

Used technologies

Back-end was built using Java SE8. Front-end was built using JavaFX8 with Scene Builder. Apache Derby (Java Database) is used for RDMS. Apache POI is used for exporting offers as Excel (.xls) file.

Description of 'Offers' program

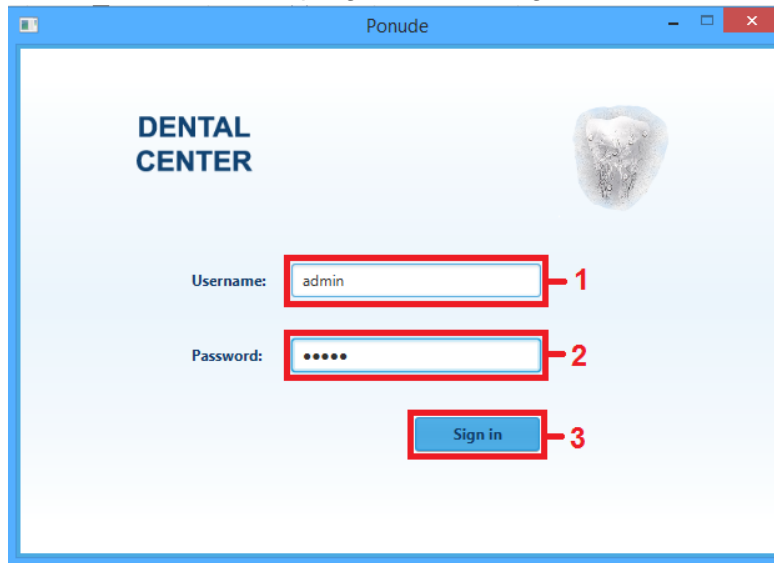
The program was built based on needs of one Croatian dental center.

The program allows creating a new offer, preview and updating of previous offers and their export as Excel (.xls) document. In a broader sense, the program has the following functions:

1. Import of default treatments in main database. Treatments have names in five languages, plus assigned default prices and discounts for each language separately. Treatments can be added directly in the program or by import from an external *.csv document.
2. Creation of a new offer entering a client's personal information, selection of language and currency of a client, and selection of treatments for each of client's jaws separately.
3. Preview of all previously saved offers, their updating and saving as an update of an existing offer or as a new one.
4. Managing users who can access the program (adding and deleting users).
5. Saving main database with data about users, clients, offers and treatments independently of the program so that main database could be saved on a local server allowing access from any computer on the local network.
6. Offers export as an Excel (.xls) document with a visual appearance that was predefined by the dental center.

Windows description

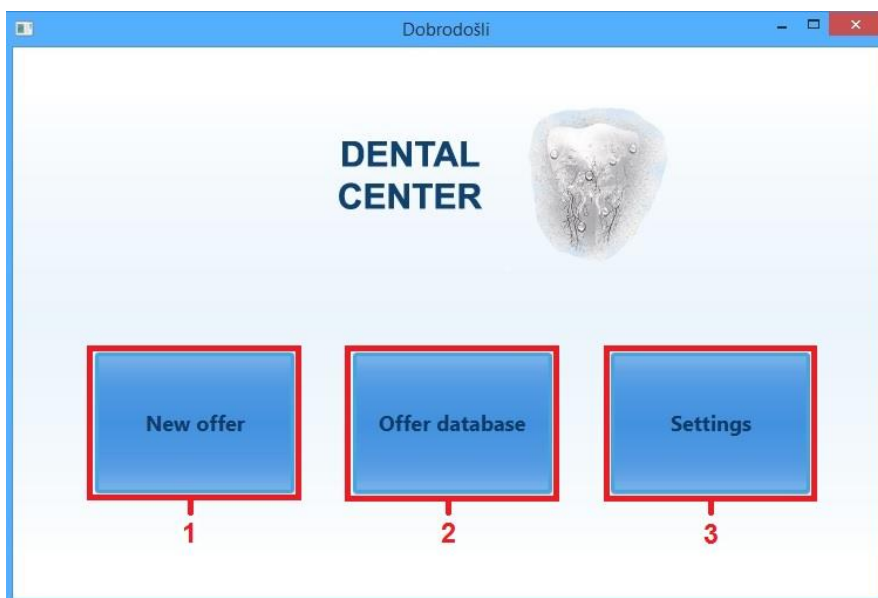
1. The first screen at the program start – sign in window



- (1.) Username should be entered. Starting: „admin“.
- (2.) Password should be entered. Starting: „admin“.
- (3.) Button „Sign in” or key „Enter” has to be pressed to sign in.

Main menu opens after successful sign in.

