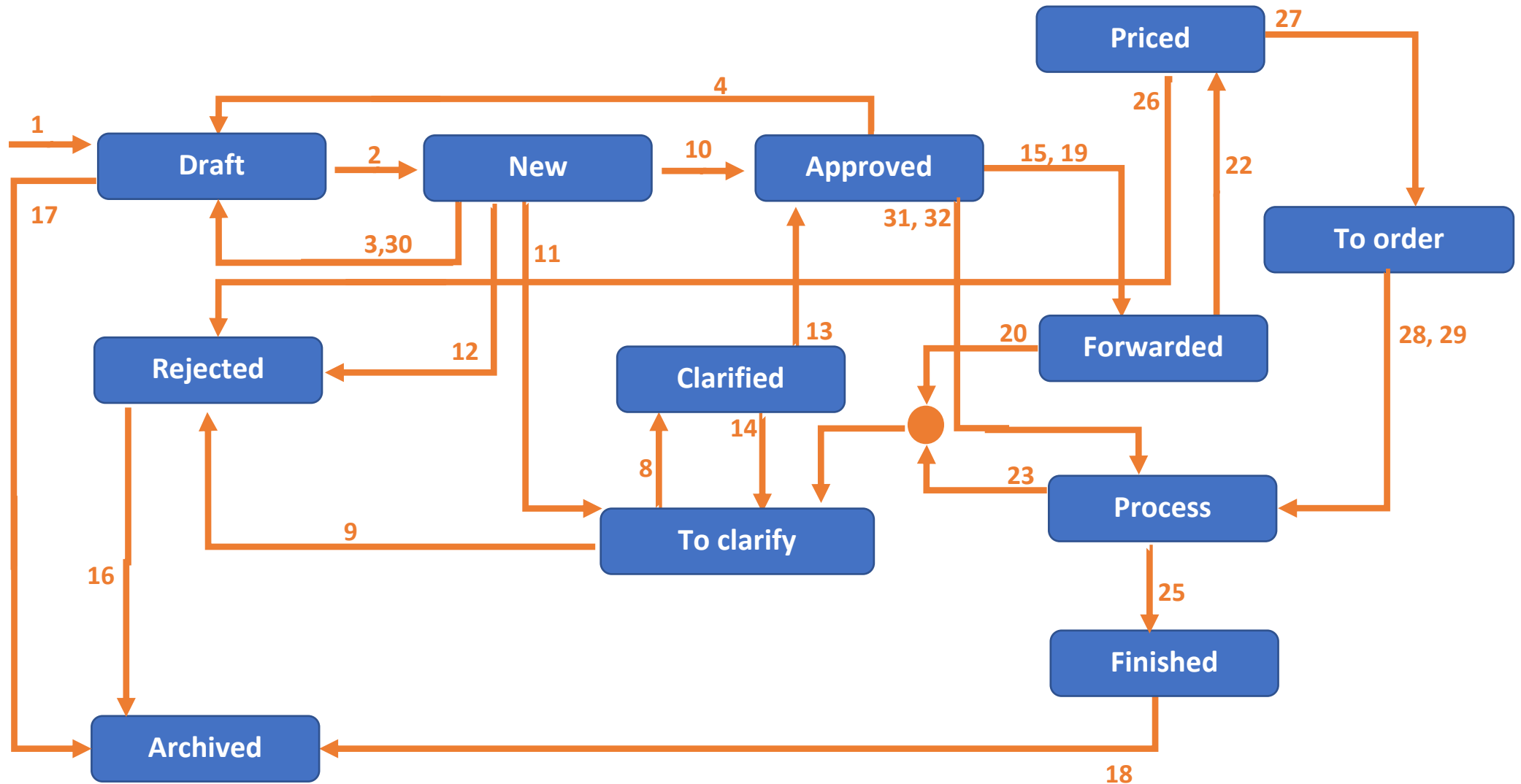
- 'man_days';

DELETE

/cr/ID – delete CR with given ID number.Each API method has validation if:

- user has permission to this operation
- CRs are linked with this Provider
- CRs are in appropriate states for this operation.

State diagram

Not logged in user

Visible fields Username, Password and button Login

Logged in Employees

In top menu:

- Dashboard – basic statistics about CRs'.
- CRs list– after clicking page List of CRs in Employee mode (see next chapter - "Forms") will be opened.
    - After clicking page 'CR – View of single CR' will be opened.
- New CR – after clicking page 'View of single CR' with creation of new CR in state **Draft** (see next chapter - "Forms") will be opened.
- Profile – after clicking page 'User profile view' in Employee mode (see next chapter - "Forms") will be opened. User data are editable.
- Log out – Logs out form application, return into mode for not logged user.

