**Mental Health System Use Cases**

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| **Use Case ID:** | UC-1.0.0 |
| **Use Case Name:** | Interact with Mental Health Support System |
| **Actors:** | Primary Actor: User  Secondary Actors: - Authentication Service - AI Therapist System - Human Therapist - System Administrator |
| **Preconditions:** | 1. System is operational and accessible 2. Authentication service is available 3. User has internet connection 4. AI Therapist system is operational 5. Database system is functional |
| **Postconditions:** | 1. User profile is created/updated 2. Session data is recorded 3. Treatment plan is established or updated 4. Progress metrics are stored 5. Critical cases are properly escalated if necessary |
| **Normal Flow:** | 1. User initiates login/registration process 2. System validates user credentials 3. System sets up/loads user profile 4. User engages with AI Therapist chatbot 5. System analyzes user responses 6. System performs mental health condition diagnosis 7. System generates personalized treatment plan 8. System provides guided self-care programs 9. System tracks user progress 10. System generates progress report 11. User session is saved and closed |
| **Alternative Flows:** | Alternative Flow 1 - Critical Case Detection 6a. During diagnosis, if system detects critical case: 1. System flags case as critical 2. System notifies human therapist 3. System provides immediate resources to user 4. Case is escalated to human therapist 5. Resume at step 7 with human therapist oversight  Alternative Flow 2 - Authentication Failure 2a. If credential validation fails: 1. System displays error message 2. User is prompted to retry or reset credentials 3. If successful, resume at step 3 4. If unsuccessful after 3 attempts, account is locked |
| **Exceptions:** | Exception 1 - System Failure 1. During any step, if system experiences technical failure: - Session data is auto-saved - User is notified of technical issues - Administrator is alerted - User is provided emergency contact information  Exception 2 - Data Security Breach 1. If security breach is detected: - Administrator is immediately notified - Affected sessions are suspended - Security protocols are activated - Users are notified of potential data exposure  Exception 3 – Overwhelmed system  1. if system is overwhelmed:  - Administrator is immediately notified - Administrator tries to load off the system - Users are notified of potential slow responses |

## Use Case: User initiates login/registration process

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| **Use Case ID:** | UC-1.0.1 |
| **Use Case Name:** | User initiates login/registration process |
| **Actors:** | Primary Actor: User Secondary Actors: Authentication Service |
| **Preconditions:** | User has access to the login page.  Authentication Service is available. |
| **Postconditions:** | User is logged into the system.  User profile is created or updated. |
| **Normal Flow:** | 1. [User initiates login/registration process] |
| **Alternative Flows:** | Alternative Flow 1 - Authentication Failure  [Action]a. If credential validation fails: 1. System displays error message 2. User is prompted to retry or reset credentials 3. If successful, resume. 4. If unsuccessful after 3 attempts, account is locked temporary. |
| **Exceptions:** | Exception 1 - System Failure 1. During any step, if system experiences technical failure: - Session data is auto-saved - User is notified of technical issues - Administrator is alerted - User is provided emergency contact information  Exception 2 - Data Security Breach 1. If security breach is detected: - Administrator is immediately notified - Security protocols are activated |

## Use Case: System validates user credentials

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| **Use Case ID:** | UC-1.0.2 |
| **Use Case Name:** | System validates user credentials |
| **Actors:** | Primary Actor: User Secondary Actors: Authentication Service |
| **Preconditions:** | User entered his data |
| **Postconditions:** | User profile data exists. |
| **Normal Flow:** | 1. [System validates user credentials] |
| **Alternative Flows:** | - |
| **Exceptions:** | Exception 1 - System Failure 1. During any step, if system experiences technical failure: - Session data is auto-saved - User is notified of technical issues - Administrator is alerted - User is provided emergency contact information |

## Use Case: System sets up/loads user profile

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| **Use Case ID:** | UC-1.0.3 |
| **Use Case Name:** | System sets up/loads user profile |
| **Actors:** | Primary Actor: User Secondary Actors: Authentication Service |
| **Preconditions:** | Authenticated user  Al-Therapist is available.  User profile exists. |
| **Postconditions:** | User data loaded  User free to interact |
| **Normal Flow:** | 1. [System sets up/loads user profile] |
| **Alternative Flows:** |  |
| **Exceptions:** | Exception 1 - System Failure 1. During any step, if system experiences technical failure: - Session data is auto-saved - User is notified of technical issues - Administrator is alerted - User is provided emergency contact information  Exception 2 – Loading Filure [Action]a. If Loading filled: 1. System displays error message 2. System attempts fixing 3. System suggests try log in other time |

## Use Case: User engages with AI Therapist chatbot

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| **Use Case ID:** | UC-1.0.4 |
| **Use Case Name:** | User engages with AI Therapist chatbot |
| **Actors:** | Primary Actor: User Secondary Actors: AI Therapist |
| **Preconditions:** | User data loaded  User have access to Interact |
| **Postconditions:** | User has interacted with Al-Therapist.  User data is collected and analyzed. |
| **Normal Flow:** | 1. [User engages with AI Therapist chatbot] |
| **Alternative Flows:** |  |
| **Exceptions:** | Exception 1 - System Failure 1. During any step, if system experiences technical failure: - Session data is auto-saved - User is notified of technical issues - Administrator is alerted - User is provided emergency contact information  Exception 3 – Overwhelmed system  1. if system is overwhelmed:  - Administrator is immediately notified - Administrator tries to load off the system - Users are notified of potential slow responses |