2. Main menu



- (1.) Button „New offer” opens window for making a new offer.
- (2.) Button „Offer database” opens window that shows all offers.
- (3.) Button „Settings” opens window in which is possible to manage database location, users, company information and default treatments data.

3. New offer

Offers database

New Offer

Client Information: Name: Hana Strong, Address: London street, London, Telephone: 099, E-mail: @mail.com

Client Details: Client language: English General, Client currency: EUR General, Exchange rate: 1.0, Convert button

Summary: Total before discount: EUR 2615.0, Discount for cash: 10 %, 261.5, Total: EUR 2353.5

Treatment Selection: Upper jaw, Lower jaw, Other, Treatment duration

Search: Search button

Results Table:

	Discount(%)	Total	Visit
0	550,00	1	
0	150,00	1	
0	130,00	1	
0	750,00	1	
5	55,00	2	
6	90,00	2	
7	45,00	3	
8	170,00	3	

Buttons: Back, Save as Excel, Save

- (1.) Fields for basic information about client.
- (2.) Provides possibility to choose between five languages. Based on selected language treatments names are pulled and Excel (.xls) file language is determined.
- (3.) Provides possibility to choose between five currencies. Based on selected currency prices are taken from database.
- (4.) Exchange rate compared to chosen currency for case when currency that is not in database wants to be used. If field is not empty or equal to „1.0“ every new selected treatment from database is converted according to the exchange rate.
- (5.) When button „Convert“ is pressed, prices in tables are converted according to the exchange rate. If the button is fast double clicked, prices are converted back.
- (6.) For every change in the tables total amounts are recalculated. If discount for cash wants to be changed after treatments are set up, new discount rate should be written in discount percentage field and key „Enter“ should be pressed while the field is still selected.
- (7.) Card layouts for showing different tables. Treatments are separated in tables for upper and lower jaw. Table „Other“ provides possibility to enter extra stuff like free accommodation for foreign clients. Table „Treatment duration“ automatically calculates amounts that should be paid at each visit. Duration of each visit should be entered manually.
- (8.) Search field that filters treatments and shows their names in selected language. For seeing all treatments (without filtering) key „Enter“ should be pressed while empty search field is selected.
- (9.) List of all selected treatments with the corresponding data. The data can be changed when double-clicked.
- (10.) Opens a new window to select location for saving a new Excel (.xls) document and writing its name. The offer previously must be saved to the database by pressing the button "Save".

4. Offers database

Offers Database

an 1 Search

Offer number	Name	Date
6	Jennell Vrooman	2016-06-27
5	Antoine Bellew	2016-06-27
3	Daryl Fabian	2016-06-27
1	Hana Strong	2016-06-23

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Back Save as Excel 3 Open

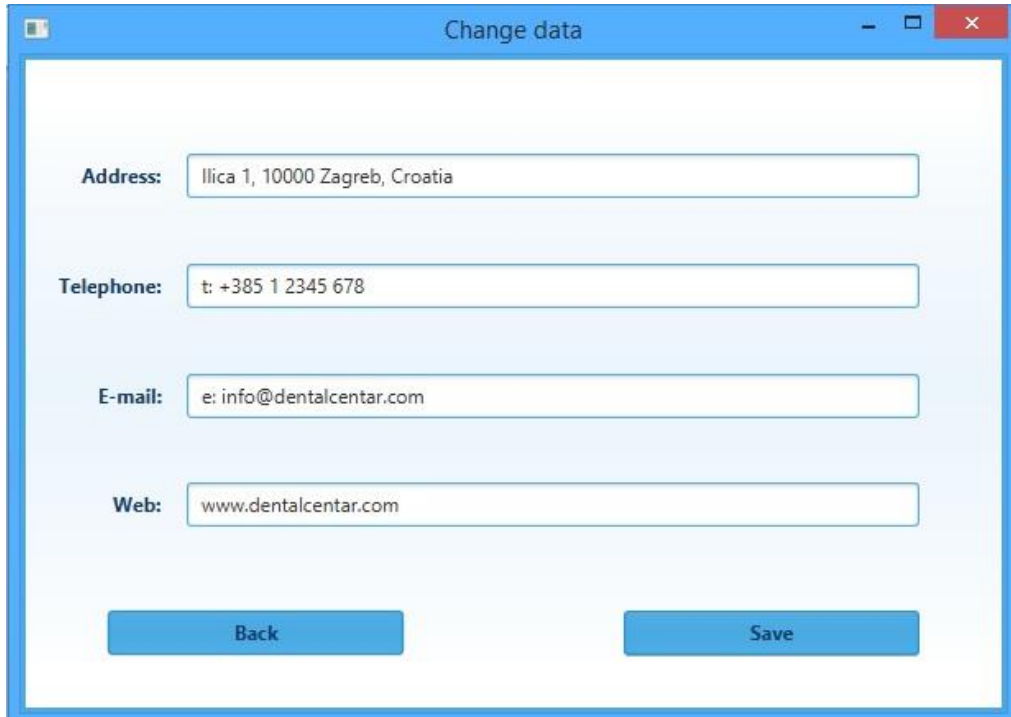
- (1.) Field for filtering offers. Filtering is done based on the name of the clients or based on the number of offers, depending on whether number or text is entered.
- (2.) List of filtered offers. An offer opens with fast double-click on an offer or with a single click on an offer and pressing button "Open". Pressing key "Delete" deletes an offer from selected row. If cell in column „Offers number” is clicked twice with delay between clicks the cell can be changed. The offer will be saved under a new number if offer under the entered number does not exist yet. In this way it is possible to set the offers start number, for example 100 if offers at lower numbers are already issued in another program.
- (3.) Opens a new window to select location for saving a new Excel (.xls) document and writing its name.

