D4.3.2 APPLICATION/ SOFTWARE DEVELOPMENT

(Quality Assurance Manager)

«Testing report of the Healthcare Monitoring System»

Reporting period: 20/09/2018 – 05/12/2018

WP 4 Joint Monitoring System

project

IMPROVING HEALTHCARE ACCESS TROUGH A PERSONAL HEALTH MONITORING SYSTEM

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Summary

The deliverable «Testing report of the Healthcare Monitoring System» is part of the project APPLICATION/ SOFTWARE DEVELOPMENT in the frame of WP 4 Joint Monitoring System of the overall project IMPROVING HEALTHCARE ACCESS TROUGH A PERSONAL HEALTH MONITORING SYSTEM, according to the contract (14/09/2018, Ref. No: 44956) that is being implemented under the INTERREG V-A Greece – Boulgaria 2014-2020 Programme.

The particular deliverable describes the methods, tools and the results of the testing procedure of the eHealth platform (and its subsystems) along with the necessary activities for the software updates and the Version Control that have been undertaken during 20/09/2018 – 05/12/2018.

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1 Testing

1.1 Methodology

Testing is aimed at extracting information about the quality of the product or service being tested. The tests also provide an objective and independent view of the software, allowing the company to understand implementation problems early and prevent risks. Testing techniques usually involve running a program or application to detect software bugs. Software testing examines the system with respect to the following properties:

- meets functional and non-functional requirements
- correctly responds to all possible inputs
- performs its functions in an acceptable time
- is reasonably easy to use
- can be installed and run in the intended environment
- achieves the result that its users want

Since the number of possible tests, even for simple systems, is practically infinite, the software control process is based on a selection strategy for specific tests, which will be feasible based on time and resources. Of course, the testing process is repetitive, as resolving an error can lead to other, more profound problems or even to create new ones.

1.1.1 Black-box testing

The method followed by the testing group for testing the Biorax platform and the individual applications is Black-box testing. This is a test method that examines the functionality of the application without requiring knowledge of the internal structure of the system.

In the early stages of the platform development, the main objective of which was to identify significant errors and to confirm the correct implementation of the basic functions of the system, the tests were based on the execution of standard test cases. By increasing the complexity and the maturation of the system, the scenarios began to become much more complex, increasingly approaching the actual conditions of use of the platform.

ΔΗΜΟΚΡΙΤΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΡΑΚΗΣ ΕΙΔΙΚΟΣ ΛΟΓΑΡΙΑΣΜΟΣ ΚΟΝΔΥΛΙΩΝ ΕΡΕΥΝΑΣ — DEMOCRITUS UNIVERSITY OF THRACE SPECIAL ACCOUNT FOR RESEARCH FUNDS

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Figure1: Test Cases example

1.1.2   Automated Testing

Secondarily, the Selenium software control tool for automated testing was used. Selenium is a test software platform for web applications. It provides a recording / playback function that allows for test without knowing a programming language (Selenium IDE). It is mainly used in automation of web applications for testing.

1.2   Report Management and Release Control Tools

Recording and managing reports for the errors detected during the tests was done using the following tools, which were also used for version control.

- **Comidor[1]:** Comidor is a SaaS tool for small and medium-sized businesses, which acts as a staff collaboration platform and provides communication capabilities (email, internal messaging), tools for planning, organizing and controlling all business processes, and organizing business records.

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[1] https://www.comidor.com/

Figure 2: Comidor – Error reports

Figure 3: Comidor - Error reports

- **GitLab[2]:** Git is an open source version control system. GitLab is a web-based management tool based on git, which additionally provides tools for recording tracking.

