## **Unit and Integration Test Plans**

TheCouchPotato.com: An E-commerce Platform for Comfort Items

The test approach is the overall test strategy that underpins the whole test plan. A test approach asks, "How are you going to test the software?" If this Test Plan is part of a larger parent project and there are other Test Plans for other parts of the overall system then the test approach should dovetail with the other test approaches. Also, consider if you are going to use established, documented test processes or procedures or if you will need to tailor tests specifically for this project. If so, then name these documents and include them in the reference section.

**Use the templates below.**

| Test Tools |
| --- |
| JUnit (for unit tests), Mockito |
| Postman |

| COMPONENT TESTING |
| --- |

| COMPONENT: | | | Product Management | | | | | | | |  | Name of Developer: | | | | | | | | | Chris Markel | | | | | | | |  |
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| Component Test Checklist | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N/A | Pass | | |  | | | | | | | | | Reviewed by Developer | | | | | | Comments | | | | | | | | | |
| Functionality | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✓ | | |  | | | | | | | | | Chris Markel | | | | | All product management functionalities are working as expected. This includes add product, update product, delete product, and search product. | | | | | | | | | | |
|  |  | | |  | | | | | | | | |  | | | | |  | | | | | | | | | | |
| Date - | | | 9/19/2023 | | | | | | | | | | | | | | | | | | | | | | | | |
| Performance | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✓ | | |  | | | | | | | | | Chris Markel | | | | | The system responds within acceptable time limits. | | | | | | | | | | |
| Date - | | 9/19/2023 | | | | | | | | | | | | | | | | | | | | |
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| **Final Sign-Off and Approval** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  |  | | |  | |  |  |  |  | Project Name- | | | | | | | CST-452 The Couch Potato Web App | | | | | | | | | | | |
|  |  | | |  | |  |  |  |  | Date- | | | | | | | 9/19/2023 | | | | | | | | | | | |

| COMPONENT: | | | User Management | | | | | | | |  | Name of Developer: | | | | | | | | | Chris Markel | | | | | | | |  |
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| Component Test Checklist | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N/A | Pass | | |  | | | | | | | | | Reviewed by Developer | | | | | | Comments | | | | | | | | | |
| Functionality | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✓ | | |  | | | | | | | | | Chris Markel | | | | | All user management functionalities are working as expected. This includes user registration, user login, and user role functions (admin and user) | | | | | | | | | | |
|  |  | | |  | | | | | | | | |  | | | | |  | | | | | | | | | | |
| Date - | | | 9/19/2023 | | | | | | | | | | | | | | | | | | | | | | | | |
| Performance | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✓ | | |  | | | | | | | | | Chris Markel | | | | | The system responds within acceptable time limits. | | | | | | | | | | |
| Date - | | 9/19/2023 | | | | | | | | | | | | | | | | | | | | |
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| **Final Sign-Off and Approval** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  |  | | |  | |  |  |  |  | Project Name- | | | | | | | CST-452 The Couch Potato Web App | | | | | | | | | | | |
|  |  | | |  | |  |  |  |  | Date- | | | | | | | 9/19/2023 | | | | | | | | | | | |

| COMPONENT: | | | Cart Management | | | | | | | |  | Name of Developer: | | | | | | | | | Chris Markel | | | | | | | |  |
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| Component Test Checklist | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N/A | Pass | | |  | | | | | | | | | Reviewed by Developer | | | | | | Comments | | | | | | | | | |
| Functionality | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✓ | | |  | | | | | | | | | Chris Markel | | | | | All cart management functionalities are working as expected. This includes add product to cart, update product quantity in cart, remove product from cart, and checkout. | | | | | | | | | | |
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| Date - | | | 9/19/2023 | | | | | | | | | | | | | | | | | | | | | | | | |
| Performance | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✓ | | |  | | | | | | | | | Chris Markel | | | | | The system responds within acceptable time limits. | | | | | | | | | | |
| Date - | | 9/19/2023 | | | | | | | | | | | | | | | | | | | | |
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| **Final Sign-Off and Approval** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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|  |  | | |  | |  |  |  |  | Date- | | | | | | | 9/19/2023 | | | | | | | | | | | |
| COMPONENT: | | | Search Functionality | | | | | | | |  | Name of Developer: | | | | | | | | | Chris Markel | | | | | | | |  |
|  |  | | |  |  | |  |  |  | | | | |  |  |  | | | | | | | |  |  |  | | | | | |  |
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| Component Test Checklist | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N/A | Pass | | |  | | | | | | | | | Reviewed by Developer | | | | | | Comments | | | | | | | | | |
| Functionality | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✓ | | |  | | | | | | | | | Chris Markel | | | | | All search functionalities are working as expected. This includes searching for a product by keyword. | | | | | | | | | | |
|  |  | | |  | | | | | | | | |  | | | | |  | | | | | | | | | | |
| Date - | | | 9/19/2023 | | | | | | | | | | | | | | | | | | | | | | | | |
| Performance | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✓ | | |  | | | | | | | | | Chris Markel | | | | | The system responds within acceptable time limits. | | | | | | | | | | |
| Date - | | 9/19/2023 | | | | | | | | | | | | | | | | | | | | |
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| **Final Sign-Off and Approval** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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|  |  | | |  | |  |  |  |  | Date- | | | | | | | 9/19/2023 | | | | | | | | | | | |

