Evidence Gathering Document for SQA Level 8 Professional Developer Award.

This document is designed for you to present your screenshots and diagrams relevant to the PDA and to also give a short description of what you are showing to clarify understanding for the assessor.

Fill in each point with screenshot or diagram and description of what you are showing.

Each point requires details that cover each element of the Assessment Criteria, along with a brief description of the kind of things you should be showing.

Week 1

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| **Unit** | **Ref** | **Evidence** |  |
| **I&T** | I.T.6 | Demonstrate the use of a hash in a program. Take screenshots of:  \*A hash in a program  \*A function that uses the hash  \*The result of the function running | |

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|  | This image above shows an array of hashes stored in a program. Within @pet\_shop there exists the key of pets (marked by the presence of a colon following the word pets). Within this key is an array [ ], and within the array is stored a hash with four key/value pairs. The keys are; name, pet\_type, breed, and price. |
|  | This image above shows a hash being added to existing data using a function.  Lines 128 - 130 show the creation of a function called add\_pet\_to\_stock. Within this function, the .push method is used to push the array the user creates into a preexisting array (pet\_shop).  On lines 132 - 137 the function is called. The new data being stored is a hash and is formatted clearly to show keys (ending with a colon), and values.  Line 139 puts (prints) the full list of pets in the pet shop to the console. |
| A close up of text on a black background  Description automatically generated | This final image above shows the output prior to calling the function (top) and then following the function (bottom). We can see that Barry the snake has been added on the final line. |

Week 2

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| **Unit** | **Ref** | **Evidence** |  |
| **I&T** | I.T.5 | Demonstrate the use of an array in a program. Take screenshots of:  \*An array in a program  \*A function that uses the array  \*The result of the function running | |

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| A screenshot of a cell phone  Description automatically generated | The above image shows an empty array called room. Within this room there are three strings - square room, circular room, and rectangular room. The block below the array cycles through each of the strings, nesting each of the arrays into the string beginning “I am in the”. |
| A screenshot of a cell phone  Description automatically generated | The end result appears as below: |

Week 3

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| **Unit** | **Ref** | **Evidence** |  |
| **I&T** | I.T.3 | Demonstrate searching data in a program. Take screenshots of:  \*Function that searches data  \*The result of the function running | |

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|  | The image on the left shows my film class template, within which there is a method called find\_specific\_screening. When this method is called the user must put the time they wish to search for as an argument, to be passed through the method as a parameter. |
|  | The image on the right illustrates that there are three screenings for film3. To identify a specific screening, the find\_specific\_screening method can be used. |
|  | The image below shows the product of running that method. We can see that by passing 15:30 as an argument, the method has identified the screening. This has been achieved by running the argument through the SQL statement created within the ruby function above. |

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| **Unit** | **Ref** | **Evidence** |  |
| **I&T** | I.T.4 | Demonstrate sorting data in a program. Take screenshots of:  \*Function that sorts data  \*The result of the function running | |

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| A screenshot of text  Description automatically generated | The image above shows my film class template, within this class is a method called customers. This method searches through tables in an SQL database and returns an array containing all of the customers who have purchased a ticket to see the movie the method is called upon. |
| A screenshot of a cell phone  Description automatically generated | By using pry and calling the method on a film created in my code, we can see that the method has successfully linked up with the customer data and has pulled it through. The method achieves this by using sql code within the ruby method ‘customers’, and negotiates through to the customers table through a series of inner joins. The final product is then mapped and placed in an array. |

Week 4

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| **Unit** | **Ref** | **Evidence** |  |
| **A&D** | A.D.1 | A Use Case Diagram | |

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| A picture containing text, map  Description automatically generated | The image on the left is a Use Case Diagram showing the relationship between the user and their physical inventory, managed by my Inventory Management System. |

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| **Unit** | **Ref** | **Evidence** |  |
| **A&D** | A.D.2 | A Class Diagram | |

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| A screenshot of a cell phone  Description automatically generated | The image on the left is a Class Diagram showing the relationship between the classes used in my inventory management project.  The diagram shows a many to many relationship connected via a junction class. The Inventory class has a one to one relationship with the Book class. |

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| **Unit** | **Ref** | **Evidence** |  |
| **A&D** | A.D.3 | An Object Diagram | |

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| A picture containing screenshot  Description automatically generated | The image on the left is an Object Diagram showing the relationship between the classes used in my inventory management project complete with example information. |