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[2] https://about.gitlab.com/
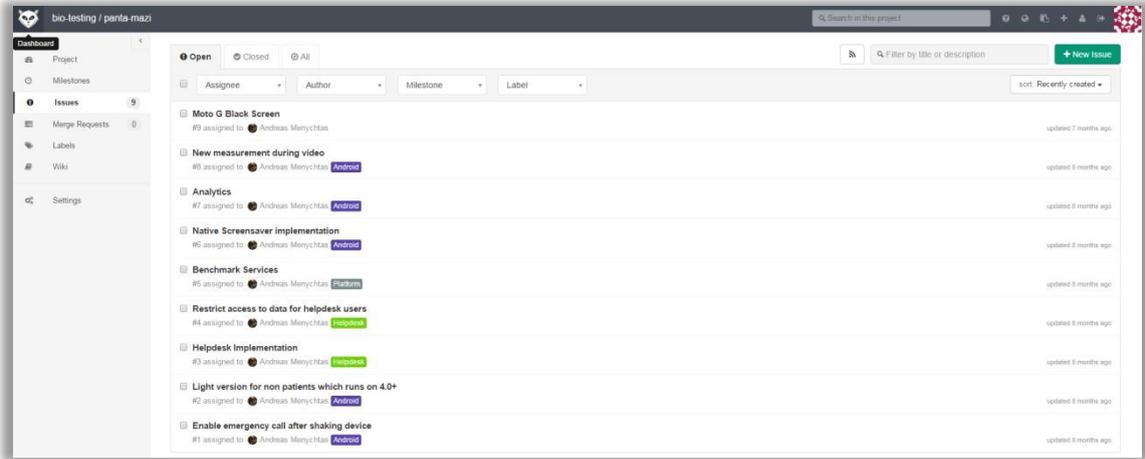
Figure 4: GitLab - Error reports

Figure5: GitLab - Error reports

1.3 Tickets

The following table lists all errors resulting from the test procedure that have been fixed or remain open.

Table 1: Complete List of Recorded Errors

Status	Title	Important	Status
Error	Adding an allergy does not work, nor does it show me suggestions as I type.	NO	Fixed
Upgrade	Back buttons on Android app	NO	Fixed
Error	Exception during installation	NO	Fixed
Error	Reminders for biosigned measurements	YES	Fixed
Upgrade	Sort contacts στη mobile	NO	Fixed
Upgrade	Icon for biosignals parameters	NO	Fixed
Error	Wrong language	NO	Fixed
Error	Drop down on the registration form	NO	Fixed
Error	All dropdown sorting alphabetically and categorization	YES	Fixed
Upgrade	For contacts, let the phone not be required to sign up.	NO	Fixed
Upgrade	Mute to video call	NO	Fixed
Error	Session Killed by server	NO	Fixed
Upgrade	Send reminder to native so as to trigger pebble notification	YES	Fixed
Error	Mesurement service does not store the Blood pressure data	YES	Fixed
Upgrade	Reminders Categories	YES	Fixed
Error	The most recent alerts are at the top of the list.	NO	Fixed
Upgrade	Change layout to lite version	YES	Fixed
Error	Add a tablet reminder	YES	Fixed

Upgrade	Automatically return to the home screen	NO	Fixed
Error	Email confirmation from tablets	YES	Fixed
Upgrade	Add profile photo from mobile	NO	Fixed
Upgrade	Pop-up messages	NO	Fixed
Error	The dropdown on the registration form does not work on all devices	YES	Fixed
Upgrade	Complete registration on tablet	NO	Fixed
Error	Registration Token	NO	Fixed
Upgrade	Start application and change user	YES	Fixed
Error	New layout	NO	Fixed
Upgrade	Version number in lowercase, in the middle of the splash screen	NO	Fixed
Error	Wrong icon	NO	Fixed
Error	User registration from android app	YES	Fixed
Error	The invitation accept link does not work	YES	Fixed
Error	Threshold overruns alerts are not sent	YES	Fixed
Error	Corrections to delete an account from a helpdesk	NO	Fixed
Upgrade	Origin of medical examinations	YES	Fixed
Error	Entry of all examinations. Categorized	NO	Open
Error	Transfer user list storage internally to the application and not to the bioassist folder	NO	Fixed
Error	Changing biosignals from mobile does not change the indication that it has been registered manually	NO	Fixed
Error	Fields in bio-signals show values as decimal, while they are integers.	NO	Fixed
Error	Entry of all examinations. Categorized	NO	Open
Error	Error after call termination	YES	Fixed

Error	Large contact photos	YES	Fixed
Error	The offline icon appears instead of the photo	NO	Fixed
Error	Redirect after email confirmation	NO	Fixed
Error	The service for the measurements returns 200 even if it is wrong.	NO	Fixed
Upgrade	Introduction serious games	NO	Open
Upgrade	Introduction serious games	NO	Open
Error	Editing measurements by a doctor	NO	Fixed
Error	Message when the caller is in trouble and restarts	NO	Fixed
Error	Contact List - Huge Photo	NO	Fixed
Upgrade	List of allergens	NO	Fixed
Error	Drug search	NO	Fixed
Error	Exam Board Columns	NO	Fixed
Upgrade	The temperature and weather are also displayed on top of the button on the home screen.	NO	Fixed
Upgrade	Hide photo from desktop	NO	Fixed
Upgrade	Restart after application update	NO	Fixed
Upgrade	Restart app from helpdesk command	NO	Fixed
Error	The return button from creating / editing a reminder on mobile is in English	NO	Fixed
Error	Restore to full screen after volume change	NO	Fixed
Error	The device does not stay on when push notification is started.	YES	Fixed
Error	The application keeps the device open for ordinary users	YES	Fixed
Upgrade	Input pressure measurement automatic conversion of 15.5 to 155	NO	Fixed
Upgrade	Delete / Edit Biosignals	YES	Fixed

