*S&a Testing Report*

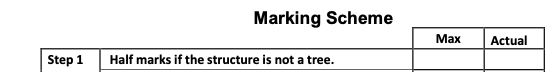
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Stage 1 of Coursework

Overview

Stage 1 of the 2021 Coursework contains a Binary Search Tree which is used to add a wide Range of pets. Below will be documented testing off all the steps and their corelating marks as shown in the coursework document.

Testing



The structure uses the given Binary Search Tree library code which Is available on moodle.

The test data for this will be : dog , cat , fish and snake

**Adding a Pet**

Marks for this section





(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The program will allow the user to input a pet name and it will be input to the tree. | The pet names should be inserted and displayed to show no faults. | Pass | Text  Description automatically generatedText  Description automatically generated  Text  Description automatically generated  Text  Description automatically generated |
| The program will display a message if pet already exists. | The program should display a non-unique message | Pass | Text  Description automatically generated |

**Finding a pet**

Marks for this section

(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The program will search the pet entries to then find a specific animal (This is more fleshed out in further steps when there is more information available) | The program will show the value has been found and display the pet name to the user. | Pass | Text  Description automatically generated  Text  Description automatically generated |
| I have included a feature to find and display the searched for value , it does the same as the test above it only displays it in a clearer way. | The program will search and return a message including the found animal. | Pass | Text  Description automatically generated  Text  Description automatically generated |
| The program will display a message if pet does exist from the specific search. | The program will display a not found message | Pass | Text  Description automatically generated |
| The program will display a message if pet does exist. | The program will display a not found message | Pass | Text  Description automatically generated |

**Remove a pet**

Marks for this section



(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The program will allow user to input the pet to be found and then removed from the tree | The pet will be removed from the tree.  This is shown in the before and after evidence. | Pass | Before  Text  Description automatically generated  Removing Pet  Text  Description automatically generated  After  Text  Description automatically generated |
| The program will display a message if pet already exists. | The program will display a not found message | Pass | Text  Description automatically generated |

**Display Tree**

Marks for this section



(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The program will display the tree in a user friendly way showing all the pets in the tree. | The tree will be shown to the user with all the tree entries | Pass | Text  Description automatically generated |
| The program will display a message that the tree is empty with no entries | The program will state the tree is empty | Pass | Text  Description automatically generated |

**Invalid menu option**

Marks for this section



(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The program will display a not valid message and re display the menu to the user | As Expected | Pass | Text  Description automatically generated |

Stage 2 of Coursework

Overview

Stage 2 of the 2021 Coursework contains a Linked List which is used to add a wide Range of products . Below will be documented testing off all the steps and their corelating marks as shown in the coursework document.

**Testing**

The structure uses the SortedLinkedList library code which Is available on moodle.

The test data for this will be : (lead,lead1,10), (bowl,bowl10,5),(ball,ball100,3), (food,food20,0)(For remove function)

**Adding a Product**

Marks for this section

Graphical user interface, text, application

Description automatically generated

(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The program will insert a product consisting of a name , id and stock. | As Expected | Pass | Text  Description automatically generated  Text  Description automatically generated  Text  Description automatically generated  Showing successful insert  Text  Description automatically generated |
| The program will check the entry to ensure there is no previous similar entries | As Expected | Pass | Text  Description automatically generated |
| If there is an entry with the same information the program will return a message to the user | As Expected | Pass | Text  Description automatically generated |

**Finding a Product**

Marks for this section



(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The program will search through the list entries to find a product using the name and unique ID for the pro | As expected | Pass | Text  Description automatically generated  Text  Description automatically generated |
| The program will display a message if product is not found | The program will display a not found message | Pass | Text  Description automatically generated    The correct ID would be bowl10 |

**Removing a Product**

Marks for this section



(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The product will remove the product from the list IF & ONLY IF the stock is set to 0 as then the product is not available to purchase. The product shold be completely removed from the tree. | As expected. | Pass | Before Remove  Text  Description automatically generated  Text  Description automatically generated  After RemoveText  Description automatically generated |
| The program will display a message to the user showing the user that there is stock available. | As Expected | Pass | Text  Description automatically generated  To show not been removedText  Description automatically generated |

