Testing

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Number | Description | Test Data | Expected Results | Actual Results |
| 1 | The user is not allowed access if they enter an incorrect username or password. | ‘jsmith44’  ‘testing4’ | The user will be told that the username or password is incorrect and they will be asked if they want to exit the system. | The system outputs ‘Incorrect Username and Password. Do you wish to exit the system. (Y/N)’ |
| After inputting the username and password, the system checks whether both of these are in the staff table in the same record. If the username and password is not in the database, the user will be told that the username or password is incorrect and they will be told if they want to exit the system. | | | | |
| 2 | The user with the sales access level can log in to the sales menu. | ‘kpowell89’  ‘testing3’ | The user will be presented with the sales menu. | The system asks the user if they want to exit the system. |
| After inputting the username and password, the user is asked if they want to exit the system. This is usually asked by the system whenever the user gets their login details incorrect or they exit the menus. The system is supposed to check the access level of the staff by retrieving the access level from the database using the username and password as a search item. However, the variable that is used to hold the access level is a tuple that only contains one element which is the access level instead of the access level itself. To fix this, I need to change the value of the variable to be the first value of the tuple, despite the tuple only having one element.    After inputting the username and password, the system checks whether the username and password are in the database and in the same record. If they are in the same record, the system checks the access level of the same record. If the access level is ‘Sales’, the sales menu is presented. | | | | |
| 3 | The user cannot add a customer if a purchase has not been added. |  | The user will be told that they cannot add a customer without adding a purchase. | The system outputs a message saying that customers can only be added after adding purchases. |
| The system checks if there are any records in the purchases table. If there are no records, the system tells the user that a purchase must be added as a customer should only be added when they make a rental purchase. | | | | |
| 4 | The user is cannot add a purchase if the return date is not inputted correctly. | ‘15-04-2021’ | The user will be told that the format of the date is invalid. | The system raises a Value Error. |
| When typing the date in an incorrect format, the system raises a Value Error when the expectation was for the system to output ‘Incorrect date format’. My system is currently programmed to catch Syntax Errors which I thought would have been the case as I am trying to catch errors that are caused due to an incorrect format. To fix this I need to change my code so that it catches Value Errors instead of Syntax Errors so that the expected result can be displayed.    When the data is inputted in an incorrect format, the system outputs a message telling the user that the date is not in the correct format. After changing the code, this part of the system now works fine. | | | | |
| 5 | The user can add a rental purchase to the database. | 101  89  ‘2021-04-29'  \*Extreme\*  101  11  ‘2025-08-25’ | The user will add a purchase to the database and they will be told that the purchase has been added. | The system outputs ‘Purchase added.’ and the record is inserted into the purchase table. |
| When all of the data is entered correctly, the system tells the user that the purchase has successfully been added.      When an extreme date has been entered, the system reacts normally and the date gets inserted into the record along with the large value for the number of days field. | | | | |
| 6 | The user can add customer details to the database. | ‘Jimmy’  ‘William’  ‘07123565656’  ‘jimmywilliam@gmail.com’  (purchaseID from test 5)  \*Extreme\*  ‘fdshsdhajjdfjgkjrt’  ‘sdgefjhshfdhkdf’  ‘11111111111’  fjfjsj@nodomain.com  (purchaseID from test 5) | The user will add a customer to the database and they will be told that the customer has been added. | The system outputs ‘Customer added.’ and the record is inserted into the customer table. |
| When a purchase has been added and the customer data has been entered correctly, the system tells the user that the customer has been successfully added.      When extreme data is entered, the system treats it as if it were normal data and it inserts that data into the record. | | | | |
| 7 | The user is told to enter the phone number again if it is not the correct length. | ‘0712256565’ | The user will be told that the phone number is not the correct length. | The system inserts the customer into the database. |
| When a phone number that is not 11 number long is entered, the system adds the record into the database. The system is currently programmed to check whether the phone number is more than or less than 11 numbers. However, the system continues when an incorrect phone number is entered and it stops when a phone number of the correct length is entered. To fix this, the system needs to check whether the phone number is 11 numbers long and not check whether it is more or less than 11 numbers.    The system checks the length of the phone number entered. When the phone number is not the correct length, the user is told by the system that the phone number must be 11 numbers long. The system works correctly after changing the code. | | | | |
| 8 | The user can edit a record that is already in the database. | (customerID from test 6)  ‘surname’  ‘Smith’ | The customer in the database will be updated and the user will be told that the record has been updated. | The system outputs ‘Customer updated.’ And the customer table is updated with the new record. |
| The system uses the field name and the new data to update the record accordingly. The system also tells the user that the customer record has been updated. | | | | |
| 9 | The user can create and send an invoice to a customer. | (customerID from test 6) | The user will be told that the invoice has been created and sent. | The system outputs ‘Invoice created.’ when the invoice is created and when the invoice gets sent, the system outputs ‘Invoice sent.’ |
| The system creates and sends an invoice to the customer using the customer ID to find the email of the customer that has made the purchase. | | | | |
| 10 | The user can delete a record in the database. | (customerID from test 6) | The record will be deleted from the database and the user will be told that the record has been deleted. | The system outputs ‘Customer deleted.’ and the record is now deleted from the customer table. |
| The system deletes the record using the primary key to search for the record that the user wants to delete. | | | | |
