Text

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Department of Computer Science

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**Testing document**

Impact Project Records Website

Team 1

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1. Acceptance testing

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Input sequence | Expected result | Current output | comments | user |
| Req 1: Login |  |  |  | Admin, Reviewer, Collaborator |
| Correct login:  Valid\_name,  Valid\_psswd | Login accepted | Load home page |  |  |
| Incorrect login:  Valid\_name,  Wrong\_psswd | Login incorrect  "Incorrect Email or Password Found" | Login incorrect  "Incorrect Email or Password Found" |  |  |
| Incorrect login:  Wrong\_name | Login incorrect  "Incorrect Email or Password Found" | "Incorrect Email or Password Found" |  |  |
| Incorrect login:  No email | Login fails  “Username is required” | Login fails  “Username is required” |  |  |
| Incorrect login:  No password | Login fails  “Password is required” | Login fails  “Password is required” |  |  |
| Req 2: Access dashboard | Accessible | View dashboard |  | Admin |
| Req 3: Access research project records | Accessible | View research projects page (name, summary, department etc) |  | Admin, reviewer, collaborator |
| Req 4: filter research projects (by departments) | Filter by chosen department | Show the research projects for chosen department |  | Admin, reviewer, collaborator |
| Req 5: sort research projects (by project title, department, investigator, progress, UOA) | Filter by chosen option | Show the research projects alphabetically for chosen option |  | Admin, reviewer, collaborator |
| Req 6: upload research project |  |  |  | Admin |
| Correct upload:  All fields are filled, and selections were made | Upload accepted | Research project uploaded |  |  |
| Incorrect upload:  Any required field not filled | Upload not accepted | Empty field is required (e.g., Project title is required) |  |  |
| Incorrect upload:  No selection of Grants, Faculty, UOA, impact progress, file | Upload not accepted | Select your (Grants, Faculty, UOA, impact progress, file) |  |  |
| Req 7: upload more files for selected research project |  |  |  | Admin |
| Correct upload:  Research project was selected, and file was chosen | Upload accepted | File uploaded |  |  |
| Incorrect upload:  Valid\_ResearchProject,  No selection of file | Upload not accepted | Please select file |  |  |
| Incorrect upload:  No selection of Research Project,  Valid\_file | Upload not accepted | Select a Research Project |  |  |
| Req 8: upload more grants |  |  |  | Admin |
| Correct upload:  Research project was selected, date was chosen, valid\_amount, valid\_name | Upload accepted | Grant uploaded |  |  |
| incorrect upload: Any required field not filled | Upload not accepted | Empty field is required (project, date, amount, name) |  |  |
| Req 9: view impact projects | Accessible | View impact project page (impact record name, impact record evidence, impact record file) |  | Admin, reviewer, collaborator |
| Req 10: download all files in zip folder |  |  |  | Admin, reviewer, collaborator |
| Req 11: upload impact evidence |  |  |  | Admin, reviewer, collaborator |
| Correct upload:  All fields are filled, and selections were made | Upload accepted | Impact project uploaded |  |  |
| Incorrect upload:  Any required field not filled | Upload not accepted | Empty field is required (e.g., Research Project is required) or select a file |  |  |
| Req 12: Edit impact records |  |  |  | Admin, reviewer, collaborator |
| Req 13: View all impact project | Accessible | View all impact records (name, evidence) |  | Admin, reviewer, collaborator |
| Req 14: view project details | Accessible | View all project details (name, summary, investigator, department etc) |  | Admin, reviewer, collaborator |
| Req 15: view users | Accessible | View all users(UserID, Email, collaborator/reviewer) |  | Admin |
| Req 16: assign users to projects |  |  |  | Admin |
| Incorrect project allocation: Research Project selected, Collaborator/reviewer not selected or selected | Incorrect project allocation if user already assigned to project | User already assigned to project |  |  |
| Correct project allocation: Research Project selected, Collaborator/reviewer selected | Correct project Allocation if user not already assigned to project | Project Allocation Added |  |  |
| Incorrect project allocation: No Research Project selected, Collaborator/reviewer not selected | Incorrect project allocation | Reload the page |  |  |
| Incorrect project allocation: Research Project selected, Collaborator/reviewer not selected | Incorrect project allocation | Warning: Undefined array key "role" in A:\ap3\htdocs\Enterprise\Software\pages\assignToProject.php on line 54 |  |  |
| Req 17: view their profile | Accessible | View user profile (logoff, change password) |  | Admin, reviewer, collaborator |
| Req 18: log off | Correct log off | Load login page |  | Admin, reviewer, collaborator |
| Req 19:  Change Password |  |  |  | Admin, Reviewer, Collaborator |
| password verified:  Valid\_old\_psswd,  Valid\_new\_psswd | Password verified,  Password changed | Password verified  Password Changed Successfully |  |  |
| Incorrect Password:  Wrong\_old\_psswd,  Valid\_new\_psswd | Password  Incorrect,  Password stays the same | Incorrect Password |  |  |
| Req 20:  Delete User |  |  |  | Admin |
| Confirmation popup accepted | User Deleted | User Deleted, Changes page |  |  |
| Confirmation button denied | User not deleted | User not deleted, Stays on same page |  |  |

3. code inspection report

Introduction:

We conducted a code inspection of the Impact Project Records Website that was built using CSS, HTML, and PHP. The website is created to provide a platform for The University of Bradford’s Research Development and Impact Team to store and update information on research outputs and impact activities. The website's primary objective is to help project collaborators quickly access the system to upload files and data, while reviewers can view projects assigned to them, and administrators can edit all projects. The Impact Project Records Website is a highly important tool for the University of Bradford's Research Development and Impact Team, and therefore, it is essential to maintain its quality, performance, and security. Our team focused on identifying potential issues with the codebase that could impact the website's performance, security, and usability. The goal of the code inspection was to ensure the quality and maintainability of the code to ensure that the website functions correctly and smoothly for all users. The code inspection report covers the areas identified as requiring improvement and provides recommendations on how to enhance the codebase's quality and security.

