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Team AYEN All Data Structures Used

1. **STL Vector -** Used in dbmanager.h, dbmanager.cpp, databaseviewform.h, databaseviewform.cpp, purchasewindow.h, purchasewindow.cpp, tripRoutePlanner.h, tripRoutePlanner.cpp, campusselectdialog.h, campusselectdialog.cpp, displaypurchases.h, displaypurchases.cpp
   a. dbmanager.h and dbmanager.cpp
      i. vector<QString> getCampusNames(); - Used to get the campus names from the database
         1. vector<QString> names; - Gets the names of campuses from database.
      ii. vector<QString> getSouvenirNamesByCampus(const QString& campus); - Used to get the souvenir names by campus
         1. vector<QString> souvenirs; - Gets the name of souvenirs in the database from each campus
      iii. vector<QString> getInitialCampusNames(); - Used to get the campus names for the first 11 campuses in the database
         1. vector<QString> names; - Gets the names of the first 11 campuses in the database
   b. databaseviewform.h, databaseviewform.cpp
      i. vector<QString> temp; - Used to populate the campuses combo box in order to display each campus, their distances, and their souvenirs
   c. purchasewindow.h and purchasewindow.cpp
      i. vector<QString> souvenirs; - Used to hold all the souvenirs at a current campus
      ii. vector<Purchase> purchases; - Used to keep track of all purchases made during a trip.
   d. tripRoutePlanner.h, tripRoutePlanner.cpp
      i. vector<QString> *visitList - Passed in as a parameter of the tripRoutePlanner constructor to determine trip
      ii. vector<QString> temp; - Used in the tripRoutePlanner constructor to get the campus names from the database.
      iii. vector<Purchase>* purchasesPtr - Used to keep track of all souvenir purchases made during the trip.
      iv. vector<Purchase> tripPurchases; - Holds all the current purchases of a trip
      v. vector<QString> campusesToVisit; - Holds all the campuses being visited in a trip
   e. campusselectdialog.h, campusselectdialog.cpp
      i. vector<QString> getChecked(); - Holds the selected campuses
         1. vector<QString> checkedCampuses; - Gets all of the campuses the user selects

ii. vector<QString> campuses - Passed in as a Parameter to the CampusSelectDialog constructor. Used to Populate list of campuses users can choose from.

f. displaypurchases.h, displaypurchases.cpp
   i. vector<Purchase> allPurchases; - holds all of the purchases made in the current trip
   ii. vector<Purchase>* purchaseList - Passed in as a parameter to the displaypurchases constructor and the function populateTransactionTable
      1. vector<QString> uniquePurchaseLocations; - Keeps track of all purchases made at different campuses for a current trip
      2. vector<Purchase> tempPurchases; - contains all of the purchases being displayed when a trip ends.
   iii. vector<Purchase> *vecPtr - Used to populate the transaction table in order to display all the purchases

2. **STL Queue -** Used in tripRoutePlanner.h, tripRoutePlanner.cpp
   a. tripRoutePlanner.h and tripRoutePlanner.cpp
      i. queue<QString> route; - Holds all the campuses being visited in order in a trip

3. **QSqlQueryModel** - Used in dbmanager.h, dbmanager.cpp
   a. dbmanager.h and dbmanager.cpp
      i. QSqlQueryModel* getDistancesModel(const QString& campus); - Used to get a model containing campus names and distances from the database
      ii. QSqlQueryModel* getSouvenirsModel(const QString& campus); - Used to get a model containing campus names, souvenirs, and prices from the database