# Traceability matrix

| Requirement Identifier | Reqs tested | FR_Difficulty | FR_Simplicity | FR_Background_Display | FR_Interaction | FR_Controls | FR_Energy_Amount | FR_Building_Activities | FR_Buildings | FR_Study | FR_Energy_Bar | FR_Scalability | FR_Energy_Display | FR_In_Game_Time | FR_Tutorial | FR_Menu_Screen | FR_Music | FR_Interact | FR_Icon | FR_Map_Locations | FR_Time_Display | FR_Movement | FR_Sprite | FR_Time_Sleep | FR_Sleep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Cases | 70 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 | 2 | 0 | 1 | 0 | 1 | 2 | 0 | 3 | 2 | 3 | 2 | 5 | 1 | 3 | 4 |
| Tested manually | 20 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |
| Tested implicitly or by automatic tests and CI | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| **ScoringTests** | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testGetUsername | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| testGetUserScore | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| testCaughtUp | 1 | | | | | | | | | X | | | | | | | | | | | | | | | |
| testNotCaughtup | 1 | | | | | | | | | X | | | | | | | | | | | | | | | |
| testStudiedEveryday | 1 | | | | | | | | | X | | | | | | | | | | | | | | | |
| testGetNumLocationsActivity | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testEatMultipleLocations | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| testDifferentStudyLocations | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| testRecreatingScore | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| testStreaks | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| testRecreateMultipleAreas | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| testHigherfromStudyingMore | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| testEatingIntervals | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| testPassFailCalledBeforeLastDay() | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testScoringCalledBeforeLastDay | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| **TimeTests** | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| testValidTimeForActivity() | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testInvalidTimeForActivity | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testDoActivity | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| testResetTime | 2 | | | | | | | | | | | | | | | | | | | | | | | | X | X |
| testGetIntervalsRemaining | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testNotEnoughTimeToUpdate | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testTimeUpdate | 4 | | | | | | | | | | | | | | | | | | | | | | | | | X |
| testGetMinsRemaining | 1 | | | | | | | | | | | | | | | | | | | | | X | | | | |
| **CoreTests** | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| testSetBadMealCount | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testSetBadRelaxCount | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testSetBadStudyCount | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testIncrementOver7Days | 1 | | | | | | | | | | | | | | | | | | | | | | X | | | |
| testInteraction | 2 | | | | | | | | | | | | | | | | | | X | | | | | | | X |
| testSetCounts | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testHasEnded | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testIsLastDay | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testGetEnergyLimit | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testGetCurrentEnergy | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testValidIncrementDay | 1 | | | | | | | | | | | | | | | | | | | | | | X | | | |
| testTimeUpdate | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testActivityTypeToString | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testExitConditionsToString | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testGetTimeRemaining | 1 | | | | | | | | | | | | | | | | | | | | | | | | | X |
