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COMP 3421 – A7: Python/Connector

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| **E/R Schema of the Auto Insurance Company Database:**  Coverage (**coverageID,** cAmount**,** planName**,** price)  States (**stateName,** climate, pDensity)  Driving Records (**recordID,** DRdate, DRtype)  Customers (**customerID**, cname, age, gender, SSN, dlNum, **coverageID, stateName**)  Cars (**VINcode,** brand, color, ctype, **customerID**)  Premium (**premiumID**, paymentPeriod, cAmount**, recordID, customerID**) |

**Python/Connector Function Description**

In connector.py script, the python function DR\_PremiumChange will accept a driving record (accident) information, including the date, type, and the accident customer’s ID. Then the function will add the record into the DrivingRecords table, and change the customer’s premium information in the Premium table.

**Code:**

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| import mysql.connector  def DR\_PremiumChange (customer\_id, DR\_date, DR\_type):  theCommand = 'select count(\*) from customers;'  myc.execute(theCommand)  total\_customers = 0  for x in myc:  total\_customers = x[0]  if customer\_id <= total\_customers: # can find the related customer information from the customers table, so start change data  print('Start change the customer #', customer\_id, '\'s driving record & premimum information..')  theCommand = 'select count(\*) from drivingrecords;'  myc.execute(theCommand)  dr\_count = 0  for x in myc:  dr\_count = x[0]  dr\_count += 2  theCommand = 'insert into drivingrecords values(' + str(dr\_count) + ', \'' + DR\_date + '\',\'' + DR\_type + '\');'  myc.execute(theCommand)  print('\nSuccessfully added a new driving record! The new added driving record information is:')    theCommand = 'select \* from drivingrecords where recordID = ' + str(dr\_count) + ';'  myc.execute(theCommand)  for x in myc:  print(x)    testCommand = 'select \* from premium where customerID = ' + str(customer\_id) +';'  myc.execute(testCommand)  print('\nNow change the customer premium information. Before change, the customer with customerID = ', customer\_id, ', whose premium information is:')  for x in myc:  print(x)    # Premium (premiumID, paymentPeriod, cAmount, recordID, customerID)  theCommand = 'update Premium set recordID = ' + str(dr\_count) + ' where customerID = ' + str(customer\_id) + ';'  myc.execute(theCommand)  for x in myc:  print(x)  myc.execute(testCommand)  print('\n After change, the customer with customerID = ', customer\_id, ', whose premium information is:')  for x in myc:  print(x)    return '\nInformation changed!'  else:  return '\nInvalid Customer information'  ## function end  # test code start  mydb = mysql.connector.connect(  user='root', # could be root, or a user you created, I created 'testuser2'  passwd='670510', # the password for that use  database='exercise7', # the database to connect to  host='127.0.0.1', # localhost  allow\_local\_infile=1 # needed so can load local files  )  print(mydb)  myc = mydb.cursor() # myc name short for "my cursor"  # We need to reset the variable that allows loading of local files  myc.execute('set global local\_infile = 1')  myc.execute("use carinsurance")    myc.execute ("show tables")  for x in myc:  print(x)  result = DR\_PremiumChange (7996, '2020-3-3', 'serious') #8000, 7999, 7998, 7997  print(result)  mydb.commit()  mydb.close() |

**Output Exhibition**

As we can see, the function added a new driving record. The code added a new driving record with the recordID = 2006 (primary key) and the related information to the DrivingRecord table, then change the customer 7996’s recordID from ‘None’ to 2006 (means no record ID before).

