**PUSH-D Document**

***Introduction*** – PUSH-D stands for Practice and Use Self-Help for Depression is an application for individuals above 18years. This application is a computer-based self-care program which is meant to empower individuals by offering a space to learn, strengthen and practice psychological skills that can be useful in dealing with depressive symptoms. This self-care program is designed for individuals with mild depression.

PUSH-D browser version and mobile app versions are available. Live browser version is deployed in the NIMHANS server and mobile app version is published in Google Play Store.

<https://echargementalhealth.nimhans.ac.in/pushd/>

***Technologies Used:***

Frontend (browser): HTML, JSP, bootstrap, JavaScript, jQuery

Frontend (hybrid mobile app – no separate backend): HTML, Bootstrap, JavaScript, jQuery

Backend: Java, JERSEY RESTFUL web services, MAVEN build, mysqlconnector (JDBC for connecting to the database)

Database: MySQL database

***Configuration files for browser version:*** /pushd/src/in/ac/nimhans/model/Path.java

/pushd/src/config.properties

/pushd/WebContent/js/values.js

***Configuration file for Cordova android mobile app version:***  C:\Users\admin\Desktop\pushdmobile\www\scripts\values.js

***ROLES:*** user, admin, doctor

***USER:*** can create user account (SELF-REGISTERED USER), read the data in various sections, enter data in tables in exercises (sections), re-do exercises (workbook), read the message from PUSH-D team (message from PUSH-D team in the workbook)

***ADMIN:*** can create new users, edit user data, see the workbook data of each user, see the list of all users, deactivate users, activate users, send message to users, see the list of messages to user, and see the list of self-registered users with responses and final feedback that was displayed to each user, create new doctor, edit doctor, assign doctor to user, deactivate doctor, activate doctor.

***DOCTOR:*** can see the list of users assigned to him, can see the workbook of his/her users, can send message to his/her user, can see the list of messages sent to a user.

***TYPES OF PUSH-D DATA:*** Two types of data are present. User data and Section data. User data means user information data, user push-d usage data etc. Section data means html structure data, page content data which includes text data, poster and videos etc.…User data is saved in the database and Section data is there in the JSON files. (C:\Users\admin\Desktop\data\sections\Section1). Part of the page data are there in JSP or HTML files and the other part in JSON files. When page loads, server catches data from the section.json file according to section number and display in the appropriate section. Also for few subsections, same JSP or HTML(for the Mobile app) file is used. For example, practicePoint7.jsp is used for Subsections 4.7, 5.7, 7.5…

***Workflow:*** For using PUSH-D application, an individual has to register first. Registration can be done by admin or by the individual himself/herself (SELF-REGISTRAION).

***SELF-REGISTERED USERS:*** In the Home page of PUSH-D application, there is an option SIGN-UP. Individuals has to provide the valid email address. An alert is displayed about an email which is sent to given email address. Person has to click on the link given in the email message and enter the password. (Emails address is the Username). After that user has to fill in forms in 4 pages compulsorily which will be displayed one after the other. The first page is for getting the user information, second and third pages include different screeners (depression, suicidal, anxiety and current function screeners- 4screeners). Fourth page is also for getting response of user to questions related to mental health. Each of the above 4 screeners has a score which is calculated based on the user responses to questions in each screener.

Score calculation is done in the frontend (JavaScript) and based on each score a final feedback is displayed with colored boxes to instruct the user to use/not to use PUSH-D.

User responses to questions in each screener are stored in the database. Later in the admin page, we are displaying the user responses and final feedback in the option “USR REGISTRAION-INFO”.

***ADMIN CREATED USERS:*** Admin can create users from the admin module (<https://echargementalhealth.nimhans.ac.in/pushd/anxiety>)

Admin need the person’s email address to register. Admin creates username and password for that user and provide the same to the user to use the application.

***INACTIVE USERS:*** Admin can deactivate users if needed. Also a user account will become inactive after 45days of registration automatically and the user cannot use the application. If the user wants to continue to use the app, admin can activate that user account from the admin module.

***SCREENERS:*** After completing Section10 and next login after 3 weeks of registration, a screener will be displayed and response of the user is stored in the database and displayed in the admin module.

***LOGIN:*** In order to login, user has to enter the email address (self-registered user) or username which was given by the admin and password.

***LOGOUT:*** Before completing all the 10 sections, if the user wants to logout, use has to select the date and time for next login so that reminders can be sent to the user 30minutes before the next login through email and message in phone.

Both Login and Logout data are saved in the database and displayed in the admin module as user activity.

