## Testing robustness and completeness of solution

*Please note that normal and erroneous data test are both present in the testing evidence section, they will be under ‘Evidence’ column and labelled with appropriate subtitles.*

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| **Objective No** | **Description of the test** | **Datatype** | **Expected Result** | **Pass/Fail** | **Testing Evidence Page 50 -73**  Testing evidence is in *log of evidence*, unless stated otherwise | **Coding Evidence**  **Page 87-134**  Coding evidence will be in Appendix  *//Annotations are written like this in code* |
| 1 | Test log in works + hashing | Normal | Successful Login, access Home Page | Pass | Page 54  6/10/17  **Fig 2.1.1** | Class: User  Function: login()  Page: 112 |
| Erroneous | Error Message | Pass |
| 2 | Test if registration works | Normal | Data should be stored into data base | Pass | Page 55  10/10/17  **Fig 2.1.3** | Register.php  Page: 127 |
| Erroneous | Data should be stored into data base | Pass |
| 3 | Database Security | Normal | Connection | Pass | Page 55 - 56  9/10/17  **Fig 2.1.2** | Class: DB  Function: \_\_construct  Page87 |
| Erroneous | No Connection | Pass |
| 4 | Reduce Data Redundancy  (data stored only at one place where necessary) | n/a | Data is of one type is only stored once where necessary | Pass | *Design -> Page5 ERD Diagram*  Page 14 ~ 30/10/17  **Fig 2.6.1**  *Database is fully normalised, in accordance to 3rd normal form* | n/a |
| 5 | Data Integrity  No calculated fields  *Normalised (box above)* | n/a | Data that can be calculated on run time is not stored | Pass | -Average Ratings of Routine  *Average rating is calculated in run time*  -Dates of timetable  *Dates are calculated in run time*  Page 13 – 29/10/17  **Fig 2.5.1** | Class: Routine  Function: findAverageRating()  Page: 91 |
| 6 | Allow user to change password | Normal | Password is changed | Pass | Page 7-8  14/10/17  **Fig 2.2.1** | Class: User  Function: changePassword()  Page 113-114 |
| Erroneous | Password is unsuccessfully hanged | Pass |
| 7 | Allow user to create a workout by adding exercises from a list, and choosing reps , sets and time.  Able to store workout in data base  (both objectives are linked) | Normal | Workout is created and stored | Pass | Page 16-17  7/1/18  **Fig 2.7.7** | Page: create.php  Page: 116 - 119 |
| Erroneous | Workout is not created | Pass |
| 13 | Allow the routine to be outputted in a organised manner with appropriate inputs to take in feedback. | n/a | Workout printed | Pass | Page 20  7/1/18  **Fig 2.8.1** | Class: Routine  Function: displayRoutine()  Page 92 - 95 |
| 14 | Allow user to search for and retrieve a workout from data base / Allow all users to search for a workout, using filters. | Normal  /  Erroneous – Returns no results | Matching Workouts are printed | Pass | Page 16-17  24/12/17  **Fig 2.7.5** | Class: Search  Function: searchRoutine()  Page 103-104 |
| 15 | Allow user to input routines into weekly timetable | Normal | Workout Added to Timetable | Pass | Page 14  21/12/17  **Fig 2.7.4** | Class: Timetable  Function: displayAddRoutine()  Page 108-109 |
| 16 | Allow user to input routines into weekly timetable | Erroneous – Trying to add on the same day as another | Workout cannot be added and Error Message | Pass |
| 17 | Allow user to remove routines from timetable | Normal | Workout removed from Timetable | Pass | Class: Timetable  Function:  displayRemoveRoutine()  Page 107-108 |
| 18 | Allow user to remove routines from timetable | Erroneous – Trying to remove routine from empty day | Error Message | Pass | Class:  Class: Timetable  Function: constructor  Page 106 |
| 19 | Allow user to access a definition and an image of each exercise in a routine | n/a | Image and Definition | Pass | Page 18  30/12/17  **Fig 2.7.6** | Class: Exercise  Function: getImage()  Pg 88  Function: getDescription()  Page 89 |
| 20 | Allow user to keep a log of previous routines | n/a | Log of previously performed routines | Pass | Page 13  21/12/17  **Fig 2.7.3** | Page: log.php  Page: 123-124 |
| 21 | Allow user to input feedback: Easy, Challenging, Too difficult | n/a  -Drop down list cannot input anything else | Data stored correctly in database. Able to uniquely identify each instance of feedback. | Pass | Page 9  20/10/17  **Fig 2.3.2**  Page 10  24/10/17  **Fig 2.3.3** | Class: Routine  Function: displayRoutine()  Page: 92 |
| 22 | 1. Allow routine to increase in intensity (automatically) either through increased weights, increased reps, or different technique, if feedback is too easy or challenging.  2. Allow routine to decrease in intensity if too easy *(linked)*  3. Allow users who have done the routine before in the last 31 days, to have suggested starting weights which take account their previous feedback  ***All 3 are linked together*** | -n/a  - complex system  - Uses pass data from users and immediate feedback | Suggested Weight before exercise is shown, if done before.  Immediate Suggested weight is provided immediately after input of feedback | Pass | Page 11  26/10/17  **Fig 2.3.5**  **Fig 2.3.6** | Class: Routine  Function: generateSuggestedWeight()  Page 98-99  ***Part of Complex-User Defined Algorithm(s)***  Function:  implementFeedback()  Page: 98-99 |
| 23 | Allow user to change password when password is forgotten using email | Normal | Correct email identified  Email Sent, with code | Pass | Page 21  12/1/18  **Fig 2.9.2** | Page: forgotpassword.php  Page 132-133 |