5. Settings



- (1.) Database location in a system. When changing, the database address must be in the specified location. Otherwise, a new popup window that states „address is not valid” will be opened.
- (2.) Opens a new window with information about company. The information gets written on offers when they are saved as Excel (.xls) file.
- (3.) Opens window for authentication, and later window for adding and deleting users if authentication is successful.
- (4.) Button "Make database backup" copies treatments from the main table in the database to the backup table. Pressing the button "Restart database" copies from the backup treatment table in the main table. This allows data recovery if .csv file is not well formatted and causes an exception and deleting data during import.

6. Window with company information



A screenshot of a web application window titled "Change data". The window has a blue header bar with standard window controls (minimize, maximize, close). The main content area is white and contains four labeled text input fields: "Address" with the value "Ilica 1, 10000 Zagreb, Croatia", "Telephone:" with the value "t: +385 1 2345 678", "E-mail:" with the value "e: info@dentalcentar.com", and "Web:" with the value "www.dentalcentar.com". At the bottom of the form are two blue buttons: "Back" on the left and "Save" on the right.

7. Sign up window for accessing window for managing (adding/deleting) users



A screenshot of a web application window titled "Change data". The window has a blue header bar with standard window controls (minimize, maximize, close). The main content area is white and contains two labeled text input fields: "Username:" with the value "admin" and "Password:" with masked characters "•••••". Below the password field is a blue "Sign in" button. At the bottom left of the form is a blue "Back" button.

Access to managing users has only administrator. Data for sign in is: username - "admin", password - "admin".

8. Window for managing (adding/deleting) users

- (1.) Fields for a new username and password. By clicking "Add user" button new user and password are stored in main database
- (2.) List of all users. By selecting user on the list and clicking button „Delete user” (or pressing key „Delete“) user is removed from database.

9. Window for managing default treatments data

Language 1	Price 1	Discount 1	Language 2	Price 2	Discount 2
Placement of an Straumann/Astra Tech/Nobel Biocare implant	750,00	0	Implantat NOBEL biocare/Straumann/Astra Tech	5.600,00	0
Abutment Straumann/Astra Tech/Nobel Biocare	200,00	0	Suprastruktura NOBEL biocare/Straumann/Astra Tech	1.500,00	0
Placement Nobel Active	800,00	0	Implantat NOBEL active	6.000,00	0
Multiunit abutment Straumann/Astra Tech/Nobel Biocare	200,00	0	Multiunit abutment NOBEL biocare/Straumann/Astra Tech	1.500,00	0
Placement of an Neodent implant	550,00	0	Implantat Neodent	4.200,00	0
Abutment Neodent	170,00	0	Suprastruktura Neodent	1.300,00	0
Placement of an Alpha Bio implant	500,00	0	Implantat Alpha bio	3.800,00	0
Abutment Alpha Bio	160,00	0	Suprastruktura Alpha bio	1.200,00	0
	0,00	0	Privremena suprastruktura na vijak	950,00	0
Zirconia abutment	350,00	0	Suprastruktura u cirkonu	2.600,00	0
Surgery	0,00	0	Kirurgija	0,00	0
Simple extraction	40,00	0	Ekstrakcija zuba	300,00	0
Complicated extraction	90,00	0	Ekstrakcija zuba komplicirana	650,00	0

- (1.) User selects two languages for which he/she wants to see data. By clicking on the desired language from the drop-down menu table is automatically updated.
- (2.) Table shows default treatment names, their default prices and default discounts for two selected languages.
- (3.) Button "Add row" adds row to enter a new treatment. Button "Delete row" deletes selected existing treatment. The changes are saved only by pressing the button "Save".