**Programming Fundamentals**

Fall 2024

**Project Details**

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| ***Project*** |  |
| Project Title | TPS Mental Health and Counseling Management System |
| Registration Number | 2024-CS-126 |
| Summary | The program is a comprehensive management system designed to streamline communication between patients, their families, and therapists, with a central focus on suicide prevention. Inspired by **The Project Suicide (TPS)**, a real-life international mental health organization, this system provides a user-friendly platform to facilitate help-seeking and support for individuals at risk of suicide. The system's primary aim is to assist patients in reaching out for help while enabling family members and therapists to actively engage in the patient’s mental health journey.  **Patients** using the program can book therapy sessions, set and track personal goals, and communicate with their therapists or family members. The system provides tools for patients to indicate their priority level, ensuring those requiring urgent attention are addressed promptly. **Family members** are given access to the patient’s current mental state, session notes from therapists, and tools to book therapy sessions on behalf of the patient. This enables families to stay informed about their loved one’s progress and contribute meaningfully to their care.  **Therapists** are empowered with functionalities to identify which patients need immediate attention based on priority levels and behavioral patterns during sessions. They can view all their assigned patients, write session notes for family members, and communicate directly with patients. These features ensure therapists can deliver personalized care effectively and track patient progress over time.  The system also includes robust administrative controls. **Administrators** can add, edit, or delete user profiles for patients, family members, and therapists. They can analyze trends across the system to evaluate its overall impact and maintain communication with therapists. The admin role also includes a unique feature to alleviate stress, emphasizing the importance of self-care for everyone involved.  The program relies on parallel arrays for data storage and management, utilizing CSV files for persistence to ensure seamless data access between sessions. It serves as a communication hub, allowing patients to seek help, families to track progress, and therapists to provide tailored care. The overarching goal of this system is to prevent suicide by fostering a supportive network and raising awareness about mental health challenges. |
| Features | **Administrator Features**  1. **User Management**    * Add new users (Patients, Family Members, Therapists).    * Edit existing user details.    * Delete users.    * Display a list of all users. 2. **System Insights**    * View general trends (e.g., patient priorities and statuses). 3. **Communication**    * Send notes to therapists. 4. **Stress Relief**    * Provides a "button mashing" feature for stress alleviation.  **Patient Features**  1. **Communication**    * Send notes to therapists and family members.    * Indicate if they are in urgent need of a session (priority). 2. **Goal Management**    * Set new personal goals.    * View current goals.    * Mark goals as completed. 3. **Session Booking**    * Schedule therapy sessions.  **Family Member Features**  1. **Patient Status**    * View the patient's state (e.g., priority indicator).    * Read notes from therapists about the patient. 2. **Therapist Interaction**    * Book therapy sessions on behalf of the patient.  **Therapist Features**  1. **Patient Management**    * View a list of priority patients.    * View all patients assigned to them. 2. **Session Management**    * Write and save session notes (patient reviews).    * View feedback from patients.    * Contact patients directly. 3. **Schedule Management**    * Review booked sessions.  **General Features**  1. **Data Management**    * Save and load data (users, goals, notes, and session details) from CSV files. 2. **Input Validation**    * Validates user input across multiple functionalities. 3. **Date Verification**    * Ensures session dates are entered in the correct format (DD-MM-YY).   This system is designed to facilitate smooth interaction and management between administrators, therapists, patients, and their families. |
| ***Implementation Details*** |  |
| Write down the names of all datatypes used in the code? | String, int, char, bool, int 1D arrays, string 1D arrays, string 2D arrays |
| How many times for, while and do-while loop is used? | While loops: 5  Do While loops:3  For Loops: 19 |
| Do you have used switch statement, if yes then enter the purpose of each occurrence. | Yes, the code contains **switch statements**. Here's a breakdown of each occurrence and its purpose: **1. Main Menu**  * **Location**: main() * **Purpose**: To handle user login or exit options based on their input. * **Cases**:   + case 1: Admin login.   + case 2: Patient (Client) login.   + case 3: Family member login.   + case 4: Therapist login.   + case 0: Exit the program.  **2. Admin Submenu**  * **Location**: Inside main() when loggedInUserType is set to Admin (1). * **Purpose**: To provide admin-specific functionalities. * **Cases**:   + case 1: Add a user (Patient, Family Member, or Therapist).   + case 2: Edit an existing user.   + case 3: Delete a user.   + case 4: Display a list of all users.   + case 5: View general trends (e.g., patient priorities).   + case 6: Contact therapists.   + case 7: Stress relief (button mashing feature).   + case 0: Logout.  **3. Patient Submenu**  * **Location**: Inside main() when loggedInUserType is set to patient (2). * **Purpose**: To allow patients to perform tasks. * **Cases**:   + case 1: Contact therapist.   + case 2: Contact family.   + case 3: Book a therapy session.   + case 4: Set new goals.   + case 5: View current goals.   + case 6: Remove completed goals.   + case 0: Logout.  **4. Family Member Submenu**  * **Location**: Inside main() when loggedInUserType is set to Family Member (3). * **Purpose**: To allow family members to manage their interactions. * **Cases**:   + case 1: View the patient's state (e.g., priority level).   + case 2: See therapist's notes about the patient.   + case 3: Book a session for the patient.   + case 0: Logout.  **5. Therapist Submenu**  * **Location**: Inside main() when loggedInUserType is set to Therapist (4). * **Purpose**: To enable therapists to manage their tasks. * **Cases**:   + case 1: View priority patients.   + case 2: View all patients.   + case 3: Write session notes.   + case 4: View patient feedback.   + case 5: Contact a patient.   + case 6: Review booked sessions.   + case 0: Logout.  **6. Adding Users**  * **Location**: Inside the Admin submenu (case 1). * **Purpose**: To select which type of user (Patient, Family Member, or Therapist) is being added. * **Cases**:   + case 1: Add a Patient.   + case 2: Add a Family Member.   + case 3: Add a Therapist.  **7. Editing Users**  * **Location**: Inside the Admin submenu (case 2). * **Purpose**: To select which type of user (Patient, Family Member, or Therapist) is being edited. * **Cases**:   + case 1: Edit a Patient.   + case 2: Edit a Family Member.   + case 3: Edit a Therapist.  **8. Deleting Users**  * **Location**: Inside the Admin submenu (case 3). * **Purpose**: To select which type of user (Patient, Family Member, or Therapist) is being deleted. * **Cases**:   + case 1: Delete a Patient.   + case 2: Delete a Family Member.   + case 3: Delete a Therapist.  **9. User Type Selection**  * **Location**: Functions getUserType() and nested within user management options in the “Admin” submenu. * **Purpose**: To specify the type of user for performing actions (add, edit, delete). * **Cases**:   + case 1: Patient.   + case 2: Patient’s Relative (Family Member).   + case 3: Therapist  **Summary of Purposes**  1. Navigate main menu options (login and exit). 2. Facilitate admin-specific functionalities (e.g., user management, system trends). 3. Enable task-specific menus for Patients, Family Members, and Therapists. 4. Specify user type for add, edit, and delete operations. 5. Streamline feature selection and execution based on roles and actions. |
| Do you have any compile time error in your code? | No |
| Do you have any run time error in your code? | No  (Slight bug about 1st line of header screen occurring in wrong format sometimes) |
| Enter the names of major modules in your system. | 1. User Management Module 2. Authentication Module 3. Admin Features Module 4. Patient Features Module 5. Family Member Features Module 6. Therapist Features Module 7. Data Persistence Module 8. Utility and Validation Module 9. Main Program Module |
| Write down all parallel 1D arrays and their purpose | Here are all the **parallel 1D arrays** used in the program along with their purposes: **1.** patient[]  * **Purpose**: Stores unique IDs for patients.  **2.** patientPriority[]  * **Purpose**: Indicates if a patient requires urgent care (Y/N).  **3.** patientReview[]  * **Purpose**: Contains reviews or notes written by therapists about patients.  **4.** usernamesP[]  * **Purpose**: Stores usernames of patients for login and identification.  **5.** passwordsP[]  * **Purpose**: Stores passwords of patients for authentication.  **6.** familyMember[]  * **Purpose**: Stores unique IDs for family members associated with patients.  **7.** usernamesPF[]  * **Purpose**: Stores usernames of family members for login and identification.  **8.** passwordsPF[]  * **Purpose**: Stores passwords of family members for authentication.  **9.** noteToPatient[]  * **Purpose**: Contains notes sent by therapists to patients.  **10.** noteToFamily[]  * **Purpose**: Contains notes sent by therapists to the family members.  **11.** therapist[]  * **Purpose**: Stores unique IDs for therapists.  **12.** usernamesT[]  * **Purpose**: Stores usernames of therapists for login and identification.  **13.** passwordsT[]  * **Purpose**: Stores passwords of therapists for authentication.  **14.** sessionDates[]  * **Purpose**: Tracks the scheduled dates of sessions booked by patients or family members.  **15.** noteToTherapist[]  * **Purpose**: Contains feedback or notes sent by patients to therapists.   These arrays are parallel because corresponding indices across related arrays hold data for the same entity (e.g., a patient’s username, password, priority, and review are aligned in usernamesP[], passwordsP[], patientPriority[], and patientReview[]). |
| Write down all 2D arrays and their purpose. | **1.** patientGoals[][5]  * **Purpose**: Stores up to 5 therapy-related goals for each patient.   + Each row corresponds to a specific patient.   + Each column represents an individual goal. |
| What is the code length, size in KBs and lines of code | Lines of Code: 1328  File Size (cpp): 44 KB  File Size (exe): 107 KB |
| ***Details of functions*** |  |
| Function Name 1 | initializeArrays |