**Display List**

Marks for this section

Text

Description automatically generated with low confidence

(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The program will display all the products In the list in a readable form with all the details | As Expected. | Pass | Text  Description automatically generated |
| When there are no entries, the program will display a message saying the list is empty | As Expected | Pass | Text  Description automatically generated |

Stage 3 of Coursework



Overview

Stage 3 of the 2021 Coursework contains a Pet BST as used in Stage 1 but it is combined with the Product Linked List. I have implemented this in a way where the product information is included with the pet object. This has been confirmed to be an acceptable method of implantation as it classed as a combined structure. After discussion with Miriam, I was told it was not advised to continue with this implantation I was using however I have managed to complete most the stage to the marking scheme. Due to this being a different method of implementation I will do my best to explain each test and section in some depth to allow the assessor to understand how each section works Below will be documented testing off all the steps and their corelating marks as shown in the coursework document.

**Testing**

**Testing data :** Pet – dog , cat , fish , snake

Product – (lead,lead1,10),(cat food,cfood10,5),(fish bowl,fbowl100,3)

**Adding a Pet**

Marks for this section



(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The program will take the user input and then insert the Pet types into the BST. When displaying the tree It will state there are no products as they have not been input yet. | As Expected | Pass | Text  Description automatically generated    Text  Description automatically generated  Display whole tree  Text  Description automatically generated  Display in Alphabetical order  Text  Description automatically generated |
| The program will display a message if pet already exists. | The program will display a non-unique message | Pass | Text  Description automatically generated |

**Adding a Product**

Marks for this section

Table

Description automatically generated

(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The program will ask the user to input the pet that the product being inserted is for. Upon which the user will input the name , id and stock of the product which then will be inserted into the tree which is apart of the Pet BST. I will include a product for every animal and show the displayed results | As Expected | Pass | Text  Description automatically generated  Text  Description automatically generated  Text  Description automatically generated  Display whole tree  Text  Description automatically generated  Display in Alphabetical order  Text  Description automatically generated |
| When the program searches for the pet to add a product to , if the pet doesn’t exist it will display a message and go back to the menu. | As Expected | Pass | Text  Description automatically generated |
| Upon product insert a suitable message will be display to the user to inform of insertion success. | As Expected | Pass | Text  Description automatically generated  This is seen in first 3 screenshots when it states “Inserted”  Text  Description automatically generated  A message is displayed when the input is not unique. |

**Finding a Product for specific pet types**

Marks for this section

Table

Description automatically generated

(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The program will ask the user for the pet which is to be searched. The program then finds the pet and displays the related products to the user. After which the program then asks the user for the product name and unique ID which it will use to find the related product and shows the found result to the user. | As Expected | Pass |  |
| The program will display a suitable message to the user if the product is not found | As Expected | Pass |  |

**Removing a Pet**

Marks for this section



(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The program will allow the user to input a pet name which then will be found in the Tree and then removed including its products. | As Expected. | Pass | Before Remove  Text  Description automatically generated  Text  Description automatically generated  Display whole tree  Text  Description automatically generated  Display in Alphabetical order  Text  Description automatically generated |
| The program will display a message that the pet has been removed and show what has been removed | As Expected | Pass | Text  Description automatically generated |

**Removing a Product (Never managed to complete this part of the program)**

Marks for this section



(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
|  |  |  |  |
|  |  |  |  |

**Display All Pet Types (Never managed to complete this part of the program)**

Marks for this section



(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
|  |  |  |  |
|  |  |  |  |

**Display All Products For Specific pet type**

Marks for this section



(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The program will ask the user to input a pet type which then it will use the find function to find the pet and display the products. | As Expected | Pass | Text  Description automatically generated  Text  Description automatically generated |
| The program will display a message if the pet doesn’t exist. | As Expected | pass | Text  Description automatically generated |

**Display All in Alphabetical Order**

Marks for this section



(Zooming in on the Evidence screenshots should make them clearer)

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Result | Actual Result | Pass / Fail | Evidence |
| The program will display all the pets and products in Alphabetical Order to the pet names | As Expected | Pass | Text  Description automatically generated |
|  |  |  |  |

Critical Appraisal

|  |  |  |
| --- | --- | --- |
|  | Ryan | Cian |
| Development | Step 1, 2 & 3 | Step 1 & Step 3 |
| Testing | Step 3 | Step 1 & 2 |