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| **Unit** | **Ref** | **Evidence** |  |
| **A&D** | A.D.4 | An Activity Diagram | |

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| A close up of text on a white background  Description automatically generated | The image on the left is an Activity Diagram showing the relationship between the user and my system during the action of putting a book on the system. |

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| **Unit** | **Ref** | **Evidence** |  |
| **A&D** | A.D.6 | Produce an Implementations Constraints plan detailing the following factors:  \*Hardware and software platforms  \*Performance requirements  \*Persistent storage and transactions  \*Usability  \*Budgets  \*Time | |

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| Constraint Category | Implementation Constraint | Solution |
| Hardware & Software Platforms | Installation of the inventory management application would require knowledge of running files through a CLI. | Host application on Heroku or package application in some way to as to avoid having to run items in CLI. |
| Hardware & Software Platforms | Installation also involves knowledge of Sinatra – currently the app is hosted on the users machine, but setting this application up on a server would create complications. | Not known at present. |
| Performance Requirements | Very low performance requirements. Should run on modern and dated machines. Requires a working browser. | Most machines have fully functioning web browsers, so the constraint should not be an issue. |
| Persistent Storage and Transactions |  |  |
| Usability | Currently there is little to no documentation to help the reader through use of the program. | Create a more detailed readme and training documentation. |
| Usability | In order to add items to the inventory, the user must first make an author, then a book, then an inventory item. | Create a ‘create’ wizard which guides the user through all three stages. |
| Budgets | Cost of labour spent on the project. Otherwise no other budget constraints. | None. |
| Time Limitations | One week to develop the application. | Focus on functionality and ensure the program meets all the user’s needs. Focus on usability given the user’s inability to read small items on the screen. |

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.5 | User Site Map | |

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| A screenshot of a cell phone  Description automatically generated | The image on the left is a Site Map of my Inventory Management project. |

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.6 | 2 Wireframe Diagrams | |

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| A screenshot of a cell phone  Description automatically generated | Here are three wireframe diagrams showing the main page (top left).  The item description page (top right).  The new author page (bottom center). |

Week 5

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.10 | Example of Pseudocode used for a method | |

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| **A screenshot of a cell phone  Description automatically generated** | The image on the left shows my pseudocode above the completed Ruby code. |

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.13 | Show user input being processed according to design requirements. Take a screenshot of:  \* The user inputting something into your program  \* The user input being saved or used in some way | |

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| **A screenshot of a cell phone  Description automatically generated** | When the user places an author in the system, the system asks for the authors forename and surname. These values are stored separately. |
| **A screenshot of a cell phone  Description automatically generated** | But on the main inventory page, the authors name appears in full, not as separate forename/surname entries. |
|  | The creation of the authors full name is managed by a method in my author.rb file, which takes the forename and surname of the author (entered by the user) and combines the two, so as to create a presentable string. |
| **A screenshot of a cell phone  Description automatically generated** | This method is then accessible in a method in inventory.rb called present\_author\_or\_authors. Which relies on the output from author\_or\_authors (both featured in the image). |
| **A screenshot of a cell phone  Description automatically generated** | Lastly, the method present\_author\_or\_authors can be found within index.erb which presents the main inventory page. The method presents the authors in a strong containing both first and last name. |

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.14 | Show an interaction with data persistence. Take a screenshot of:  \* Data being inputted into your program  \* Confirmation of the data being saved | |

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| **A screenshot of a cell phone  Description automatically generated** | The image on the far left shows my inventory management program and CLI is positioned directly right of this.  Currently, there are five authors listed in the Author database, which can be seen both in the application as well as within psql. |
| **A screenshot of a cell phone  Description automatically generated** | In the image on the left I am inputting data into the New Author field. Upon hitting submit, the data will be sent to the database and the records will be updated to show John Barth as a new author. |
| **A screenshot of a cell phone  Description automatically generated** | On the left we can see that John Barth is now stored in the sql file. After hitting submit the page has taken us back to the homepage, which does not show authors. If we were to click on view authors on the sidebar, then John Barth would appear at the bottom of the list. |
| **A screenshot of a cell phone  Description automatically generated** | Here we can see that John Barth has indeed been added. |

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.15 | Show the correct output of results and feedback to user. Take a screenshot of:  \* The user requesting information or an action to be performed  \* The user request being processed correctly and demonstrated in the program | |