| Function Prototype | void initializeArrays(int patient[], char patientPriority[], string patientReview[], string usernamesP[], string passwordsP[], string patientGoals[][5], int familyMember[], string usernamesPF[], string passwordsPF[], string noteToPatient[], string noteToFamily[], int therapist[], string usernamesT[], string passwordsT[], string sessionDates[], string noteToTherapist[], int maxPatient, int maxFamily, int maxTherapist, int maxGoals); |
| Description | Initializes all the arrays in the program to default values (e.g., empty strings, zeros, etc.) for patients, family members, and therapists. Ensures no leftover or uninitialized data exists in the arrays. |
| Function Return type and purpose | void |
| Parameter names and purpose of each parameter | * int patient[]: Stores patient IDs. * char patientPriority[]: Indicates if a patient is in urgent need of attention. * string patientReview[]: Stores therapist reviews for patients. * string usernamesP[], passwordsP[]: Store usernames and passwords of patients. * string patientGoals[][5]: Stores patient goals. * int familyMember[]: Stores IDs of family members. * string usernamesPF[], passwordsPF[]: Store usernames and passwords of family members. * string noteToPatient[], noteToFamily[]: Notes for patients and their families. * int therapist[]: Stores therapist IDs. * string usernamesT[], passwordsT[]: Store usernames and passwords of therapists. * string sessionDates[]: Tracks booked session dates. * string noteToTherapist[]: Notes from patients to therapists. * int maxPatient, maxFamily, maxTherapist, maxGoals: Maximum sizes for corresponding arrays. |
|  | |
| Function Name 2 | saveData |
| Function Prototype | void saveData(int patient[], char patientPriority[], string patientReview[], string usernamesP[], string passwordsP[], string patientGoals[][5], int familyMember[], string usernamesPF[], string passwordsPF[], string noteToPatient[], string noteToFamily[], int therapist[], string usernamesT[], string passwordsT[], string sessionDates[], string noteToTherapist[], int maxPatient, int maxFamily, int maxTherapist, int maxGoals); |
| Description | Saves the current state of the program’s data into external CSV files for persistence. This includes user details, session data, notes, and goals |
| Function Return type and purpose | Void |
| Parameter names and purpose of each parameter | * int patient[]: Stores patient IDs. * char patientPriority[]: Indicates if a patient is in urgent need of attention. * string patientReview[]: Stores therapist reviews for patients. * string usernamesP[], passwordsP[]: Store usernames and passwords of patients. * string patientGoals[][5]: Stores patient goals. * int familyMember[]: Stores IDs of family members. * string usernamesPF[], passwordsPF[]: Store usernames and passwords of family members. * string noteToPatient[], noteToFamily[]: Notes for patients and their families. * int therapist[]: Stores therapist IDs. * string usernamesT[], passwordsT[]: Store usernames and passwords of therapists. * string sessionDates[]: Tracks booked session dates. * string noteToTherapist[]: Notes from patients to therapists. * int maxPatient, maxFamily, maxTherapist, maxGoals: Maximum sizes for corresponding arrays. |
|  | |
| Function Name 3 | loadData |
| Function Prototype | void loadData(int patient[], char patientPriority[], string patientReview[], string usernamesP[], string passwordsP[], string patientGoals[][5], int familyMember[], string usernamesPF[], string passwordsPF[], string noteToPatient[], string noteToFamily[], int therapist[], string usernamesT[], string passwordsT[], string sessionDates[], string noteToTherapist[], int maxPatient, int maxFamily, int maxTherapist, int maxGoals); |
| Description | Loads data from external CSV files into program arrays to restore the program state. Reads patient, family member, and therapist details, including notes and session data. |
| Function Return type and purpose | void |
| Parameter names and purpose of each parameter | * int patient[]: Stores patient IDs. * char patientPriority[]: Indicates if a patient is in urgent need of attention. * string patientReview[]: Stores therapist reviews for patients. * string usernamesP[], passwordsP[]: Store usernames and passwords of patients. * string patientGoals[][5]: Stores patient goals. * int familyMember[]: Stores IDs of family members. * string usernamesPF[], passwordsPF[]: Store usernames and passwords of family members. * string noteToPatient[], noteToFamily[]: Notes for patients and their families. * int therapist[]: Stores therapist IDs. * string usernamesT[], passwordsT[]: Store usernames and passwords of therapists. * string sessionDates[]: Tracks booked session dates. * string noteToTherapist[]: Notes from patients to therapists. * int maxPatient, maxFamily, maxTherapist, maxGoals: Maximum sizes for corresponding arrays. |
|  | |
| Function Name 4 | searchUser |
| Function Prototype | bool searchUser(string username, int maxUsers, string usernameList[], int &reqUserIndex); |
| Description | Searches for a user in the given list of usernames and stores the index of the found user. Returns true if the user exists, false otherwise. |
| Function Return type and purpose | bool (indicates if the user was found). |
| Parameter names and purpose of each parameter |  string username: Username to search for.   int maxUsers: Maximum number of users in the list.   string usernameList[]: Array of usernames to search.   int &reqUserIndex: Reference to store the index of the found user. |
|  | |
