Portfolio Project Bryan Miranda ISM4432

The following techniques used in the portfolio project revolved around the accessibility of the program that I was using. These are some of my findings which I enjoyed very much. Testing a program that I use on a regular basis at one of my jobs to then give feedback / workarounds to both the IT staff at Lightspeed Retail and the user at my job.

I decided to use 4 Testing techniques. Stress based testing was the main one followed by

Specification which I was only able to find out 5 ,Boundary testing with 3 options and Equivalence testing with only two. All the test cases luckily were successful. Meaning no drastic errors were found. But recommendations on how to operate the system are something that I will explain in the end.

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| **Test CaseID** | TCSTRESS1 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To develop test cases that stress the resource requirements of the selected impress feature. |
| **Functional Test Type** | Stress based Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Opening New Sales |
| **Expected Outputs** | Opening multiple sales in one instance doesn’t crash program |
| **Post-Conditions** | All the sales opened stay open |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCSTRESS2 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To develop test cases that stress the resource requirements of the selected impress feature. |
| **Functional Test Type** | Stress-based Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Adding in multiple customers at once |
| **Expected Outputs** | Customers get successfully added into the Customers section of Lightspeed and you can look them up based on the information inserted |
| **Post-Conditions** | Moves you to the customers page to find a customer |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCSTRESS3 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To develop test cases that stress the resource requirements of the selected impress feature. |
| **Functional Test Type** | Stress-based Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Opening multiple Purchase Orders on multiple windows |
| **Expected Outputs** | All Purchase orders come up and information can be inputted accordingly |
| **Post-Conditions** | Information gets saved after finalization |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCSTRESS4 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To develop test cases that stress the resource requirements of the selected impress feature. |
| **Functional Test Type** | Stress-based Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Several Transfers are set-up from Tampa to Orlando |
| **Expected Outputs** | Transfers stay open and can be changed at either store |
| **Post-Conditions** | Transfers successfully save after inputs are finalized |
| **Execution History** | Bryan Miranda : Result Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCSTRESS5 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To develop test cases that stress the resource requirements of the selected impress feature. |
| **Functional Test Type** | Stress-based Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Search button with different filters selected each time |
| **Expected Outputs** | Searches don’t get overloaded and finds the information selected instantaneously |
| **Post-Conditions** | Information is provided. |
| **Execution History** | Bryan Miranda : Result Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCSTRESS6 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To develop test cases that stress the resource requirements of the selected impress feature. |
| **Functional Test Type** | Stress-based Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Duplicate button gets selected to make multiple copies of the same item |
| **Expected Outputs** | Multiple Duplications are successfully and both products come up with the search |
| **Post-Conditions** | Duplication saves automatically |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCSTRESS7 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To develop test cases that stress the resource requirements of the selected impress feature. |
| **Functional Test Type** | Stress-based Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Printing Labels through lightspeed retail |
| **Expected Outputs** | labels get printed but depends on printer being used. |
| **Post-Conditions** | Queue for labels is processed successfully |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCSTRESS8 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To develop test cases that stress the resource requirements of the selected impress feature. |
| **Functional Test Type** | Stress-based Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | New Vendor button selection |
| **Expected Outputs** | All information is successfully inputted and saved |
| **Post-Conditions** | New vender comes up with search. |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCSTRESS9 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To develop test cases that stress the resource requirements of the selected impress feature. |
| **Functional Test Type** | Stress-based Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Importing Items / Products |
| **Expected Outputs** | Items successfully import no freeze or crash with big amounts of products |
| **Post-Conditions** | Items are saved into the inventory of LightSpeed |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCSTRESS10 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To develop test cases that stress the resource requirements of the selected impress feature. |
| **Functional Test Type** | Stress-based Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Master Orders button gets selected |
| **Expected Outputs** | Master order button works and allows you to input larges amounts of orders all at once |
| **Post-Conditions** | Information gets successfully saved and sent to the Supplier for review |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCSPEC1 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | Using the specifications of multiple features , developing test cases to verify that the specifications are met |
| **Functional Test Type** | Specification Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | History portion of products gets selected |
| **Expected Outputs** | Dates selected gives you history based on those specific dates |
| **Post-Conditions** | Information can be archived and used for later use. |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCSPEC2 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | Using the specifications of multiple features , developing test cases to verify that the specifications are met |
| **Functional Test Type** | Specification Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Merging Feature of the products |
| **Expected Outputs** | Products can be merged with another product even if supplier is different |
| **Post-Conditions** | Merging is successful and cannot be undone |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCSPEC3 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | Using the specifications of multiple features , developing test cases to verify that the specifications are met |
| **Functional Test Type** | Specification Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Sales button/section of an item gets selected. |
| **Expected Outputs** | Shows all history of products from date of inception |
| **Post-Conditions** | All transactions are shown. |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCSPEC4 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | Using the specifications of multiple features , developing test cases to verify that the specifications are met |
| **Functional Test Type** | Specification Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | New Order section |
| **Expected Outputs** | Allows you to select vendors and input a new order |
| **Post-Conditions** | You need to know which supplier you are going to order with |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCSPEC5 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | Using the specifications of multiple features , developing test cases to verify that the specifications are met |
| **Functional Test Type** | Specification Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Layaway section |
| **Expected Outputs** | Nothing can be selected. Layaway is used with a different vendor and |
| **Post-Conditions** | No information should be in this section |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCBOUND1 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To perform Boundary testing on certain functions Multiplication |
| **Functional Test Type** | Boundary Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Numeric; Value that has been input is $100 |
| **Expected Outputs** | Expect output should be 107.50 |
| **Post-Conditions** | Total amount should be displayed as 107.50 |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCBOUND2 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To perform Boundary testing on certain functions (ADD) |
| **Functional Test Type** | Boundary Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Numeric; Value that has been input is $1000 |
| **Expected Outputs** | Expected output should be $1000 |
| **Post-Conditions** | Price before tax should display $1000 |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCBOUND3 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To perform Boundary testing on certain functions (Subtraction) |
| **Functional Test Type** | Boundary Testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Numeric; Value that has been input is $450 from initial amount of $500 |
| **Expected Outputs** | Expected output should be $50 |
| **Post-Conditions** | Amount of $50 is displayed after change has been made |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCEQUIV1 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To perform Equivalence testing |
| **Functional Test Type** | Equivalence testing |
| **Pre-Conditions** | Access to LightSpeed Retail Program |
| **Inputs** | Numeric input of 0.1 |
| **Expected Outputs** | Doesn’t allow decimals for inventory only whole numbers |
| **Post-Conditions** | Displays a message that a decimal value cannot be inputted. |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (04/29/2022) |