| testGetTimeLimit | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testResourceTypesToString | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| **PlayScreenTests** | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 |
| testPlayerNearInteraction | 3 | | | | | | | | | | | | | | | | | | X | X | | | | | | |
| testGameArea | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| testActivityLocationsinMap | 2 | | | | | | | | | X | | | | | | | | | | | X | | | | | |
| testEnoughLocations | 2 | | | | | | | | | X | | | | | | | | | | | X | | | | | |
| **LeaderboardTests** | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testLeaderboardWriteReadScore | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| testLeaderboardAddScore | 1 | | | | | | | | | | | | | | | | | | | | | | | | |

| Requirement Identifier | FR_Score_Calc | FR_Study_Score | FR_Recreation_Score | FR_Overstudy | FR_Forget_to_Eat | FR_No_Recreation | FR_Timing | FR_Smooth_Time | FR_Time_Drain | FR_Time_Cut | FR_End_Message | FR_Score_Display | FR_Leaderboard | FR_Leaderboard_Input | FR_Streaks | FR_Streak_achievement | FR_Map_Location_Display | FR_Interaction_Points | FR_New_Areas |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Cases | 7 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 1 | 2 | 1 | 2 | 2 |
| Tested manually | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Tested implicitly or by automatic tests and CI | | | | | | | | | | | | | | | | | | | |
| **ScoringTests** | 7 | 1 | 2 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 0 | 0 |
| testGetUsername | | | | | | | | | | | | | | X | | | | | |
| testGetUserScore | | | | | | | | | | | X | X | | X | | | | | |
| testCaughtUp | | | | | | | | | | | | | | | | | | | |
| testNotCaughtup | | | | | | | | | | | | | | | | | | | |
| testStudiedEveryday | | | | | | | | | | | | | | | | | | | |
| testGetNumLocationsActivity | | | | | | | | | | | | | | | | | | | |
| testEatMultipleLocations | X | | | | | | | | | | | | | | | | | | |
| testDifferentStudyLocations | X | | | | | | | | | | | | | | | | | | |
| testRecreatingScore | X | | X | | | X | | | | | | | | | | | | | |
| testStreaks | X | | | | | | | | | | | | | | X | X | | | |
| testRecreateMultipleAreas | X | | X | | | X | | | | | | | | | | | | | |
| testHigherfromStudyingMore | X | X | | X | | | | | | | | | | | | | | | |
| testEatingIntervals | X | | | | X | | | | | | | | | | | | | | |
| testPassFailCalledBeforeLastDay() | | | | | | | | | | | | | | | | | | | |
| testScoringCalledBeforeLastDay | | | | | | | | | | | | | | | | | | | |
| **TimeTests** | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testValidTimeForActivity() | | | | | | | | | | | | | | | | | | | |
| testInvalidTimeForActivity | | | | | | | | | | | | | | | | | | | |
| testDoActivity | | | | | | | | | | X | | | | | | | | | |
| testResetTime | | | | | | | | | | | | | | | | | | | |
| testGetIntervalsRemaining | | | | | | | | | | | | | | | | | | | |
| testNotEnoughTimeToUpdate | | | | | | | | | | | | | | | | | | | |
| testTimeUpdate | | | | | | | X | X | X | | | | | | | | | | |
| testGetMinsRemaining | | | | | | | | | | | | | | | | | | | |
| **CoreTests** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testSetBadMealCount | | | | | | | | | | | | | | | | | | | |
| testSetBadRelaxCount | | | | | | | | | | | | | | | | | | | |
| testSetBadStudyCount | | | | | | | | | | | | | | | | | | | |
| testIncrementOver7Days | | | | | | | | | | | | | | | | | | | |
| testInteraction | | | | | | | | | | | | | | | | | | | |
| testSetCounts | | | | | | | | | | | | | | | | | | | |
| testHasEnded | | | | | | | | | | | | | | | | | | | |
| testIsLastDay | | | | | | | | | | | | | | | | | | | |
| testGetEnergyLimit | | | | | | | | | | | | | | | | | | | |
| testGetCurrentEnergy | | | | | | | | | | | | | | | | | | | |
| testValidIncrementDay | | | | | | | | | | | | | | | | | | | |
| testTimeUpdate | | | | | | | | | | | | | | | | | | | |
| testActivityTypeToString | | | | | | | | | | | | | | | | | | | |
| testExitConditionsToString | | | | | | | | | | | | | | | | | | | |