***MONITOR CIRCLES:*** In the page which is displayed after clicking the smiley faces, there are 2 monitor circles. One circle indicates the number of sections completed by the user and the other shows the number of exercise completed.

***DOWNLOAD:*** Tables in some of the Essential zone sections can be downloaded to excel sheet in the browser version. (This feature is not available in mobile app version).

***CONTENT:*** Major part of PUSH-D content is text data content. There are also videos and posters.

PUSH-D application has 3 categories in the browser version and 2 categories in the mobile app version. They are Essential zone sections, Optional zone sections and Workbook (in the browser version) and Essential zone sections and Optional zone sections (in the mobile app version).

***LOGIC OF DATA FLOW:*** There are 10 Essential zone sections and 8 Optional zone sections. Each sections has numerous subsections. User has to complete all the 10 essential zone sections in a sequential order. Initially Essential zone sections are locked except Section1. While proceeding forward, each section will be unlocked. For example, after completing Section1, Section2 will be unlocked. In some of the Essential zone sections, user has to enter data in tables as a part of exercises. Some of these exercises are compulsory which means the user has to do the exercise to go forward. While others are not mandatory and the user can skip that and do it later in the Workbook. In the Essential zone sections, user is able to enter data only once. (Both mandatory and non-mandatory exercises)

In the Workbook, users can re-do some of the exercises which are present in the Essential zone sections any number of times as versions. But before going to Workbook, User has to finish the Essential zone sections. For example, if user completes section 1, 2, 3, and then same sections will be available in the workbook.

Latest data (if a user creates multiple versions of an exercise) is displayed in the Essential zone section exercises.

Also, both mobile app and browser versions are synchronized. If the user enters data through mobile app, same data will be visible in the browser version simultaneously.

A user can visit any optional zone section and complete that. If the user logs out before completing any essential zone section or optional zone section, in the next login, user is directed to the next unvisited subsection of the section last visited. If the user visits any optional zone section before completing all essential zone sections, after completing that optional zone sections, user is directed to the unvisited essential zone sections.

***HORIZONTAL BAR IN ALL PAGES:***  Indicates which week the user is in (green color) after creating the use account.

***SMILEYS:*** A user has to select one of option from to indicate his/her current mood by clicking on a smiley face which will be displayed after every login. The selected option is saved in the database and displayed in the admin page.

***POPUPS:*** After completing each Essential zone section for the first time, 2 popup boxes will be displayed one after the other and the user has to select one of option from a list of options. These data will be saved in the database and displayed in the admin page.

***LOCKING AND UNLOCKING:*** When a new user logs in, the user has to visit all the Essential zone sections in sequential order. But in some cases, admin can unlock Essential zone sections which can be used by the user directly. That means, if the admin unlocks Essential zone sections 4 and 7, in the side menu of sections name, sections 4 and 7 will be displayed as unlocked. So instead of visiting Essential zone sections 1, 2, 3, 4, 5, 6, 7…, the user can visit section4 or 7 directly. After that user will be directed to sections1 according to normal logic.

***SECTION3.2:*** When a user visits Essential zone section 3 subsection 2, an email will be sent to the username (email address) which is a set of forms for doing exercises at the user end. Also, in section 3.2, a table is displayed, and the user has to fill data (minimum one activity from each category Pleasurable, Meaningful and Mastery-oriented). In the second table, sorted data is displayed. (One activity from each category is displayed at the top rows of second able which are highlighted.) Sorting is based on the “How easy it is to add it to my day/increase its frequency?” After the first 3 rows in the second table (which are based on Pleasurable, Meaningful and Mastery-oriented). Next rows are displayed displays activities which are easy to do.

For example, if an activity is easy to do and another activity is slightly difficult or very difficult, then easy activity will be displayed as the fourth row and difficult activity in the next row.

In the second table, user has to select the activity and select the day on which s/he is going to do that. Clicking the submit button, third table is displayed. But user cannot use third table in the same login. User has to click next button to go forward. User has to do/try to do the activity and logs in again and click on the Tried/ Did boxes in section 3.2 to indicate the status. Clicking Did button changes its color to green and clicking Tried button changes its color to yellow.

Note: Above process is replicated in the workbook also. But after completing all three tables in a version, next version is available to re-do the exercises.

***LANDING PAGE:*** After completing all Essential zone sections for the first time, user is directed to the landing page from where user can go to any section (re-visiting Essential zone sections or optional zone sections)

***SCREENSHOTS:IMAGE1- HOMEPAGE***