| **UNIT TESTING** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Project:** | CST-452 The Couch Potato Web App | | | | | | | | | | |  | **Name of Developer:** | | | | | | | | | | | Chris Markel | | | | | | |  | |
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|  |  |  |  | |  | |  | | |  | | | | |  | | | | **Name of Reviewer:** | | | | | | Chris Markel | | | | | | |  | |
|  |  |  |  | |  | |  | | |  | | | | |  | | | |  |  | | |  | | | |  |  |  | | | | | | |
| **Unit Test Checklist** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **N/A** | **Pass** |  | | | | | | | | | | | | **Reviewed by Developer** | | | | | | | | **Comments** | | | | | | | | |
| **Functionality** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✔ | Find user by ID | | | | | | | | | | | | Chris Markel | | | | | | | | Ensure that the user registration process captures all necessary details, validates the input, and stores the user data securely. | | | | | | | | |
|  | ✔ | Find user by username | | | | | | | | | | | | Chris Markel | | | | | | | | Validate that users can log in with correct credentials, and incorrect credentials are handled appropriately without revealing sensitive information. | | | | | | | | |
|  | ✔ | Save user to database | | | | | | | | | | | | Chris Markel | | | | | | | | Check if new products can be added with all required details and that they appear correctly in the product listings. | | | | | | | | |
|  | ✔ | Fetch user from database by username | | | | | | | | | | | | Chris Markel | | | | | | | | Ensure admin can fetch user from database. | | | | | | | | |
|  | ✔ | Fetch user from database by email | | | | | | | | | | | | Chris Markel | | | | | | | | Ensure admin can fetch user from database. | | | | | | | | |
|  | ✔ | Test invalid user ID | | | | | | | | | | | | Chris Markel | | | | | | | | Ensure admin can check for invalid user ID. | | | | | | | | |
|  | ✔ | Test invalid username | | | | | | | | | | | | Chris Markel | | | | | | | | Ensure admin can check for invalid username. | | | | | | | | |
|  |  | | | | | | | | Date - | | | | | | | | | 9/24/2023 | | | | | | | | | | | | |
| **Other Validations** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✔ | Boundary Condition Testing | | | | | | | | | | | | Chris Markel | | | | | | | | Validate the system's behavior at boundary conditions, such as maximum input lengths or limit values. | | | | | | | | |
|  | ✔ | Null and Empty Data Handling | | | | | | | | | | | | Chris Markel | | | | | | | | Check how the system handles null or empty inputs without crashing or behaving unexpectedly. | | | | | | | | |
|  |  | | | | | | | | Date - | | | | | | | | 9/24/2023 | | | | | | | | | | | | | |
| **Processing** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✔ | Data Processing Logic | | | | | | | | | | | | Chris Markel | | | | | | | | Validate that data processing, like calculations and transformations, are done correctly. | | | | | | | | |
|  | ✔ | Data Retrieval Logic | | | | | | | | | | | | Chris Markel | | | | | | | | Check if the system can retrieve data from the database or other sources accurately and quickly. | | | | | | | | |
|  |  | | | | | | | | Date - | | | | | | | 9/20/2023 | | | | | | | | | | | | | | |
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| **Code QA Checklist** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **N/A** | **Pass** |  | | | | | | | | | | | | **Reviewed by Developer** | | | | | | | | **Comments** | | | | | | | | |
| **Format and Style** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✔ | Consistent Indentation | | | | | | | | | | | | Chris Markel | | | | | | | | Ensure consistent indentation throughout the code for readability. | | | | | | | | |
|  | ✔ | Variable Naming | | | | | | | | | | | | Chris Markel | | | | | | | | Check if variable names are descriptive and follow a consistent naming convention. | | | | | | | | |
|  |  | | | | | | | | Date - | | | | | | |  | | | | | | | | | | | | | | |
| **Coding Standards and Practices ( General I)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✔ | Error Handling | | | | | | | | | | | | Chris Markel | | | | | | | | Ensure that potential errors or exceptions are handled gracefully. | | | | | | | | |
|  | ✔ | Modularity | | | | | | | | | | | | Chris Markel | | | | | | | | Validate that the code is modular and each module or function performs a single responsibility. | | | | | | | | |
|  | ✔ | Dependencies | | | | | | | | | | | | Chris Markel | | | | | | | | Check if all dependencies are necessary and up to date. | | | | | | | | |
| **Performance (if applicable)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ✔ |  | N/A | | | | | | | | | | | |  | | | | | | | |  | | | | | | | | |
|  |  | | | | | | | | Date - | | | | | | | 9/24/2023 | | | | | | | | | | | | | | |
| **Final Sign-Off and Approval** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  |  |  |  |  | |  | |  | | | Project Name- | | | | | | | | | | CST-452 The Couch Potato Web App | | | | | | | | | | |
|  |  |  |  |  | |  | |  | | | Date- | | | | | | | | | | 9/24/2023 | | | | | | | | | | |

