CS 6400 Database Project

BuzzBuy Data Warehouse

**Abstract Code & SQL**

**Team 34**

Login

Abstract Code

* User enters employee id and password (last 4 ssn + “-” + LastName) input fields
* If data validation is successful for both employee id and password input fields, then:
  + When ***Login*** button is clicked:

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| --- |
| **SELECT EmployeeID FROM User WHERE EmployeeID = ‘$employeeID’ AND Password = ‘$password’** |

* + If User record is found but User.password != (last 4 SSN + “-“ + LastName):
    - Go back to **Login** form with error message.
  + Else:
    - Store login information as session variable ‘$EmployeeID’.
    - Go to **Main Menu** form.
* Else employee id and password input fields are invalid
  + Stay in **Login** form, display an error message

Main Form

Abstract Code

* Show “***View Statistics***”, ***“View Holidays”, “View Reports”, “View Audit Log”*** and “***Log Out***” tabs in navigation bar.
* Upon:
  + Click ***View Statistics*** button – Jump to the **View Statistics** task
  + Click ***View Holidays*** button – Jump to the **View Holidays** task
  + Click ***View Audit Log*** button – Jump to the **View Audit Log** task
  + Click ***Log Out*** button – Invalidate login session and go back to the **Login** form.

View Statistics

Abstract Code

* Show Data – Count of Stores, Holidays, Cities, Districts, Manufacturers, Products, Categories, Holidays

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| --- |
| **SELECT Count(Number) FROM Store GROUP BY Number** |
| **SELECT HolidayName, Date from Holiday ORDER BY Date** |
| **SELECT Number as Store.StoreNumber, Store.PhoneNumber, Store.District, City.CityName, City.State FROM Store, City**  **WHERE Store.City = City.CityName**  **ORDER BY Store.StoreNumber** |
| **SELECT Product.PID, Product.RetailPrice, Product.Name, Manufacturer.Name, Categories.Name as CategoryName**  **FROM Product, Manufacturer, Categories**  **WHERE Product.ManufacturerName = Manufacturer.Name AND Product.PID = Categories.PID**  **ORDER BY Product.PID** |

* Show “***Manufacturer’s Product Report***”, “***Category Report****”*, “***Actual versus Predicted Revenue For GPS units***”, *“****Air Conditioners on Groundhog Day?****”*, *“****Store Revenue by Year by State***”, “***District with Highest Volume for each Category****”,* “***Revenue by Population***”, *“****Edit Holiday****”,* and *“****View Audit Log****”* Links
* Upon:
  + Click ***Manufacturer’s Product Report*** button – Jump to **View Reports** task
  + Click ***Category Report*** button – Jump to **View Reports** task
  + Click ***Actual versus Predicted Revenue For GPS units*** button – Jump to **View Reports** task
  + Click ***Air Conditioners on Groundhog Day?*** Button – Jump to **View Reports** task
  + Click ***Stores Revenue by Year by State*** button – Jump to **View Reports** task
  + Click ***District with Higher Volume for each Category*** button – Jump to **View Reports** task
  + Click ***Revenue by Population*** button – Jump to **View Reports** task
  + Click ***Edit Holiday*** button – Jum to **Edit Holiday** task
  + Click ***View Audit Log*** button – Jump to **View Audit Log** task

View Holidays

Abstract Code

* Check if user has been granted to access to all districts
* If all districts are accessible, then:
  + View all holidays

|  |
| --- |
| **SELECT HolidayName, Date FROM Holidays ORDER BY Date** |

* + Display ***Edit Holiday*** button next to each holiday
  + Display ***Add Holiday*** button on top of the form
* Else:
  + Display an error message
  + Go back to **Main Menu** form

Edit Holidays

Abstract Code

* Check if user has been granted to access to all districts
* If all districts are accessible, then:
  + View the selected holiday

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| --- |
| **SELECT HolidayName, Date From Holidays WHERE Date = ‘$HolidayDate’** |

* + Display ***Save Holiday*** button next
  + If ***Save Holiday*** button is clicked then:

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| --- |
| **UPDATE Holidays SET HolidayName = ‘$HolidayName’**  **WHERE Date = ‘$HolidayDate’** |

* Else:
  + Display an error message
  + Go back to **Main Menu** form

View Reports

Abstract Code

* Check if user has been granted to access to Reports
* If a user is granted to access, then:
  + View all available reports with its button or hyperlink
  + Choose a report to generate a report
  + Upon completion of generation a report
    - User is able to export the output to different formats of files (PDF or CSV)
* Else:
  + Stay in Main Menu form

View Audit Logs

Abstract Code

* Check if user has been granted to access to Audit Logs
* If a user is granted to access, then:
  + View all available audit logs
    - Search by Date, User, ReportName

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| --- |
| **SELECT ReportName, TimeStamp FROM AuditLog WHERE TimeStamp = ‘$DateParam’** |
| **SELECT ReportName, TimeStamp FROM AuditLog WHERE ReportName = ‘$ReportName’** |

* + - Sort by Date

|  |
| --- |
| **SELECT ReportName, TimeStamp FROM AuditLog ORDER BY TimeStamp ASC** |
| **SELECT ReportName, TimeStamp FROM AuditLog ORDER BY TimeStamp DESC** |

* + Choose an ***Audit Log View*** button to view
  + A selected log can be printed or exported to other file formats
* Else:
  + Stay in Main Menu form