| Function Name 5 | dateVerify |
| Function Prototype | string dateVerify(void); |
| Description | Ensures the date entered by the user is in the correct format (DD-MM-YY). Validates day and month ranges. |
| Function Return type and purpose | String (to return date in correct format) |
| Parameter names and purpose of each parameter | void |
|  | |
| Function Name 6 | getUsername |
| Function Prototype | String getUsername(void) |
| Description | Prompts the user to input their username and returns it. |
| Function Return type and purpose | String (returns user’s username) |
| Parameter names and purpose of each parameter | void |
|  | |
| Function Name 7 | getPassword |
| Function Prototype | string getPassword(void); |
| Description | Prompts the user to input their password and returns it, ensuring the password length is between 8 and 32 characters. |
| Function Return type and purpose | String (user’s password) |
| Parameter names and purpose of each parameter | void |
|  | |
| Function Name 8 | getAnote |
| Function Prototype | string getAnote(void); |
| Description | Allows the user to input a note to send to the therapist or family member. |
| Function Return type and purpose | String (note to be sent) |
| Parameter names and purpose of each parameter | void |
|  | |
| Function Name 9 | checkPriority |
| Function Prototype | char checkPriority(void); |
| Description | Allows the user to input a note to send to the therapist or family member. |
| Function Return type and purpose | char (priority indicator for patient) |
| Parameter names and purpose of each parameter | void |
|  | |
| Function Name 10 | choiceValidation |
| Function Prototype | int choiceValidation(string choice, char start, char end); |
| Description | Validates that the user’s input is a valid choice within a specified range. Also is used for string validation. |
| Function Return type and purpose | int (valid choice number). |
| Parameter names and purpose of each parameter |  string choice: The input string to validate.   char start, char end: The range of valid choices. |
|  | |
| Function Name 11 | printHeader |
| Function Prototype | void printHeader(void); |
| Description | Prints the program header to the console. |
| Function Return type and purpose | void |
| Parameter names and purpose of each parameter | void |
|  | |
| Function Name 12 | coutFancy |
| Function Prototype | void coutFancy(string fancy); |
| Description | Prints a string in a formatted, visually appealing way. |
| Function Return type and purpose | void |
| Parameter names and purpose of each parameter | string fancy: The string to be printed in a fancy format. |
|  | |
| Function Name 13 | askToContinue |
| Function Prototype | void askToContinue(void); |
| Description | Asks the user to press any key to continue, used after each major action to ensure smooth flow. |
| Function Return type and purpose | void |
| Parameter names and purpose of each parameter | void |
|  | |
| Function Name 14 | MainMenuInputPrompt |
| Function Prototype | int MainMenuInputPrompt(void); |
| Description | Displays the main menu and prompts the user to choose an option. |
| Function Return type and purpose | int(choice selected by user) |
| Parameter names and purpose of each parameter | void |
|  | |
| Function Name 15 | grtAdminInput |
| Function Prototype | int getAdminInput(void); |
| Description | Displays the admin submenu and prompts for input based on the selected option. |
| Function Return type and purpose | int (admin's choice ). |
| Parameter names and purpose of each parameter | void |
|  | |
| Function Name 16 | getPatientInput |
| Function Prototype | int getPatientInput(void); |
| Description | Displays the patient submenu and prompts for input based on the selected option. |
| Function Return type and purpose | int (patient's choice) |
| Parameter names and purpose of each parameter | void |
|  | |
| Function Name 17 | getFamilyInput |
| Function Prototype | int getFamilyInput(void); |
| Description | Displays the family member submenu and prompts for input based on the selected option. |
| Function Return type and purpose | Int (patient’s Family input) |
| Parameter names and purpose of each parameter | void |
|  | |
| Function Name 18 | getTherapistInput |
| Function Prototype | int getTherapistInput(void); |
| Description | Displays the therapist submenu and prompts for input based on the selected option. |
| Function Return type and purpose | int (therapist’s choice) |
| Parameter names and purpose of each parameter | void |
|  | |
| Function Name 19 | displayList |
| Function Prototype | void displayList(string usersArrayP[], string usersArrayPF[], string usersArrayT[], int maxUsers); |
| Description | This function is responsible for displaying the list of all users (patients, family members, and therapists) in a formatted manner. It prints each user type's name side-by-side for easy viewing. If a user doesn't exist (i.e., an empty string is found), they are not shown in the list. |
| Function Return type and purpose | void |
| Parameter names and purpose of each parameter |  string usersArrayP[]: An array of patient usernames.   string usersArrayPF[]: An array of family member usernames.   string usersArrayT[]: An array of therapist usernames.   int maxUsers: The maximum number of users to display (used to limit the iteration over the arrays). |
|  | |
| Function Name 20 | getUserType |
| Function Prototype | int getUserType(void); |
