

Network-Based Application Development (ITIS 4166/5166) **Summer 19**

**Assignment - Phase 3**

# (Submission: June 27th, 11:59 PM)

The goal of this phase is to familiarize you with using databases to persist the data in your web application, the details are provided below. This assignment is an extension to the previous assignment. To be able to meet the requirements for this step successfully you are encouraged to resolve any issues or missing requirements from Assignment - phase 2 (you can also use your or my solution of phase 2 as a starting point for phase 3).

**Database Integration**

For this phase, you’ll improve the application by modifying it so it uses a database instead of a text file to store the product and user data. You’ll use JDBC to work with the data.

# Specifications

* Create Shop database by importing the Shop.sql schema into your MySQL server.
* Use a class named ProductTable that’s in the murach.data package to retrieve, add, update, and delete the products in the Product Management application. This class should use JDBC.

# ProductTable methods:

* + List<Product> selectProducts(): retrieves all records of products from the database and store them in a List data structure.
  + Product selectProduct(String productCode): retrieves the record of the product with a product code matching the provided one.
  + boolean exists(String productCode): returns true if the database contains a product with a code matching the provided code.
  + saveProducts(List<Product> products): inserts a provided list of products into the database.
  + insertProduct(Product product) : inserts a record for the provided product into the database.
  + updateProduct(Product product): updates an existing product in the database (based on product code) with the new information of the provided product object.
  + deleteProduct(Product product): removes a provided product from the database.
* Use a class named UserTable that’s in the murach.data package to retrieve, add users in the Product Management application. This class should use JDBC.

# UserTable methods:

* + addRecord(User user) : adds a user record to the database..
  + getUser(String emailAddress) : retrieves a user record using her email address.
  + ArrayList<User> getUsers() : retrieves the records for all users and store them in ArrayList data structure.
  + HashMap<String, User> getUsersMap() : retrieves the records for all users and store them in HashMap data structure.

**Assignment Submissions**

upload a zip file of the NetBeans project