Logged in Admin

In top menu:

- Dashboard – basic statistics about CRs'.
- CRs list– after clicking page 'List of CRs in Admin mode' (see next chapter - "Forms") will be opened.
    - After clicking page 'CR – View of single CR' will be opened.
- Providers – after clicking page 'List of Providers' will be opened; each Provider is described by name and price per one MD; there will be possibility to add new Provider, modify existing one or delete Provider (possible only if there is no CR connected to this Provider).
- Units – after clicking page 'List of organization units' will be opened; each unit is described by name; there will be possibility to add new unit, modify existing one or delete it (only if there is no CR connected to this unit).
- Users – after clicking page 'List of users view' (see next chapter - "Forms") will be opened.
- Automatic archiving – after clicking page 'Management view" will be opened. Page contains:
    - Field 'Time for Draw status (min.) [0 = off]' (integer > 0)
    - Field 'Time for Rejected status (min.) [0 = off]' (integer > 0)
    - Field 'Time for Received status (min.) [0 = off]' (integer > 0)
    - Button 'Save' – saving changes
    - Button 'Cancel' – discarding changes
- Profile – after clicking page 'User profile view 'in Admin mode will be opened. User data are editable (see next chapter - "Forms").
- Log out – Logs out form application, return into mode for not logged user

Logged in Providers

In top menu:

- Dashboard – basic statistics about CRs'.
- CRs list– after clicking page 'List of CRs' in Provider mode (see next chapter - "Forms") will be opened.
  - After clicking page 'CR – View of single CR' will be opened.
- Profile – after clicking page 'User profile view' in Provider mode (see next chapter - "Forms") will be opened. User data are editable.
- Log out – Logs out form application, return to mode for not logged user.

Forms

CR list view

Filter's fields						
Name of field	**Type**	**Length**	**Validations**	**Employee mode**	**Admin mode**	**Provider mode**
Phrase	Text					
Providers	A multiple-choice list					avaiable only if logged in as provider
CR state	A multiple-choice list			all states exept 'Archived'	all states	States: Approved, To order, Forwarded, Process, Priced
Date creation from	Date	YYYY-MM-DD	<= od 'Date creation to'			
Date creation to	Date	YYYY-MM-DD	>= od 'Date creation from'			
Last change date from	Date	YYYY-MM-DD	<= od 'Last change date to'			
Last date change to	Date	YYYY-MM-DD	>= od 'Last change date from'			
Clear	Button	Clear all filter's fields and refresh the results				
Export to JSON	Button	N/A	N/A	not visible		
Export to XML	Button	N/A	N/A	not visible		
List of results						
Name of field	**Type**	**Length**	**Validations**	**Employee mode**	**Admin mode**	**Provider mode**
Paged table, 20 lines on one page						
Duble click opens view of single CR						
CRs in state 'To clarify' and 'Priced' are marked (for example bolded)						
Number	text	10				
Name	text	20				
Provider	A multiple-choice list	n/d				
Status	text	20				
Number of comments	number					
Actions	List of buttons (different for each CR state)					