| Description | This function displays a menu to the user to select their role (user type). The options include selecting whether the user is a **Patient**, a **Family Member**, or a **Therapist**. It prompts the user to choose one of these options and returns the corresponding numeric value. The function ensures that the user enters a valid choice within the given range. |
| Function Return type and purpose | int (The function returns an integer that represents the selected user type: 1 for Patient, 2 for Family Member, and 3 for Therapist.) |
| Parameter names and purpose of each parameter | void |
|  | |
| Details of Files |  |
| File Name 1 | Clients.csv |
| File Type | Input/Output File |
| File Format | **Username, Password, Priority, Therapist Review, Notes to Patient**  **1**. john\_doe, pass12345, Y, "Doing well, needs minor adjustments", “Give fee Quickly”  **2**. jane\_doe, secure456, N, "Progressing but needs motivation",  “Take some rest” |
|  | |
| File Name 2 | Client’s Family.csv |
| File Type | Input/Output File |
| File Format | **Username, Password, Notes by Therapist**  **1**. family\_member1, fam12345, "Doing well, needs minor adjustments  **2.** family\_member2, familypass, "Progressing but needs motivation", |
|  | |
| File Name 3 | Therapist.csv |
| File Type | Input/Output File |
| File Format | **Username, Password, Session Dates, Note by Client’s Family**  **1.** therapist1, therapass, 24-12-24, "Thank you for the help!"  **2.** therapist2, securetherapist, 29-12-24, "Help Ali asap please!" |
|  | |
| File Name 4 | Client’s Goals.csv |
| File Type | Input/Output File |
| File Format | **Patient Username, Goal 1, Goal 2, Goal 3, Goal 4, Goal 5**  **1.** Ahmad909, "Complete mindfulness exercise", "Read motivational books", "", "", ""  **2.** Hassan2128, "Practice gratitude journaling", "Walk daily for 30 minutes", "", "", "" |
|  |  |
| ***Details of Interfaces*** |  |
| ***Main Menu Details*** | |
| Option 1 | *Administrator Login* |
| Purpose | *Allows admin to login, manage and overlook the overall system* |
| Input/ Output | *After selecting 1, a prompt to enter the username and password will be given. On entering the correct credentials, sub menu containing options for possible actions will be shown.* |
| Validation | *On wrong credentials, the credentials will be asked again.* |
| Test cases with sample inputs and outputs | * **Input**: Username: TPS, Password: TPSTPS909 * **Output**: Login successful; Admin submenu displayed. * **Input**: Username: Admin, Password: random1234 * **Output**: Login failed; displayed wrong credentials error message gave prompt to try again. |
| Which array is used on this option for data storage and retrieval? | * None (uses string constants ADMIN\_USERNAME and ADMIN\_PASSWORD). |
| Which function is used to call for this option? | * getMainMenuInput() |
| Screenshot |  |
|  | |
| Option 2 | *User/ Patient login* |
| Purpose | *Allows patient to login and ask for help, book sessions with therapists and track personal goals* |
| Input/ Output | *After selecting 2, a prompt to enter the username and password will be given. On entering the correct credentials, sub menu containing options for possible actions will be shown.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, the user is told to contact the admin and Credentials are asked again.* |
| Test cases with sample inputs and outputs | * **Input**: Username: AHMAD909, Password: 123456789 * **Output**: Login successful; Patient submenu displayed. * **Input**: Username: jane\_doe, Password: wrongpass * **Output**: Login failed; retry prompt displayed. |
| Which array is used on this option for data storage and retrieval? | * usernamesP[], passwordsP[]. |
| Which function is used to call for this option? | * getMainMenuInput() |
| Screenshot |  |
|  | |
| Option 3 | *Patient’s family login* |
| Purpose | *After selecting 3, a prompt to enter the username and password will be given. On entering the correct credentials, sub menu containing options for possible actions will be shown.* |
| Input/ Output | *After selecting 3, a prompt to enter the username and password will be given. On entering the correct credentials, sub menu containing options for possible actions will be shown.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, the user is told to contact the admin and Credentials are asked again.* |
| Test cases with sample inputs and outputs | * **Input**: Username: family\_member1, Password: password123 * **Output**: Login successful; Family Member submenu displayed. * **Input**: Username: family\_member2, Password: wrongpass * **Output**: Login failed; retry prompt displayed. |
| Which array is used on this option for data storage and retrieval? | * usernamesPF[], passwordsPF[]. |
| Which function is used to call for this option? | * getMainMenuInput() |
| Screenshot |  |
|  | |
| Option 4 | *Therapist Login* |
| Purpose | *Allows therapist to see urgent patients, all patients, and add session notes for family members to see* |
| Input/ Output | *After selecting 3, a prompt to enter the username and password will be given. On entering the correct credentials, sub menu containing options for possible actions will be shown.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, the user is told to contact the admin and Credentials are asked again.* |
| Test cases with sample inputs and outputs | * **Input**: Username: therapist1, Password: therapass * **Output**: Login successful; Therapist submenu displayed. * **Input**: Username: therapist2, Password: wrongpass * **Output**: Login failed; retry prompt displayed. |