| testGetTimeRemaining | | | | | | | | | | | | | | | | | | | |
| testGetTimeLimit | | | | | | | | | | | | | | | | | | | |
| testResourceTypesToString | | | | | | | | | | | | | | | | | | | |
| **PlayScreenTests** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| testPlayerNearInteraction | | | | | | | | | | | | | | | | | | X | |
| testGameArea | | | | | | | | | | | | | | | | | | | X |
| testActivityLocationsinMap | | | | | | | | | | | | | | | | | | | |
| testEnoughLocations | | | | | | | | | | | | | | | | | | | |
| **LeaderboardTests** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| testLeaderboardWriteReadScore | | | | | | | | | | | | | X | | | | | | |
| testLeaderboardAddScore | | | | | | | | | | | | | | X | | | | | |

| Requirement Identifier | Reqs tested | FR_Difficulty | FR_Simplicity | FR_Background_Display | FR_Interaction | FR_Controls | FR_Energy_Amount | FR_Building_Activities | FR_Buildings | FR_Study | FR_Energy_Bar | FR_Scalability | FR_Energy_Display | FR_In_Game_Time | FR_Tutorial | FR_Menu_Screen | FR_Music | FR_Interact | FR_Icon | FR_Map_Locations | FR_Time_Display | FR_Movement | FR_Sprite | FR_Time_Sleep | FR_Sleep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Cases | 70 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 | 2 | 0 | 1 | 0 | 1 | 2 | 0 | 3 | 2 | 3 | 2 | 5 | 1 | 3 | 4 |
| Tested manually | 20 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |
| **EnergyTests** | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testGetLimit | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testGetCurrentEnergy() | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testSleepPassedIntoActivityType | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testTooMuchEnergyToEat | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testResetEnergy | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testNotEnoughEnergyToRecreate | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testNotEnoughEnergyToStudy | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testValidEnergyForActivity | 1 | | | | | | X | | | | | | | | | | | | | | | | | | |
| testDoActivity | 2 | | | | | | X | | | | X | | | | | | | | | | | | | | |
| **AssetTests** | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| testInteractionPopupAssetsExists | 3 | | | | | | | | | | | | | | | | | X | X | | | | | | |
| testHUDAssetsExists | 4 | | | | | | | | | | X | | X | | | | | | | | X | | | | |
| testFontAssetsExist | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| testTutorialScreenAssetsExist | 2 | | | | | | | | | | | | | | X | X | | | | | | | | | |
| testPlayScreenAssetsExists | 3 | | | | | | | | | | | | | | | | | | | X | | | | | |
| testLeaderboardScreenAssetsExists | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| testPlayerAnimatorAssetsExists | 1 | | | | | | | | | | | | | | | | | | | | | | X | | |
| testMenuScreenAssetsExists | 1 | | | | | | | | | | | | | | | X | | | | | | | | | |
| **AvatarTests** | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| testGetPlayerXYPos | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testGetPlayerXYPos | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| testMovePlayerRight | 1 | | | | | | | | | | | | | | | | | | | | | X | | | |
| testMovePlayerLeft | 1 | | | | | | | | | | | | | | | | | | | | | X | | | |
| testMovePlayerDown | 1 | | | | | | | | | | | | | | | | | | | | | X | | | |
| testMovePlayerUp | 1 | | | | | | | | | | | | | | | | | | | | | X | | | |
| testDontMovePlayer | 1 | | | | | | | | | | | | | | | | | | | | | X | | | |
| **Manual Tests** | 20 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |
| manualInteract | 4 | | | | | | | X | | | | | | | | | | X | | | | | X | | |
| manualCheckMap | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| manualAvatarMovement | 2 | | | | | | | | | | | | | | | | | | | | | X | X | | |
| manualUserTesting | 4 | X | X | X | X | | | | | | | | | | | | | | | | | | | | |