## Use Case: System analyzes user responses

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| **Use Case ID:** | UC-1.0.5 |
| **Use Case Name:** | System analyzes user responses |
| **Actors:** | Primary Actor: User Secondary Actors: AI Therapist |
| **Preconditions:** | User data collected and validated |
| **Postconditions:** | System produces responses based on it |
| **Normal Flow:** | 1. [System analyzes user responses] |
| **Alternative Flows:** | - |
| **Exceptions:** | Exception 1 - System Failure 1. During any step, if system experiences technical failure: - Session data is auto-saved - User is notified of technical issues - Administrator is alerted - User is provided emergency contact information  Exception 2 – Invalid data - System tries to generate another data |

## Use Case: System performs mental health condition diagnosis

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| **Use Case ID:** | UC-1.0.6 |
| **Use Case Name:** | System performs mental health condition diagnosis |
| **Actors:** | Primary Actor: User Secondary Actors: AI Therapist |
| **Preconditions:** | User has records of treatment  User data is valid  User profile exists |
| **Postconditions:** | Provide detailed log of diagnosis and recommendations |
| **Normal Flow:** | 1. [System performs mental health condition diagnosis] |
| **Alternative Flows:** | - |
| **Exceptions:** | Exception 1 - System Failure 1. During any step, if system experiences technical failure: - Session data is auto-saved - User is notified of technical issues - Administrator is alerted - User is provided emergency contact information  Exception 2 – Invalid data - System tries to generate another data |

## Use Case: System generates personalized treatment plan

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| **Use Case ID:** | UC-1.0.7 |
| **Use Case Name:** | System generates personalized treatment plan |
| **Actors:** | Primary Actor: User Secondary Actors: AI Therapist |
| **Preconditions:** | All user data has been validated  User accepted to receive the personalized treatment plan**.** |
| **Postconditions:** | System sets another schedule for user |
| **Normal Flow:** | 1. [System generates personalized treatment plan] |
| **Alternative Flows:** | - |
| **Exceptions:** | Exception 1 - System Failure 1. During any step, if system experiences technical failure: - Session data is auto-saved - User is notified of technical issues - Administrator is alerted - User is provided emergency contact information  Exception 2 - Data Security Breach 1. If security breach is detected: - Administrator is immediately notified - Affected sessions are suspended - Security protocols are activated - Users are notified of potential data exposure |

## Use Case: System provides guided self-care programs

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| **Use Case ID:** | UC-1.0.8 |
| **Use Case Name:** | System provides guided self-care programs |
| **Actors:** | Primary Actor: User Secondary Actors: AI Therapist |
| **Preconditions:** | System has enough data to guide user |
| **Postconditions:** | System annotate user to ask the human therapist for critical situations. |
| **Normal Flow:** | 1. [System provides guided self-care programs] |
| **Alternative Flows:** | - |
| **Exceptions:** | Exception 1 - System Failure 1. During any step, if system experiences technical failure: - Session data is auto-saved - User is notified of technical issues - Administrator is alerted - User is provided emergency contact information |

## Use Case: System tracks user progress

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| **Use Case ID:** | UC-1.0.9 |
| **Use Case Name:** | System tracks user progress |
| **Actors:** | Primary Actor: User Secondary Actors: System Administrator |
| **Preconditions:** | User profile exist  Not new comer |
| **Postconditions:** | System reports to user every session about the progress |
| **Normal Flow:** | 1. [System tracks user progress] |
| **Alternative Flows:** | - |
| **Exceptions:** | Exception 1 - System Failure 1. During any step, if system experiences technical failure: - Session data is auto-saved - User is notified of technical issues - Administrator is alerted - User is provided emergency contact information |

## Use Case: System generates progress report

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| **Use Case ID:** | UC-1.0.10 |
| **Use Case Name:** | System generates progress report |
| **Actors:** | Primary Actor: User Secondary Actors: AI Therapist |
| **Preconditions:** | System generated data to identify user progress |
| **Postconditions:** | System motivates the user to keep working! |
| **Normal Flow:** | 1. [System generates progress report] |
| **Alternative Flows:** | - |
| **Exceptions:** | Exception 1 - System Failure 1. During any step, if system experiences technical failure: - Session data is auto-saved - User is notified of technical issues - Administrator is alerted - User is provided emergency contact information  Exception 2 - Data Security Breach 1. If security breach is detected: - Administrator is immediately notified - Affected sessions are suspended - Security protocols are activated - Users are notified of potential data exposure |

## Use Case: User session is saved and closed

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| **Use Case ID:** | UC-1.0.11 |
| **Use Case Name:** | User session is saved and closed |
| **Actors:** | Primary Actor: User Secondary Actors: AI Therapist |
| **Preconditions:** | User has made modification or interactions |
| **Postconditions:** | System saves session and close. |
| **Normal Flow:** | 1. [User session is saved and closed] |
| **Alternative Flows:** | - |
| **Exceptions:** | Exception 1 -Saving Failure - Notify user of unable to save data - Show possible reasons - Warn user of close the session before saving the data |