| Which array is used on this option for data storage and retrieval? | * usernamesT[], passwordsT[]. |
| Which function is used to call for this option? | * getMainMenuInput() |
| Screenshot |  |
|  |  |
| Option 0 | *Logout* |
| Purpose | *Allows user to exit the program.* |
| Input/ Output | *After selecting 0, user will be displayed an exit message and program will teraminate.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs | ***Input:*** *0*  ***Output:*** *“BYE THANKS FOR USING TPS :)”* |
| Which array is used on this option for data storage and retrieval? | *None* |
| Which function is used to call for this option? | getMainMenuInput() |
| Screenshot |  |
|  | |
| ***Sub Menu Details*** | |
| ***Sub Menu 1*** | |
| Option 1 | *Add user* |
| Purpose | *Adds users (patient, patient’s family and therapist)* |
| Input/ Output | *After selecting 1, a prompt to enter the username and password of new users will be given and stored in system.* |
| Validation | *On wrong credentials, the credentials will be asked again.* |
| Test cases with sample inputs and outputs | * **Input**: 1(Add Patient); Username: patient1, Password: password123 * **Output**: "Patient added successfully." * **Input**: 1(Add Therapist); Username: therapist1, Password: password123 * **Output**: "Therapist added successfully." |
| Which array is used on this option for data storage and retrieval? | * usernamesP[], passwordsP[] for Patients. * usernamesPF[], passwordsPF[] for Family Members. * usernamesT[], passwordsT[] for Therapists. |
| Which function is used to call for this option? | * searchUser() * *getAdminInput()*; |
| Screenshot |  |
|  | |
| Option 2 | *Edit users* |
| Purpose | *Edits current users info (patient, patient’s family and therapist)* |
| Input/ Output | *After selecting 2, a prompt to enter the username will be given. After asking for new credentials they are stored.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input is asked again.* |
| Test cases with sample inputs and outputs | * **Input**:1(Edit Patient); Username: patient1, New Password: newpass * **Output**: "Patient updated successfully." * **Input**: 3(Edit Therapist); Username: therapist1, New Password: newpass * **Output**: "Therapist updated successfully." |
| Which array is used on this option for data storage and retrieval? | * usernamesP[], passwordsP[] for Patients. * usernamesPF[], passwordsPF[] for Family Members. * usernamesT[], passwordsT[] for Therapists. |
| Which function is used to call for this option? | * searchUser() * *getAdminInput()* |
| Screenshot |  |
|  | |
| Option 3 | *Delete users* |
| Purpose | *Deletes current users info (patient, patient’s family and therapist)* |
| Input/ Output | *After selecting 3, a prompt to enter the username will be given. If username is found, all data at that index is erased.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs |  **Input**: 1(Delete Patient); Username: patient1   **Output**: "Patient deleted successfully."   **Input**: 3(Delete Therapist); Username: therapist1   **Output**: "Therapist deleted successfully." |
| Which array is used on this option for data storage and retrieval? | * usernamesP[], passwordsP[] for Patients. * usernamesPF[], passwordsPF[] for Family Members. * usernamesT[], passwordsT[] for Therapists. |
| Which function is used to call for this option? | * searchUser() * *getAdminInput()*; |
| Screenshot |  |
|  | |
| Option 4 | *List users* |
| Purpose | *Lists all current users (patients, patient’s family and therapist)* |
| Input/ Output | *After selecting 4, a list will be shown containing the users* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input is asked again.* |
| Test cases with sample inputs and outputs | **Output**: Displays a list of all patients, family members, and therapists. |
| Which array is used on this option for data storage and retrieval? | usernamesP[], usernamesPF[], usernamesT[]. |
| Which function is used to call for this option? | displayList()  *getAdminInput()* |
| Screenshot |  |
| Option 5 | *General Treands* |
| Purpose | *Allows user to see general trends of all patients* |
| Input/ Output | *After selecting 5, a list will display how all patients are doing.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs | * **Input**: 5. * **Output**: Displays a summary of patient trends, including priority levels and usernames. |
| Which array is used on this option for data storage and retrieval? | patientPriority[], usernamesP[ ] |
| Which function is used to call for this option? | *getAdminInput()* |
| Screenshot |  |
|  | |
| Option 6 | *Contact Therapist* |
| Purpose | *Allows admin to contact a therapist if they themselves need mental assistance.* |
| Input/ Output | *After selecting 6, therapist will be contacted.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs |  **Input**: Write note: "Need assistance for general consultation."   **Output**: "Press any key to continue” |
| Which array is used on this option for data storage and retrieval? | noteToTherapist[]. |
| Which function is used to call for this option? | getAnote()  *getAdminInput()* |
|  |  |
| Screenshot |  |
|  | |
| Option 7 | *Stress Relief* |
| Purpose | *To help alleviate the stress of admin by button mashing into the void* |
| Input/ Output | *It lets user input a string for as long as they like.*  *Program Exits when user hits enter.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs |  **Input**: Enter random keys: ASD123!!   **Output**: "Press any key(+enter) to continue." |