View of single CR

Form

Section	Name of fied	Type	Lenght	Validations	Draft	New	Approved	Priced	To order	To clarify	Clarified	Rejected	Forwarded	Process	Finished	Archived
Employee					Section visible	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft
	Name				visible, read only, automaticaly fullfiled	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft
	Phone number				visible, read only, automaticaly fullfiled	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft
	E-mail				visible, read only, automaticaly fullfiled	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft
	Unit				visible, read only, automaticaly fullfiled	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft	as Draft
Description of the change					Section visible	Section visible	as New	as New	as New	as New	as New	as New	as New	as New	as New	as New
	Status				visible, read only, automaticaly fullfiled											
	Number	text	10	integer	visible, read only, automaticaly fullfiled	visible, read only	visible, read only	visible, read only	visible, read only	visible, read only	visible, read only	visible, read only	visible, read only	visible, read only	visible, read only
	Name	text	20	mandatory	visible, read-write	visible, read only	as New	as New	as New	as New	as New	as New	as New	as New	as New
	Business case	text area	200	mandatory	visible, read-write	visible, read only	as New	as New	as New	as New	as New	as New	as New	as New	as New
	Description of change	text area	200	mandatory	visible, read-write	visible, read only	as New	as New	as New	as New	as New	as New	as New	as New	as New
	Financial sources	text area	200	mandatory	visible, read-write	visible, read only	as New	as New	as New	as New	as New	as New	as New	as New	as New
	Related production errors	text area	200	no validations	visible, read-write	visible, read only	as New	as New	as New	as New	as New	as New	as New	as New	as New
	Provider	A multiple-choice lis	n/a	n/a	visible, read-write	visible, read only	as New	as New	as New	as New	as New	as New	as New	as New	as New
	Man-days	text area	4.1	real, 1 digid after	not visible	not visible	not visible	visible, read only	as Priced	as Priced	as Priced	as Priced	visible, read-write	as Priced	as Priced	as Priced
	Price				not visible	not visible	not visible	visible, read only	as Priced	as Priced	as Priced	as Priced	visible, read only	as Priced	as Priced	as Priced
	Amount				not visible	not visible	not visible	visible, read only	as Priced	as Priced	as Priced	as Priced	visible, read only	as Priced	as Priced	as Priced
	End	checkbox			visible	not visible	as New	as New	as New	as New	as New	as New	as New	as New	as New
Comments	*List of comments*				Section not visible	Section visible	as New	as New	as New	as New	as New	as New	as New	as New	as New
If adding comments is posible in CR state - visible fields to add comment																
	Comment	text area	200	n/d	not visible	visible, read only	as New	as New	as New	as New	as New	as New	as New	as New	as New
	Author	Text	81	n/d	not visible	visible, read only	as New	as New	as New	as New	as New	as New	as New	as New	as New
	Date of comment	text area	200	n/d	not visible	visible, read only	as New	as New	as New	as New	as New	as New	as New	as New	as New
History	*List of states changes*				Section not visible	Section visible	as New	as New	as New	as New	as New	as New	as New	as New	as New
	User	Text	81	n/d	not visible	visible, read only	as New	as New	as New	as New	as New	as New	as New	as New	as New
	New state	Text	20	n/d	not visible	visible, read only	as New	as New	as New	as New	as New	as New	as New	as New	as New
	Date of change	Text	YYYY-MM-DD hh24:mi:ss	n/d	not visible	visible, read only	as New	as New	as New	as New	as New	as New	as New	as New	as New

available action

Name		Action description			Draft	New	Approved	Priced	To order	To clarify	Clarified	Rejected	Forwarded	Process	Finished	Archived
Save		Save changes in CR			available	available	available	available	available	available	available	available	available	available	available	available
Edit		Return to state				available	available									
Reject		State transition 12 and 26				available for Admin				available for Admin	available for Admin and Employee					
Approve		State transition 10				available for Admin					available for Admin					
To clarify		State transition 14,20,23				available for Admin					available for Admin	available for Admi	available for Admin and Provider			
To clarified		State transition 8									available					
Clone		Creation new				available for Admin										
Order		State transition 27						available for Admin								
Price		State transition 22											available for Admin i Provider			
Finish		State transition 25													available for Admin i Pprovider	
Delete		Deleting CR from database			available											

Page 13

List of users view

Filter's fields			
Name of field	**Type**	**Length**	**Validation**
Phrase	text	20	
Role	Selection list		All roles, Admin, Provider, Employee
Status	Selection list		All statuses, Blocked, Active
New employee	Button	Adding new Employee	
New admin	Button	Adding new Admin	
New provider	Button	Adding new Provider	
Results			
Name of field	**Type**	**Length**	
Paged table, 20 lines on one page			
Double click opens view User profile			
Username	n/a		
Name	n/a		
Role	n/a		
Status	n/a		
Actions	buttons: Edit, Block/Active, Delete (optional)		

User profile

Name of field	Type	Length	Validations	Employee mode	Admin mode	Provider mode
Username	Text	20	no spaces, unique	visible, read-write	visible, read-write	visible, read-write
First name	Text	40	Only latters and spaces		visible, read-write, wymagane	
Last name	Text	40	Only letters, spaces an '-' char		visible, read-write, wymagane	
E-mail	Text	40	mask: x...x@x...x.xx		visible, read-write, wymagane	
Phone number	Text	40	No validations		visible, read-write, wymagane	
Unit	Selection list	n/a	n/a	visible, read-write, wymagane	visible, read-write, mandatory for = Employee	not visible
Provider	Selection list	n/a	n/a	not visible	visible, read-write, mandatory for = Provider	visible, read-write, mandatory
Status	Selection list			not visible	visible	not visible
Password	Text	20	fields compatible with each other, if fullfiled: min 8 digits, max 20 digits, min 1: capital letter, lowercasenumber, special character		visible, read-write	
Confirm password	Text	20			visible, read-write	
Save	Button		Saving changes in form			
Cancel	Button		Discarding changes in form			

Log in

Name of field	Type	Length	Validations
Username	Text	20	
Password	Text	20	
Login	Button		