| manualColourBlind | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| manualCheckTutorial | 2 | | | | X | | | | | | | | | | X | | | | | | | | | | |
| manualCheckButtons | 1 | | | | | | | | | | | X | | | | | | | | | | | | | |
| manualCheckGUI | 6 | | | | | | | | | | | | X | X | | X | | | | | X | | | | |

| Requirement Identifier | FR_Score_Calc | FR_Study_Score | FR_Recreation_Score | FR_Overstudy | FR_Forget_to_Eat | FR_No_Recreation | FR_Timing | FR_Smooth_Time | FR_Time_Drain | FR_Time_Cut | FR_End_Message | FR_Score_Display | FR_Leaderboard | FR_Leaderboard_Input | FR_Streaks | FR_Streak_achievement | FR_Map_Location_Display | FR_Interaction_Points | FR_New_Areas |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Cases | 7 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 1 | 2 | 1 | 2 | 2 |
| Tested manually | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| | | | | | | | | | | | | | | | | | | | |
| **EnergyTests** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testGetLimit | | | | | | | | | | | | | | | | | | | |
| testGetCurrentEnergy() | | | | | | | | | | | | | | | | | | | |
| testSleepPassedIntoActivityType | | | | | | | | | | | | | | | | | | | |
| testTooMuchEnergyToEat | | | | | | | | | | | | | | | | | | | |
| testResetEnergy | | | | | | | | | | | | | | | | | | | |
| testNotEnoughEnergyToRecreate | | | | | | | | | | | | | | | | | | | |
| testNotEnoughEnergyToStudy | | | | | | | | | | | | | | | | | | | |
| testValidEnergyForActivity | | | | | | | | | | | | | | | | | | | |
| testDoActivity | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| **AssetTests** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 |
| testInteractionPopupAssetsExists | | | | | | | | | | | | | | | | | | X | |
| testHUDAssetsExists | | | | | | | | | | | | | | | | X | | | |
| testFontAssetsExist | | | | | | | | | | | | X | | | | | | | |
| testTutorialScreenAssetsExist | | | | | | | | | | | | | | | | | | | |
| testPlayScreenAssetsExists | | | | | | | | | | | | | | | | | X | | X |
| testLeaderboardScreenAssetsExists | | | | | | | | | | | | | X | | | | | | |
| testPlayerAnimatorAssetsExists | | | | | | | | | | | | | | | | | | | |
| testMenuScreenAssetsExists | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| **AvatarTests** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testGetPlayerXYPos | | | | | | | | | | | | | | | | | | | |
| testGetPlayerXYPos | | | | | | | | | | | | | | | | | | | |
| testMovePlayerRight | | | | | | | | | | | | | | | | | | | |
| testMovePlayerLeft | | | | | | | | | | | | | | | | | | | |
| testMovePlayerDown | | | | | | | | | | | | | | | | | | | |
| testMovePlayerUp | | | | | | | | | | | | | | | | | | | |
| testDontMovePlayer | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| **Manual Tests** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| manualInteract | | | | | | | | | | | | | | | | | | X | |
| manualCheckMap | | | | | | | | | | | | | | | | | X | | |
| manualAvatarMovement | | | | | | | | | | | | | | | | | | | |
| manualUserTesting | | | | | | | | | | | | | | | | | | | |
| manualColourBlind | | | | | | | | | | | | | | | | | | | |
| manualCheckTutorial | | | | | | | | | | | | | | | | | | | |
| manualCheckButtons | | | | | | | | | | | | | | | | | | | |
| manualCheckGUI | | | | | | | | | | | X | X | | | | | | | |

| Requirement Identifier | Reqs tested | UR_Access | UR_Activity | UR_Apperance | UR_Easy_Play | UR_Enjoy | UR_Interact | UR_Map | UR_Movement | UR_Resting | UR_Scoring | UR_Time | UR_User | UR_Win | UR_Multi_OS | UR_Leaderboard | UR_Streaks | UR_New_A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Cases (automated tests) | 32 | 0 | 2 | 0 | 0 | 0 | 5 | 1 | 6 | 1 | 10 | 0 | 1 | 1 | 1 | 2 | 1 | 1 |
| Tested Manually | 8 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tested implicitly or by automatic tests and CI | 2 | | | | | | | | | | | | X | X | | | | |
| **ScoringTests** | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| testGetUsername | 0 | | | | | | | | | | | | | | | | | |
| testGetUserScore | 0 | | | | | | | | | | | | | | | | | |