Error	User seems to be online while is offline	YES	Fixed
Error	The video off button is in English	NO	Fixed
Error	Too many messages in the desktop are in English	NO	Fixed
Upgrade	Actions of the link in invitation email	NO	Fixed
Error	Sugars do not show the measurements	YES	Fixed
Upgrade	Limits in historical and red if it has passed the limit	NO	Fixed
Error	History on mobile is missing names from the price columns and the "sprocket" on the right	NO	Fixed
Error	Change row in the list of online contacts	NO	Fixed
Upgrade	Communicate only with a computer microphone	NO	Fixed
Upgrade	Adding weight to biosignals	NO	Fixed
Upgrade	Automatic start of application ONLY for patients	NO	Fixed
Upgrade	Show doctors' boundaries within biosignals graphics	NO	Fixed
Upgrade	Live streams come out of biosignals. Default 1 week	YES	Fixed
Upgrade	In the android history we must also show the allergies and drugs	NO	Fixed
Error	The doctor can only change the patient's allergies and medications he has added	NO	Fixed
Error	Service call returns user list	YES	Fixed
Error	Cache problems. Old icons still appear after the web content update	YES	Fixed
Upgrade	Upgrade a simple member to a Doctor from HelpDesk	YES	Fixed
Error	Button in English	YES	Fixed
Error	Button in English	YES	Fixed
Upgrade	Repeated reminders	NO	Programmed
Upgrade	Icon for push notifications	NO	Fixed

Error	Image Disable Button	NO	Fixed
Error	Return from Biosignal Light View	NO	Fixed
Upgrade	Repeated reminders	NO	Programmed
Error	Closing screensaver	NO	Fixed
Error	Scroll Down on the photos	NO	Fixed
Error	Correction of message	NO	Fixed
Upgrade	Push notification for reminders/alerts	NO	Open
Error	Move the "Back" button from the 1st navbar to the 2nd navbar	NO	Fixed
Upgrade	Push notification for reminders/alerts	NO	Open
Error	Problem in Calling Calls	NO	Fixed
Upgrade	reminders sound	NO	Fixed
Upgrade	profile photo	NO	Fixed
Upgrade	Load EHR after registration or membership update	YES	Fixed
Error	Camera hits after a few calls	YES	Fixed
Error	Logout Button at mobile	YES	Fixed
Upgrade	Trial Period	NO	Open
Upgrade	Call button from the patient's tab	YES	Fixed
Error	Data Synchronization with Biomedicine	YES	Fixed
Error	Do not show results in the history that have no value	NO	Fixed
Error	Return Full Screen after typing	YES	Fixed
Error	History typing displays dashes	YES	Fixed
Upgrade	Deleting the connection control button when I add a user	YES	Fixed
Upgrade	Javascript popup messages need to become native android.	YES	Fixed
Upgrade	Trial Period	NO	Open

Upgrade	Simple Daily questionnaire on how the patient feels	YES	Fixed
Upgrade	Exams not coming from Biomedicine	YES	Fixed
Error	Double-click on an incoming call	NO	Fixed
Upgrade	Video	NO	Open
Upgrade	Voice reminders	NO	Open
Upgrade	Contact photos are not displayed immediately	NO	Fixed
Upgrade	Video	NO	Open
Upgrade	Voice reminders	NO	Open
Upgrade	Sorting History	YES	Fixed
Upgrade	Video (De)Activation Button	NO	Fixed
Upgrade	Measurement process	YES	Fixed
Error	Invitation call (mail - push notification)	YES	Fixed
Error	Push notification message	YES	Fixed
Error	Survey result	YES	Fixed
Error	Change automatic answer setting	NO	Fixed
Error	Manual measurement submission - Check limits	YES	Fixed
Error	Alerts for contacts reminders	NO	Fixed
Error	When the application is in the background, it rings, but it does not come to the fore	YES	Fixed
Upgrade	Chatting during video	NO	Open
Upgrade	Chatting during video	NO	Open
Error	Different messages depending on the user's gender	NO	Fixed
Upgrade	New biosignals	YES	Fixed
Upgrade	The application disables the keyboard prediction mode	NO	Fixed