Code Quality:

Overall, the code quality of the website is good, and there are no major issues that could cause significant problems in the future. The HTML and CSS code are well-organized, with appropriate tags and classes used throughout the website. The PHP code is well-structured and follows best practices, such as proper indentation, and variable naming conventions. However, there were several functions and classes that lacked proper documentation, making it difficult for new developers to understand the purpose of the code. Therefore, comments were added to all the code files to improve readability and maintainability, to explain its functionality and purpose especially in complex or non-obvious parts of the codebase. The website's performance is generally good, with fast load times and minimal page bloat.

Usability:

The website has a clear and user-friendly design, with a consistent layout that make it easy to access different sections of the website. Black and white colours were mostly used for the design to look professional and simple. The text and images are appropriately sized and formatted, making it easy to read and understand the content. For further development, the website needs to be tested on different systems and screens to make sure that it is responsive, and its layout adjusts to fit different screen sizes.

Security:

Example 1: (The website is secure, with appropriate measures taken to prevent common security issues such as SQL injection and cross-site scripting attacks. However, we identified a potential security vulnerability in the PHP code related to session management. The website uses session variables to store user data, but there is no code in place to regenerate the session ID after a user logs in or logs out. This could potentially allow an attacker to hijack a user's session and access their account information.)

Example 2: (The code has several security concerns. For instance, user input is not being validated or sanitized, which could lead to security vulnerabilities such as SQL injection attacks. We recommend adding input validation and sanitization to the code to mitigate these security concerns.)

Observations and recommendations:

HTML:

a) The overall structure of the code is well-organized and follows the HTML standards.

b) All the HTML tags are properly closed, and the code is indented correctly for readability.

c) Some pages were missing meta tags; they were added so they do not negatively impact search engine optimization (SEO).

d) The HTML code has some inline styles, which may lead to maintenance issues in the future. For further use, we suggest using a separate CSS file for styling the website.

e) Some images do not have alt attributes, which is essential for accessibility purposes.

f) There was a small amount of code duplication found throughout the codebase. They were removed to improve maintainability.

CSS:

a) The CSS file is well-structured and organized, with each selector and property on a separate line.

b) Some of the CSS styles were not used so they were removed to reduce the file size and improve website performance.

c) Instead of hard-coded pixel values, CSS frameworks like Bootstrap were used to prevent issues with responsiveness.

PHP:

a) The PHP code has several SQL queries and uses mysqli functions to interact with the database, which is a good practice for preventing SQL injection attacks.

b) The code has a well-structured variable naming consistency, which prevents confusion during maintenance.

c) The code has proper error handling, which prevents security vulnerabilities and website crashes and improve the robustness of the code. However, more error handling can be done. For instance, if a database connection fails, the code handles the error gracefully.

Conclusion:

The website's code is of good quality and meets the requirements of the project, as it is well-structured, organized, and follows good practices for security in its use of PHP and SQL queries.

The issues identified in this inspection report should be addressed to improve the overall quality, maintainability, and performance of the code.

However, there are some areas of improvement, such as,

Overall, we recommend implementing the suggested changes to improve the website's maintainability.

4. Work assignment and peer-review

Samuel Coyle 21011003

* Update the Home page (2x2 boot strap)
* change the colour of logoff/login button
* Linking pages together
* Use of cookies
* Dashboard
* Rearranging actual layout
* delete the spreadsheet page from project – client wants to have all data in the database, which means the excel spreadsheet is no longer needed
* Sort out the images on image folder

Ceridwen Grey 21005946

* Team speaker
* Merge the Upload Impact form page to the GitHub
* Add template for Research Impact Project
* Sort out back buttons
* Create new interfaces
* Create a page after clicking the button to view projects of the user
* Dashboard
* Rearranging actual layout
* delete the spreadsheet page from project – client wants to have all data in the database, which means the excel spreadsheet is no longer needed

Joanna Oruba 21025084

* Team Secretary
* Weekly meeting minutes
* Merge the updated Req. Spec. file to the GitHub
* Attempt to make the View Project page more readable for user
* Send email to Alex, upload impact form – add functionality
* Create a page after clicking the button to view projects of the user
* Add option for more grants, upload the file. Fix the upload files feature and impact record and research project templated (add option for more grants) to be saved in database
* Testing document
* Upload/download
* Get rid of the delete user button for admin profile
* Add more comments

Joshua Mackay 21030482

* Team leader
* Add table for holding the file names
* Add more data to the tables in database
* Add user page with change password
* List of all users on one page – with buttons like: assign to project, delete account, approve (after creating the account)
* Change home page – for login page
* Fix the user profile hyperlink with changing the password
* Admin can delete users' account
* Add extra column to the database to the research\_project table called Impact Assessment
* Debugging
* Filter on users page
* Change value of grantID column in research\_project table and add researchID in research\_grant table
* Display the content/details of each research project

Shamim Akbari Bavani 21018873

* Second submission template document
* Add notes column for the admin
* Work assignment
* CSS for the change password
* CSS for the user profile page
* CSS for the user's page
* CSS for displayed the research records and impact projects from the database
* CSS for assign to project page
* Meta tags
* Added back button to assign to project and project details page
* Acceptance testing
* Code inspection report

5. others

**Attached below are the GitHub Links to relevant files required from Team 1**

GitHub link <https://github.com/jfmackay01/Enterprise-Pro-Team-1/tree/main>

Meeting minutes link <https://github.com/jfmackay01/Enterprise-Pro-Team-1/tree/main/minutes>