| **UNIT TESTING** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Project:** | CST-452 The Couch Potato Web App | | | | | | | | | | |  | **Name of Developer:** | | | | | | | | | | | Chris Markel | | | | | | |  | |
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|  |  |  |  | |  | |  | | |  | | | | |  | | | | **Name of Reviewer:** | | | | | | Chris Markel | | | | | | |  | |
|  |  |  |  | |  | |  | | |  | | | | |  | | | |  |  | | |  | | | |  |  |  | | | | | | |
| **Unit Test Checklist** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **N/A** | **Pass** |  | | | | | | | | | | | | **Reviewed by Developer** | | | | | | | | **Comments** | | | | | | | | |
| **Functionality** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✔ | User Registration Logic | | | | | | | | | | | | Chris Markel | | | | | | | | Ensure that the user registration process captures all necessary details, validates the input, and stores the user data securely. | | | | | | | | |
|  | ✔ | User Login Logic | | | | | | | | | | | | Chris Markel | | | | | | | | Validate that users can log in with correct credentials, and incorrect credentials are handled appropriately without revealing sensitive information. | | | | | | | | |
|  | ✔ | Product Addition Logic | | | | | | | | | | | | Chris Markel | | | | | | | | Check if new products can be added with all required details and that they appear correctly in the product listings. | | | | | | | | |
|  |  | | | | | | | | Date - | | | | | | | | | 9/19/2023 | | | | | | | | | | | | |
| **Other Validations** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✕ | Boundary Condition Testing | | | | | | | | | | | | Chris Markel | | | | | | | | Validate the system's behavior at boundary conditions, such as maximum input lengths or limit values. | | | | | | | | |
|  | ✕ | Null and Empty Data Handling | | | | | | | | | | | | Chris Markel | | | | | | | | Check how the system handles null or empty inputs without crashing or behaving unexpectedly. | | | | | | | | |
|  |  | | | | | | | | Date - | | | | | | | | 9/20/2023 | | | | | | | | | | | | | |
| **Processing** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✔ | Data Processing Logic | | | | | | | | | | | | Chris Markel | | | | | | | | Validate that data processing, like calculations and transformations, are done correctly. | | | | | | | | |
|  | ✔ | Data Retrieval Logic | | | | | | | | | | | | Chris Markel | | | | | | | | Check if the system can retrieve data from the database or other sources accurately and quickly. | | | | | | | | |
|  |  | | | | | | | | Date - | | | | | | | 9/20/2023 | | | | | | | | | | | | | | |
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| **Code QA Checklist** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **N/A** | **Pass** |  | | | | | | | | | | | | **Reviewed by Developer** | | | | | | | | **Comments** | | | | | | | | |
| **Format and Style** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✔ | Consistent Indentation | | | | | | | | | | | | Chris Markel | | | | | | | | Ensure consistent indentation throughout the code for readability. | | | | | | | | |
|  | ✔ | Variable Naming | | | | | | | | | | | | Chris Markel | | | | | | | | Check if variable names are descriptive and follow a consistent naming convention. | | | | | | | | |
|  |  | | | | | | | | Date - | | | | | | |  | | | | | | | | | | | | | | |
| **Coding Standards and Practices ( General I)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ✕ | Error Handling | | | | | | | | | | | | Chris Markel | | | | | | | | Ensure that potential errors or exceptions are handled gracefully. | | | | | | | | |
|  | ✔ | Modularity | | | | | | | | | | | | Chris Markel | | | | | | | | Validate that the code is modular and each module or function performs a single responsibility. | | | | | | | | |
|  | ✔ | Dependencies | | | | | | | | | | | | Chris Markel | | | | | | | | Check if all dependencies are necessary and up to date. | | | | | | | | |
| **Performance (if applicable)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ✔ |  | N/A | | | | | | | | | | | |  | | | | | | | |  | | | | | | | | |
|  |  | | | | | | | | Date - | | | | | | | 9/19/2023 | | | | | | | | | | | | | | |
| **Final Sign-Off and Approval** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  |  |  |  |  | |  | |  | | | Project Name- | | | | | | | | | | CST-452 The Couch Potato Web App | | | | | | | | | | |
|  |  |  |  |  | |  | |  | | | Date- | | | | | | | | | | 9/19/2023 | | | | | | | | | | |