Upgrade	Search users by name	YES	Fixed
Upgrade	Time limit when a user calls someone else and the other does not answer.	NO	Fixed
Upgrade	Call from initation to contact that is offline	NO	Fixed
Upgrade	Add contacts during registration	NO	Fixed
Upgrade	Send a call for a user account	NO	Fixed
Upgrade	Call confirmation message	NO	Fixed
Upgrade	In the video chat between two users, it is advisable to include the name of the caller and Mr	NO	Fixed
Upgrade	Confirm Dialog to change the "favorite" contact	NO	Fixed
Error	Turning on / off the video causes changes to the UI	YES	Fixed
Error	Multiple push notifications	YES	Fixed
Error	JavaScript Console Error	NO	Fixed
Upgrade	Single User Registration from mobile just downloaded	NO	Fixed
Upgrade	Weather on the screensaver and the mobile web	NO	Fixed
Error	When I add a metric to the web application, refresh the charts automatically	NO	Fixed
Error	The autologin when I have a single user to slow longer because I can not add another user	NO	Fixed
Upgrade	Updating the weight on the patient's tab of the bio-signals	NO	Fixed
Upgrade	Only 2 contacts with auto answer;	YES	Fixed
Error	Check credentials when adding an account	NO	Fixed
Error	Contact photos in your doctor's application appear a little strange.	NO	Fixed
Error	The sound at every touch on the mobile does not play anymore.	NO	Fixed

Upgrade	Events in our member accounts have a serial number.	NO	Fixed
Upgrade	Biosignal origin	NO	Fixed
Upgrade	Restart when the camera crashes	NO	Fixed
Error	Slow webview entry	YES	Fixed
Error	When the user does not have a profile pic, a default user pic is displayed instead of white	NO	Fixed
Error	Typeahead at dropdowns	NO	Fixed
Error	Pop up to reconnect to the web is in English	NO	Fixed
Error	Text down right to leave	NO	Fixed
Error	The emergency alert to the doctor must include the patient's name	YES	Fixed
Error	Problem in the UI of the android app (YOGA 2 tablet)	NO	Fixed
Error	Online user on Android app	NO	Fixed
Error	Problems in the UI during the call	YES	Fixed
Error	Register new user through Tablet	NO	Fixed
Upgrade	Previous choices in "How do I feel today" appear along with other bio-signals.	NO	Fixed
Error	The email confirmation link for user registration does not work.	YES	Fixed
Error	Restore from background	NO	Fixed
Error	Spelling / Typographical Errors	NO	Fixed
Error	Medical history on mobile	YES	Fixed
Error	Normal values in history are wrong	NO	Fixed
Error	The weather shows the wrong location (Kalamaria)	YES	Fixed
Error	In the addition of a test, the control message does not specify what the problem is	NO	Fixed

Error	Selecting a Measurement Unit when Adding Testing Results	NO	Open
Error	Normal values in history are wrong	YES	Fixed
Error	Selecting a Measurement Unit when Adding Testing Results	NO	Open
Error	Wrong label name when adding a new reminder	NO	Fixed
Error	View photos	NO	Fixed
Error	Search for allergens	NO	Fixed
Error	Delete Reminder	NO	Fixed
Error	Unable to add exams from Att. Doctor	NO	Fixed
Error	Search for examination by typing	NO	Fixed
Error	problem in iOS call camera	YES	Fixed
Error	Add patient	YES	Fixed
Error	The accordion of examinations in the medical history is open from the beginning	NO	Fixed
Error	Incorrect reminder	NO	Fixed
Error	Back button off position	YES	Fixed
Error	AMKA length validation	NO	Fixed
Error	Search for mobile examinations	NO	Fixed
Upgrade	Notification button	NO	Fixed
Error	"How do I feel" automatic return	NO	Fixed
Error	The app crashes several times when it opens from notification	YES	Fixed
Upgrade	Delete Account from Helpdesk	NO	Fixed
Upgrade	Possibility to upgrade a user to premium	YES	Fixed
Upgrade	Registration Process	YES	Fixed
Error	Not Responded by iOS	YES	Fixed