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| **Test CaseID** | TCEQUIV2 |
| **Component** | LightSpeed Retail |
| **Purpose of Test Case** | To perform Equivalence testing |
| **Functional Test Type** | Equivalence testing |
| **Pre-Conditions** | Access to lightspeed retail |
| **Inputs** | Numeric input of -1 |
| **Expected Outputs** | Expect output should be -1 for change in inventory |
| **Post-Conditions** | displays -1 after change has been made |
| **Execution History** | Bryan Miranda : Result : Output matches expected output (3/12/2022) |

2.I sadly do not have structural access to the program therefore I cannot proceed with this section

3. The third section I can go into detail but can’t display any images correlating to me testing the software itself due to confidential information of customers and inventory.

There are several ways that automated testing can be useful for a system like this. Especially when inputting repetitive information. When it comes to customer information its better for it to be inputted manually. Things like inventory and sales have a great opportunity for automated testing to be used because inventory regardless of the amount inputted, which can be changed accordingly. All the other functions of punching in numbers can be generated automatically which would help with having more consistent inventory counts.

As far as the recommendations I would give to LightSpeed Retail. The main one would be the sales portion. When a sale is opened it cannot be closed until it is used, it is an easy work around when you have someone that is keeping tabs on the sales that are open itself. But if the company is at a largest scale. This could create unnecessary storage in the system itself and if it becomes too much. It could potentially slow down the system or shut it down perhaps. Another one would be the margins section, which is an easy work around but wasn’t addressed as an error based on the expected output. Margins can be adjusted based on the unit price of the product and you can then adjust the listing price giving you your margin. But the issue here is when one margin is changed for example the MSRP is changed and not Default Price. The margin changes for all of the prices versus just changing for the Default Price.