| 11 | The user can see a list of records in the database. |  | The user will be presented with a list of records in the database. | The system outputs all records from the database table. |
| The system is displaying all records from the database table after the user has inputted the option that displays all records. | | | | |
| 12 | The user can confirm that a purchase has been made. | 101 | The number of stock will decrease and the user will be told that the purchase will be successful. | The system outputs ‘Purchase successful.’ and the Remaining Stock field is updated. |
| The system decreases the remaining stock field by one after a purchase has been made by inputting the item ID of the item bought. | | | | |
| 13 | The user can input the number of hours they have worked. | 89  16  \*Extreme\*  11  35785478 | The hours worked field in the staff table will be updated and the user will be told that their hours have been updated. | The system outputs ‘Hours Updated.’ and the Hours Worked field is updated. |
| The system uses the hours inputted and it is added onto the existing number that is in the Hours Worked field in the staff table.    When an extremely large number is entered, the system reacts normally. | | | | |
| 14 | The user can exit the menu. |  | The menu will no longer be accessible and the user will be asked if they want to exit the system. | The system outputs a message asking the user if they want to exit the system and the sales menu is no longer accessible. |
| After the user has entered the option that exits the menu, the system is displaying a message asking if they want to exit the system. | | | | |
| 15 | The user can exit the system. |  | The system will be closed. | The system closes on request. |
| The system is asking for confirmation if the user wants to exit the system after entered the option to exit the system. | | | | |
| 16 | The user can pay employees. |  | The system will calculate the employees pay and the user will be told how much each staff member has been paid. | The system outputs messages saying the employee has been paid and a payslip has been sent. |
| The system is showing all staff members from the staff table and the system is multiplying the hours worked with the hourly rate to calculate the pay. The system creates a payslip for each employee to verify the transaction.    From the extreme test in test 13, the system uses the extreme value and calculates the pay in the same way that it would for a normal value. | | | | |
| 17 | The user can manage expenses. |  | The user will be presented with their expenses and their income. | The system outputs information regarding income and expenses. |
| The system generates statistics regarding the income and expenses of the business when the option to manage expenses is entered. | | | | |
| 18 | The user can create and send reports. |  | A text file will be created with statistics regarding the items and it will get sent to management staff. | The system creates a report and it gets sent to the management staff. |
| Reports are created and sent to the management staff by the system when the option to create reports is entered. | | | | |
| 19 | The user can access the sales menu. |  | The user will be presented with the sales menu and they will be able to access all of the options. | The system outputs the sales menu and the sales menu is now accessible. |
| The sales menu is being displayed after the option to access the sales menu was entered from the finance menu. | | | | |
| 20 | The user can add staff details to a database. | ‘Will’  ‘Smith’  ‘07678564545’  ‘willsmith@gmail.com’  12.50  ‘willsmith123’  ‘Sales’ | The user will add a staff member to the database and they will be told that a staff has successfully been added. | The system outputs ‘Staff added.’ and the record is inserted into the staff table. |
| When the staff details are entered correctly, the record is added into the staff table and the system outputs a message telling the user that the record has successfully been added. | | | | |
| 21 | The user can access the finance menu. |  | The user will be presented with the finance menu and they will be able to access all of the options. | The finance menu is outputted by the system and it is now accessible. |
| The finance menu is being displayed after the option to access the finance menu was entered from the management menu. | | | | |
| 22 | The user can add item details to the database. | ‘Gaming Headset’  False  60.0  0.0  80  \*Extreme\*  ‘Extreme Game’  True  40.0  1200.0  70000 | The user will add an item to the database and they will be told that the item has successfully been added. | The system outputs ‘Item added.’ and the record is inserted into the items table. |
| When the item details are entered correctly, the record is added into the items table and the system outputs a message telling the user that the record has successfully been added.      When extreme data is entered, the system reacts normally and it inserts the data into the record. | | | | |
| 23 | The user can add order details to the database. | (itemID from test 22)  11  10  2500.0  50 | The user will add an order to the database and they will be told that an order has successfully been added. | The system outputs ‘Order added’ and the record is inserted into the orders table. |
| When the order details are entered correctly, the record is added into the orders table and the system outputs a message telling the user that the record has successfully been added. | | | | |
| 24 | The user can order items. |  | The user will make an order and the number of stock will increase. | The system outputs ‘Delivery Successful’ when the delivery is confirmed and the Remaining Stock field in the items table is updated. The system also outputs ‘Invoice sent’ when the system creates an invoice for the delivery and sends it to the staff making the delivery. |
| The system uses the order ID to make a delivery. The system adds the Number Of Units field onto the Remaining Stock field in the items table after the delivery has been successful. | | | | |
| 25 | The user with the finance access level can log in to the sales menu. | ‘jsmith43’  ‘testing2’ | The user will be presented with the finance menu. | The finance menu is outputted by the system. |
| After inputting the username and password, the system checks whether the username and password are in the database and in the same record. If they are in the same record, the system checks the access level of the same record. If the access level is ‘Finance, the finance menu is presented. | | | | |
| 26 | The user with the management access level can log in to the sales menu. | ‘grees11’  ‘testing1' | The user will be presented with the management menu. | The management menu is outputted by the system. |
| After inputting the username and password, the system checks whether the username and password are in the database and in the same record. If they are in the same record, the system checks the access level of the same record. If the access level is ‘Management, the management menu is presented. | | | | |