Error	Notifications on iOS / Android	NO	Fixed
Error	Email for threshold overrun	NO	Fixed
Error	Message in Greek on login form	NO	Fixed
Error	Invitations accept link does not work	NO	Fixed
Error	The application crashes on different devices	YES	Fixed
Error	The examinations appear one by one	NO	Fixed
Error	Failed to call iOS	YES	Fixed
Error	Biosignals charts	NO	Fixed
Error	Functionality 'Notifications'	NO	Fixed
Error	Add a patient reminder	YES	Fixed
Error	The measurement download reminder remains active after taking a measurement	NO	Fixed
Upgrade	ESC button - View photos	NO	Fixed
Error	Manually add metrics	NO	Fixed
Error	moto g black screen in video	YES	Programmed
Upgrade	Reminders icon "	NO	Fixed
Error	moto g black screen in video	YES	Programmed
Upgrade	Add the tab "Add button" and the tab "Patients"	NO	Fixed
Error	Problem with doctor's mobile application	YES	Fixed
Upgrade	Changes the mobile UI	YES	Fixed
Error	Splash screen delay if no internet available	YES	Fixed
Error	Biomedical examination	YES	Fixed
Error	Acknowledge notification from pebble	YES	Fixed
Error	Single confirmation on logout	NO	Fixed

Error	Bigger icons	YES	Fixed
Upgrade	Notifications remain unread after logout / login	YES	Fixed
Upgrade	Mobile biosignals counts to have seconds	NO	Fixed
Upgrade	In the Light version, both the user name and the photo are displayed	YES	Fixed
Upgrade	Show Biosignals on Mobile	YES	Fixed
Error	reminder for heart rate measurement makes no sense	YES	Fixed
Upgrade	After logging in a new user login automatically	NO	Fixed
Error	Push notification does not go to the last device that logged in a user	YES	Fixed
Error	night screen operation	NO	Fixed
Error	Disable reminder for measurement	NO	Fixed
Error	Timeout Popup Exit / Change User	NO	Fixed
Error	Remote restart	YES	Fixed
Error	Call from reminder	NO	Fixed
Upgrade	In the Desktop / Helpdesk popup: ESC -> cancel, Enter -> OK	NO	Fixed
Error	Show a new contact invitation to all users	YES	Fixed
Upgrade	Doctor contact call (Mobile)	YES	Fixed
Error	Remote Restart and push notification fails In HOL network	YES	Fixed
Upgrade	Timeline for all users and helpdesk	NO	Open
Error	Text to speech	NO	Open
Error	Lag on screen	NO	Fixed
Upgrade	Method to turn off a pebble reminder	YES	Fixed
Error	Small Corrections on registration from mobile	NO	Fixed
Error	Measure Reminders	NO	Programmed

Error	Numbering in notifications	NO	Fixed
Upgrade	Timeline for all users and helpdesk	NO	Open
Error	Text to speech	NO	Open
Error	Measure Reminders	NO	Programmed
Error	Sometimes he sticks to the splash for a long time and does not login	NO	Fixed
Error	Today's weather is continually null	NO	Fixed
Error	The app crashes after a remote restart	YES	Fixed
Error	The application does not start automatically when the device lights up	YES	Fixed
Error	The application crashes when it opens after a new record	YES	Programmed
Error	In SersorsActivity be a fullscreen and the purple actionbar appear	YES	Fixed
Error	The application crashes when it opens after a new record	YES	Programmed
Error	Exception to Play	NO	Fixed
Error	Ringtone to the web	YES	Fixed
Error	Back Button on WebActivity does not close the application	YES	Fixed
Upgrade	English Support	YES	Fixed
Error	I can not define an automatic answer to a contact.	NO	Fixed
Error	Registration Redirect. It sticks to the picture below	NO	Fixed
Upgrade	When a contact call is shown in the contact list as inactive	YES	Fixed
Error	If a normal call closes the open listening session	NO	Programmed
Error	If a normal call closes the open listening session	NO	Programmed
Error	The invitation email does not open the application	NO	Fixed
Error	When connecting problems....	NO	Fixed
Error	Cancel the count reminder to return to the home page	NO	Fixed

Error	Call problems	NO	Programmed
Error	Weather - Reload location	NO	Fixed
Error	Promote an email invitation to iOS	NO	Fixed
Upgrade	Firefox support	NO	Fixed
Error	The measurement reminder has no title on the pebble	NO	Programmed
Error	Call problems	NO	Programmed
Error	Viewing biosignals on the mobile takes half the screen	YES	Fixed
Error	Delete the cache	NO	Fixed
Error	'How I Feel' does not appear as a graph on mobile	YES	Fixed
Error	Change profile image	NO	Fixed