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| **A screenshot of a cell phone  Description automatically generated** | The image on the far left shows my inventory management program and CLI is positioned directly right of this.  I have just started Sinatra which is running in a file named main.rb. |
| **A screenshot of a cell phone  Description automatically generated** | I have clicked on the button ‘more info’ next to Scarlett Thomas, PopCo.  Within Sinatra we can see that there has been a GET request for inventory/1 where 1 is the id page which specifically shows the details page for PopCo by Scarlett Thomas.  The request has been successful, and the details page has loaded. |
| **A screenshot of a cell phone  Description automatically generated** | I have now clicked on the ‘Edit this Entry’ button. In the CLI we can see that there has been a GET request for inventory/1/edit.  The request has been successful, and the details page has loaded. |
| **A screenshot of a cell phone  Description automatically generated** | Finally, I changed some of the values and submitted the form by clicking ‘submit entry’ in the previous page.  In the CLI we can see that a POST request has been sent to inventory/submitted\_edits. I have then been redirected back to inventory/1/edit where we can see that the changes have been saved. |

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.11 | Take a screenshot of one of your projects where you have worked alone and attach the Github link. | |

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| **A screenshot of a cell phone  Description automatically generated** | Image showing the homepage of my project. |
| **A screenshot of a cell phone  Description automatically generated** | Image showing my github page for the project. [Accessible here.](https://github.com/wickertongue/e33_wk4_project__bookshop) |

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.12 | Take screenshots or photos of your planning and the different stages of development to show changes. | |

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| **A close up of text on a white surface  Description automatically generated** | The image on the left shows my original class structure. Author and Book are in a many to many relationship, and Inventory was representative of the junction table between them. |
| **A screenshot of a cell phone  Description automatically generated** | This image show my proto-persona, for whom the project was developed.  A key aspect of this was to make the finished application user friendly, simple to use, and use large features. |
| **A close up of text on a white background  Description automatically generated** | My original wireframes show how I initially intended to create an application that only used two pages – a main page, and a ‘more information’ page.  The intention was that new authors, books and inventory items could be created from these two pages. At this time I had not considered that entry and edit forms may need their own pages. |
| **A screenshot of a cell phone  Description automatically generated** | After creating the classes, database, and connecting the two with save methods employing SQL, I realised that by putting items such as quantity into Inventory I was inadvertently creating duplicate records.  If a book had more than one author, then a second inventory item would be created to connect the second author with the first book, this produced two records in the inventory which was not what I had intended.  I created a new Class Diagram, which can be seen on the left. |
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Week 7

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.16 | Show an API being used within your program. Take a screenshot of:  \* The code that uses or implements the API  \* The API being used by the program whilst running | |

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Week 8

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.2 | Take a screenshot of the project brief from your group project. | |

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.3 | Provide a screenshot of the planning you completed during your group project, e.g. Trello MOSCOW board. | |

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.4 | Write an acceptance criteria and test plan. | |

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Week 9

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.1 | Take a screenshot of the contributor’s page on Github from your group project to show the team you worked with. | |

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Week 11

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.18 | Demonstrate testing in your program. Take screenshots of:  \* Example of test code  \* The test code failing to pass  \* Example of the test code once errors have been corrected  \* The test code passing | |

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| **Unit** | **Ref** | **Evidence** |  |
| **I&T** | I.T.1 | The use of Encapsulation in a program and what it is doing. | |

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Week 12

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| **Unit** | **Ref** | **Evidence** |  |
| **I&T** | I.T.7 | The use of Polymorphism in a program and what it is doing. | |

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| **Unit** | **Ref** | **Evidence** |  |
| **A&D** | A.D.5 | An Inheritance Diagram | |

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| **Unit** | **Ref** | **Evidence** |  |
| **I&T** | I.T.2 | Take a screenshot of the use of Inheritance in a program. Take screenshots of:  \*A Class  \*A Class that inherits from the previous class  \*An Object in the inherited class  \*A Method that uses the information inherited from another class. | |

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Week 14

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.9 | Select two algorithms you have written (NOT the group project). Take a screenshot of each and write a short statement on why you have chosen to use those algorithms. | |

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| **P** | P.7 | Produce two system interaction diagrams (sequence and/or collaboration diagrams). | |

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.8 | Produce two object diagrams. | |

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| **Unit** | **Ref** | **Evidence** |  |
| **P** | P.17 | Produce a bug tracking report | |

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