| testCaughtUp | 1 | | | | | | | | | | X | | | | | | | |
| testNotCaughtup | 1 | | | | | | | | | | X | | | | | | | |
| testStudiedEveryday | 2 | | | | | | | | | | X | | | X | | | | |
| testGetNumLocationsActivity | 0 | | | | | | | | | | | | | | | | | |
| testEatMultipleLocations | 1 | | | | | | | | | | X | | | | | | | |
| testDifferentStudyLocations | 1 | | | | | | | | | | X | | | | | | | |
| testRecreatingScore | 1 | | | | | | | | | | X | | | | | | | |
| testStreaks | 2 | | | | | | | | | | X | | | | | | X | |
| testRecreateMultipleAreas | 1 | | | | | | | | | | X | | | | | | | |
| testHigherfromStudyingMore | 1 | | | | | | | | | | X | | | | | | | |
| testEatingIntervals | 1 | | | | | | | | | | X | | | | | | | |
| testPassFailCalledBeforeLastDay() | 0 | | | | | | | | | | | | | | | | | |
| testScoringCalledBeforeLastDay | 0 | | | | | | | | | | | | | | | | | |
| **TimeTests** | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testValidTimeForActivity() | 0 | | | | | | | | | | | | | | | | | |
| testInvalidTimeForActivity | 0 | | | | | | | | | | | | | | | | | |
| testDoActivity | 1 | | | | | | X | | | | | | | | | | | |
| testResetTime | 0 | | | | | | | | | | | | | | | | | |
| testGetIntervalsRemaining | 0 | | | | | | | | | | | | | | | | | |
| testNotEnoughTimeToUpdate | 0 | | | | | | | | | | | | | | | | | |
| testTimeUpdate | 0 | | | | | | | | | | | | | | | | | |
| testGetMinsRemaining | 0 | | | | | | | | | | | | | | | | | |
| **CoreTests** | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testSetBadMealCount | 0 | | | | | | | | | | | | | | | | | |
| testSetBadRelaxCount | 0 | | | | | | | | | | | | | | | | | |
| testSetBadStudyCount | 0 | | | | | | | | | | | | | | | | | |
| testIncrementOver7Days | 0 | | | | | | | | | | | | | | | | | |
| testInteraction | 2 | | | | | | X | | X | | | | | | | | | |
| testSetCounts | 0 | | | | | | | | | | | | | | | | | |
| testHasEnded | 0 | | | | | | | | | | | | | | | | | |
| testIsLastDay | 0 | | | | | | | | | | | | | | | | | |
| testGetEnergyLimit | 0 | | | | | | | | | | | | | | | | | |
| testGetCurrentEnergy | 0 | | | | | | | | | | | | | | | | | |
| testValidIncrementDay | 0 | | | | | | | | | | | | | | | | | |
| testTimeUpdate | 0 | | | | | | | | | | | | | | | | | |
| testActivityTypeToString | 0 | | | | | | | | | | | | | | | | | |
| testExitConditionsToString | 0 | | | | | | | | | | | | | | | | | |
| testGetTimeRemaining | 0 | | | | | | | | | | | | | | | | | |
| testGetTimeLimit | 0 | | | | | | | | | | | | | | | | | |
| testResourceTypesToString | 0 | | | | | | | | | | | | | | | | | |
| **PlayScreenTests** | 4 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| testPlayerNearInteraction | 1 | | | | | | X | | | | | | | | | | | |
| testGameArea | 1 | | | | | | | | | | | | | | | | | X |
| testActivityLocationsinMap | 1 | | X | | | | | | | | | | | | | | | |
| testEnoughLocations | 1 | | X | | | | | | | | | | | | | | | |
| **LeaderboardTests** | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| testLeaderboardWriteReadScore | 1 | | | | | | | | | | | | | | | X | | |
| testLeaderboardAddScore | 1 | | | | | | | | | | | | | | | X | | |

| Requirement Identifier | Reqs tested | UR_Access | UR_Activity | UR_Apperance | UR_Easy_Play | UR_Enjoy | UR_Interact | UR_Map | UR_Movement | UR_Resting | UR_Scoring | UR_Time | UR_User | UR_Win | UR_Multi_OS | UR_Leaderboard | UR_Streaks | UR_New_A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Cases (automated tests) | 32 | 0 | 2 | 0 | 0 | 0 | 5 | 1 | 6 | 1 | 10 | 0 | 1 | 1 | 1 | 2 | 1 | 1 |
| Tested Manually | 8 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| **EnergyTests** | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testGetLimit | 0 | | | | | | | | | | | | | | | | | |
| testGetCurrentEnergy() | 0 | | | | | | | | | | | | | | | | | |
| testSleepPassedIntoActivityType | 0 | | | | | | | | | | | | | | | | | |
| testTooMuchEnergyToEat | 0 | | | | | | | | | | | | | | | | | |
| testResetEnergy | 0 | | | | | | | | | | | | | | | | | |