| Which array is used on this option for data storage and retrieval? | *None* |
| Which function is used to call for this option? | *getAdminInput()* |
| Screenshot |  |
|  | |
| Option 0 | *Logout* |
| Purpose | *Allows user to exit to main menu* |
| Input/ Output | *After selecting 0, user will be displayed “ Admin logged out”.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs | ***Input:*** *0*  ***Output:*** *“You are logged out”* |
| Which array is used on this option for data storage and retrieval? | *None* |
| Which function is used to call for this option? | *getAdminInput()* |
| Screenshot |  |
|  | |
| ***Sub Menu 2*** | |
| Option 1 | *Contact Therapist* |
| Purpose | *Allows patient to contact the Therapist* |
| Input/ Output | *After selecting 1, user will be able to write a note to the therapist.* |
| Validation | *User can only enter number in range of options given.*  *On wrong input, input is asked again.* |
| Test cases with sample inputs and outputs | * **Input**: "Need urgent help." * **Output**: "Press any key(+enter) to continue” |
| Which array is used on this option for data storage and retrieval? | * noteToTherapist[]. |
| Which function is used to call for this option? | * getAnote() * *getPatientInput()* |
| Screenshot |  |
|  | |
| Option 2 | *Contact Family* |
| Purpose | *User will be able contact Family Members* |
| Input/ Output | *After selecting 2, user will be able to write a note to the therapist.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input is asked again.* |
| Test cases with sample inputs and outputs | * **Input**: "Feeling much better now." * **Output**: "Press any button(+enter) to continue." |
| Which array is used on this option for data storage and retrieval? | * noteToFamily[]. |
| Which function is used to call for this option? | * getAnote() * *getPatientInput()* |
| Screenshot |  |
|  | |
| Option 3 | *Book Sessions* |
| Purpose | *Patient is able to book sessions with therapist.* |
| Input/ Output | *After selecting 3, user will be asked when they want to schedule sessions.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs | * **Input**: Date: 12-12-24 * **Output**: "Session booked successfully." |
| Which array is used on this option for data storage and retrieval? | * sessionDates[]. |
| Which function is used to call for this option? | * dateVerify() * *getPatientInput()* |
| Screenshot |  |
|  | |
| Option 4 | *Set new goals* |
| Purpose | *Allows user to set new personal goals.* |
| Input/ Output | *After selecting 4, screen to set a new goal will be shown.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input is asked again.* |
| Test cases with sample inputs and outputs | * **Input**: Goal: "Practice mindfulness exercises." * **Output**: "Goal added successfully." |
| Which array is used on this option for data storage and retrieval? | patientGoals[][5]. |
| Which function is used to call for this option? | *getPatientInput()* |
| Screenshot |  |
|  |  |
| Option 5 | *View current goals* |
| Purpose | *Allows user to see current goals* |
| Input/ Output | *After selecting 5, user will see all personal goals and input index of goal to update.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs |  **Input**: 5.   **Output**: Displays a list of current goals for the patient |
| Which array is used on this option for data storage and retrieval? | patientGoals[][5]. |
| Which function is used to call for this option? | *getPatientInput()* |
| Screenshot |  |
|  | |
| Option 6 | *Progress Goals* |
| Purpose | *Allows user to complete a goal (by deleting it)* |
| Input/ Output | *After selecting 6, prompt to add progress to goals will be completed..* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs |  **Output**: Displays list of all current goals  “Enter goal index to update: ”   **Input**: 2   **Output**: "Goal Completed!!."  Goal at index 2 will be deleted |
| Which array is used on this option for data storage and retrieval? | patientGoals[][5] |
| Which function is used to call for this option? | *getPatientInput()* |
| Screenshot |  |
|  | |
| Option 0 | *Logout* |
| Purpose | *Allows user to exit to main menu* |
| Input/ Output | *After selecting 0, user will be displayed “logged out”.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs | ***Input:*** *0*  ***Output:*** *“You are logged out”* |
| Which array is used on this option for data storage and retrieval? | *None* |
| Which function is used to call for this option? | *getPatientInput()* |
| Screenshot |  |
| ***Sub Menu 3*** | |
| Option 1 | *View Patient’s state* |
| Purpose | *Allows family members to see the patient’s current status* |
| Input/ Output | *After selecting 1, user will be able to see the patient’s mental status* |
| Validation | *User can only enter number in range of options given.*  *On wrong input, input is asked again.* |
| Test cases with sample inputs and outputs |  **Input**: 1.   **Output**: Displays the current mental health state of the patient (e.g., priority level) and note of patient to family  “Patient needs help!!”  Hassan: “can you visit” |
| Which array is used on this option for data storage and retrieval? | patientPriority[].  usernamesP[]  noteToFamily[] |
| Which function is used to call for this option? | *getFamilyInput()* |
| Screenshot |  |
|  | |
| Option 2 | *See Therapist Notes* |
| Purpose | *Family members will see the notes of the therapist.* |
| Input/ Output | *After selecting 2, user will be able to see the session notes of the therapist.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input is asked again.* |