| testNotEnoughEnergyToRecreate | 0 | | | | | | | | | | | | | | | | | |
| testNotEnoughEnergyToStudy | 1 | | | | | | X | | | | | | | | | | | |
| testValidEnergyForActivity | 0 | | | | | | | | | | | | | | | | | |
| testDoActivity | 0 | | | | | | | | | | | | | | | | | |
| **AssetTests** | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testInteractionPopupAssetsExists | 1 | | | | | | X | | | | | | | | | | | |
| testHUDAssetsExists | 0 | | | | | | | | | | | | | | | | | |
| testFontAssetsExist | 0 | | | | | | | | | | | | | | | | | |
| testTutorialScreenAssetsExist | 0 | | | | | | | | | | | | | | | | | |
| testPlayScreenAssetsExists | 1 | | | | | | | X | | | | | | | | | | |
| testLeaderboardScreenAssetsExists | 0 | | | | | | | | | | | | | | | | | |
| testPlayerAnimatorAssetsExists | 1 | | | | | | | | X | | | | | | | | | |
| testMenuScreenAssetsExists | 0 | | | | | | | | | | | | | | | | | |
| **AvatarTests** | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testGetPlayerXYPos | 0 | | | | | | | | | | | | | | | | | |
| testGetPlayerXYPos | 0 | | | | | | | | | | | | | | | | | |
| testMovePlayerRight | 1 | | | | | | | | X | | | | | | | | | |
| testMovePlayerLeft | 1 | | | | | | | | X | | | | | | | | | |
| testMovePlayerDown | 1 | | | | | | | | X | | | | | | | | | |
| testMovePlayerUp | 1 | | | | | | | | X | | | | | | | | | |
| testDontMovePlayer | 1 | | | | | | | | X | | | | | | | | | |
| **Manual Tests** | 7 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| manualInteract | 1 | | | | | | X | | | | | | | | | | | |
| manualCheckMap | | | | | | | | X | | | | | | | | | | |
| manualAvatarMovement | 1 | | | | | | | | X | | | | | | | | | |
| manualUserTesting | 5 | X | | X | X | X | | | | | | X | | | | | | |
| manualColourBlind | 0 | | | | | | | | | | | | | | | | | |
| manualCheckTutorial | 0 | | | | | | | | | | | | | | | | | |
| manualCheckButtons | 0 | | | | | | | | | | | | | | | | | |
| manualCheckGUI | 0 | | | | | | | | | | | | | | | | | |

| Requirement Identifier | Reqs tested | NF_Availability | NF_Colour | NF_Graphics | NF_Reliability | NF_Display | NF_Difficulty | NF_Lose | NF_Game_Time | NF_Win | NF_Simplicity | NF_Background_Display | NF_MUSIC | NF_SFX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Cases | 8 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 2 | 0 | 0 | 0 | 0 |
| Tested manually | 6 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| Tested implicitly or by automatic tests and CI | 2 | X | | | X | | | | | | | | | |
| **ScoringTests** | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 |
| testGetUsername | 0 | | | | | | | | | | | | | |
| testGetUserScore | 0 | | | | | | | | | | | | | |
| testCaughtUp | 1 | | | | | | | | | X | | | | |
| testNotCaughtup | 1 | | | | | | | X | | | | | | |
| testStudiedEveryday | 1 | | | | | | | | | X | | | | |
| testGetNumLocationsActivity | 0 | | | | | | | | | | | | | |
| testEatMultipleLocations | 0 | | | | | | | | | | | | | |
| testDifferentStudyLocations | 0 | | | | | | | | | | | | | |
| testRecreatingScore | 0 | | | | | | | | | | | | | |
| testStreaks | 0 | | | | | | | | | | | | | |
| testRecreateMultipleAreas | 0 | | | | | | | | | | | | | |
| testHigherfromStudyingMore | 0 | | | | | | | | | | | | | |
| testEatingIntervals | 0 | | | | | | | | | | | | | |
| testPassFailCalledBeforeLastDay() | 0 | | | | | | | | | | | | | |
| testScoringCalledBeforeLastDay | 0 | | | | | | | | | | | | | |
| **TimeTests** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testValidTimeForActivity() | 0 | | | | | | | | | | | | | |
| testInvalidTimeForActivity | 0 | | | | | | | | | | | | | |
| testDoActivity | 0 | | | | | | | | | | | | | |
| testResetTime | 0 | | | | | | | | | | | | | |
| testGetIntervalsRemaining | 0 | | | | | | | | | | | | | |
| testNotEnoughTimeToUpdate | 0 | | | | | | | | | | | | | |
| testTimeUpdate | 0 | | | | | | | | | | | | | |
| testGetMinsRemaining | 0 | | | | | | | | | | | | | |
| **CoreTests** | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| testSetBadMealCount | 0 | | | | | | | | | | | | | |
| testSetBadRelaxCount | 0 | | | | | | | | | | | | | |
| testSetBadStudyCount | 0 | | | | | | | | | | | | | |
| testIncrementOver7Days | 1 | | | | | | | | X | | | | | |
| testInteraction | 0 | | | | | | | | | | | | | |
| testSetCounts | 0 | | | | | | | | | | | | | |
| testHasEnded | 1 | | | | | | | | X | | | | | |
| testIsLastDay | 1 | | | | | | | | X | | | | | |
| testGetEnergyLimit | 0 | | | | | | | | | | | | | |
| testGetCurrentEnergy | 0 | | | | | | | | | | | | | |
| testValidIncrementDay | 0 | | | | | | | | | | | | | |
| testTimeUpdate | 0 | | | | | | | | | | | | | |
| testActivityTypeToString | 0 | | | | | | | | | | | | | |
| testExitConditionsToString | 0 | | | | | | | | | | | | | |
| testGetTimeRemaining | 0 | | | | | | | | | | | | | |
| testGetTimeLimit | 0 | | | | | | | | | | | | | |
| testResourceTypesToString | 0 | | | | | | | | | | | | | |
| **PlayScreenTests** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testPlayerNearInteraction | 0 | | | | | | | | | | | | | |
| testGameArea | 0 | | | | | | | | | | | | | |
| testActivityLocationsinMap | 0 | | | | | | | | | | | | | |
| testEnoughLocations | 0 | | | | | | | | | | | | | |
| **LeaderboardTests** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testLeaderboardWriteReadScore | 0 | | | | | | | | | | | | | |
| testLeaderboardAddScore | 0 | | | | | | | | | | | | | |

| Requirement Identifier | Reqs tested | NF_Availability | NF_Colour | NF_Graphics | NF_Reliability | NF_Display | NF_Difficulty | NF_Lose | NF_Game_Time | NF_Win | NF_Simplicity | NF_Background_Display | NF_MUSIC | NF_SFX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Cases | 8 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 2 | 0 | 0 | 0 | 0 |
| Tested manually | 6 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| **EnergyTests** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testGetLimit | 0 | | | | | | | | | | | | | |
| testGetCurrentEnergy() | 0 | | | | | | | | | | | | | |
| testSleepPassedIntoActivityType | 0 | | | | | | | | | | | | | |
| testTooMuchEnergyToEat | 0 | | | | | | | | | | | | | |
| testResetEnergy | 0 | | | | | | | | | | | | | |
| testNotEnoughEnergyToRecreate | 0 | | | | | | | | | | | | | |
| testNotEnoughEnergyToStudy | 0 | | | | | | | | | | | | | |
| testValidEnergyForActivity | 0 | | | | | | | | | | | | | |
| testDoActivity | 0 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| **AssetTests** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testInteractionPopupAssetsExists | 0 | | | | | | | | | | | | | |
| testHUDAssetsExists | 0 | | | | | | | | | | | | | |
| testFontAssetsExist | 0 | | | | | | | | | | | | | |
| testTutorialScreenAssetsExist | 0 | | | | | | | | | | | | | |
| testPlayScreenAssetsExists | 0 | | | | | | | | | | | | | |
| testLeaderboardScreenAssetsExists | 0 | | | | | | | | | | | | | |
| testPlayerAnimatorAssetsExists | 0 | | | | | | | | | | | | | |
| testMenuScreenAssetsExists | 0 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| **AvatarTests** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| testGetPlayerXYPos | 0 | | | | | | | | | | | | | |
| testGetPlayerXYPos | 0 | | | | | | | | | | | | | |
| testMovePlayerRight | 0 | | | | | | | | | | | | | |
| testMovePlayerLeft | 0 | | | | | | | | | | | | | |
| testMovePlayerDown | 0 | | | | | | | | | | | | | |
| testMovePlayerUp | 0 | | | | | | | | | | | | | |
| testDontMovePlayer | 0 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| **Manual Tests** | 4 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| manualInteract | 0 | | | | | | | | | | | | | |
| manualCheckMap | 1 | | | | | X | | | | | | | | |
| manualAvatarMovement | 0 | | | | | | | | | | | | | |
| manualUserTesting | 2 | | | X | | | X | | | | | X | X | | |
| manualColourBlind | 1 | X | | | | | | | | | | | | |
| manualCheckTutorial | 0 | | | | | | | | | | | | | |
| manualCheckButtons | 0 | | | | | | | | | | | | | |
| manualCheckGUI | 0 | | | | | | | | | | | | | |
| manualCheckMusic | | | | | | | | | | | | | X | X |