| Test cases with sample inputs and outputs |  **Input**: 2.   **Output**: Displays notes written by the therapist about the patient. |
| Which array is used on this option for data storage and retrieval? | patientReview[]. |
| Which function is used to call for this option? | *getFamilyInput()* |
| Screenshot |  |
|  | |
| Option 3 | *Book Sessions* |
| Purpose | *Patient’s family member is able to book sessions with therapist.* |
| Input/ Output | *After selecting 3, user will be asked when they want to schedule sessions on the patient’s behalf.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs | * **Input**: Date: 12-12-24   **Output**: "Session booked successfully." |
| Which array is used on this option for data storage and retrieval? | * sessionDates[]. |
| Which function is used to call for this option? | * dateVerify() * askToContinue() * *getFamilyInput()* |
| Screenshot |  |
|  | |
| Option 0 | *Logout* |
| Purpose | *Exits the Patient’s Family Interface* |
| Input/ Output | *After selecting 0, user will be displayed “logged out”.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input is asked again.* |
| Test cases with sample inputs and outputs | ***Input:*** *0*  ***Output:*** *“You are logged out”* |
| Which array is used on this option for data storage and retrieval? | *None* |
| Which function is used to call for this option? | *Executed in main* |
| Screenshot |  |
|  | |
| ***Sub Menu 4*** | |
| Option 1 | *View Priority Patients* |
| Purpose | *Allows Therapist to view priority patients* |
| Input/ Output | *After selecting 1, therapist will be able to see which Patients need urgent help.* |
| Validation | *User can only enter number in range of options given.*  *On wrong input, input is asked again.* |
| Test cases with sample inputs and outputs |  **Input**: 1.   **Output**: Displays a list of patients marked as needing urgent attention. |
| Which array is used on this option for data storage and retrieval? | patientPriority[]. |
| Which function is used to call for this option? | *getTherapistInput()* |
| Screenshot |  |
|  | |
| Option 2 | *View all patients* |
| Purpose | *Therapist will be able to see all patients under them.* |
| Input/ Output | *After selecting 2,therapist will be able to see all patients under them.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input is asked again.* |
| Test cases with sample inputs and outputs |  **Input**: 2.   **Output**: Displays a list of all patients assigned to the therapist. |
| Which array is used on this option for data storage and retrieval? | usernamesP[]. |
| Which function is used to call for this option? | *getTherapistInput()* |
| Screenshot |  |
|  | |
| Option 3 | *Write sessions note* |
| Purpose | *Therapist is able to write session notes for patient’s family to see.* |
| Input/ Output | *After selecting 3, Therapist is able to write session notes for patient’s family to see.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs |  **Input**: Write review about patient\_name: "Patient is making good progress."   **Output**: "Press any key(+enter ) to continue." |
| Which array is used on this option for data storage and retrieval? | *patientReview()* |
| Which function is used to call for this option? | *getTherapistInput()*  *getUsername()*  *searchUser()* |
| Screenshot |  |
|  | |
| Option 4 | *See Patient’s Notes* |
| Purpose | *Allows Therapist to see the patient’s notes to therapist* |
| Input/ Output | *After selecting 4, therapist will update the patient’s record.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input is asked again.* |
| Test cases with sample inputs and outputs |  **Input**: 4.   **Output**: Displays feedback or notes written by the patient to the therapist. |
| Which array is used on this option for data storage and retrieval? | noteToTherapist[]. |
| Which function is used to call for this option? | *getTherapistInput()* |
| Screenshot |  |
|  |  |
| Option 5 | *Contact Patient* |
| Purpose | *Allows therapist to contact patient.* |
| Input/ Output | *After selecting 5, therapist can contact the patient* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs |  **Input**: Write: "Please schedule a follow-up session."   **Output**: "Enter any key(+enter to continue)" |
| Which array is used on this option for data storage and retrieval? |  noteToPatient[]. |
| Which function is used to call for this option? | *getTherapistInput()* |
| Screenshot |  |
|  | |
| Option 6 | *Booked Sessions* |
| Purpose | *Allows therapist to see the booked sessions* |
| Input/ Output | *After selecting 6, a prompt will ask them to confirm if they want to logout.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs | ***Input:*** *6*  ***Output:*** *Displays list of all booked sessions* |
| Which array is used on this option for data storage and retrieval? | *usernamesP()*  *sessionDates()* |
| Which function is used to call for this option? | *getTherapistInput()* |
| Screenshot |  |
|  |  |
| Option 0 | *Logout* |
| Purpose | *Allows user to exit to main menu* |
| Input/ Output | *After selecting 0, user will be displayed “logged out”.* |
| Validation | *User will only be allowed to enter numbers in range of options given.*  *In case of wrong input, input asked again.* |
| Test cases with sample inputs and outputs | ***Input:*** *0*  ***Output:*** *“You are logged out”* |
| Which array is used on this option for data storage and retrieval? | *None* |
| Which function is used to call for this option? | *getTherapistInput()* |
| Screenshot |  |
|  | |