Java Programming

6-2: JDBC Basics

Practice Activities

Lesson Objectives:

- JDBC Data Types

- Programming with JDBC PreparedStatement

- Programming with Use JDBC CallableStatement

- Reading MetaData from Database

Vocabulary:

Identify the vocabulary word for each definition below.

|	
	An object that represents a precompiled SQL statement.
	The interface used to execute SQL stored procedures
	An object that can be used to get information about the types and properties of the columns in a ResultSet Object

Try It/Solve It:

In this practice, you will be writing the code that JavaFx uses to communicate with the Oracle database.

Your task is to develop the Java FX application that will show table contents from table names that begin with the word JOB. Use "JOB%" in the Java FX TextArea.

For example, the application can display contents from the JOBS, JOB_HISTORY, or JOB_GRADES tables.
Notes: Use the DatabaseMetaData object.

Below is the JOBS entity diagram and an example of the finished interface.
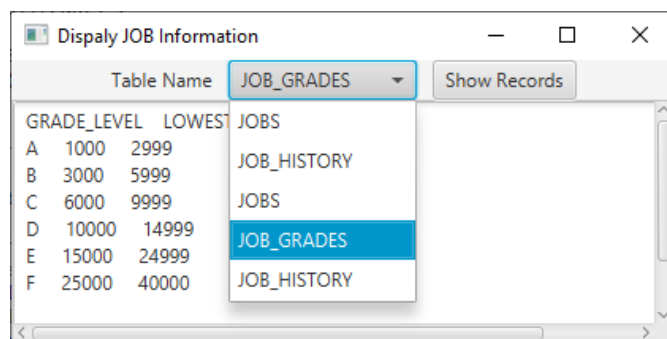
1. The following is the basic structure of the program, complete the code blocks where instructed to do so:

```java
package application;


public class DisplayJobs extends Application {
    private TextArea ta = new TextArea();
    private Button btShowJobs = new Button("Show Records");
    private ComboBox<String> cboTableName = new ComboBox<>();

    private Statement stmt;

    @Override
    public void start(Stage primaryStage) {
        //establish the database connection
        initializeDB();

        //display the JOB Data
        btShowJobs.setOnAction(e -> showData());

        HBox hBox = new HBox(10);
        hBox.getChildren().addAll(new Label("Table Name"), cboTableName, btShowJobs);
        hBox.setAlignment(Pos.CENTER);

        BorderPane bpane = new BorderPane();
        bpane.setCenter(new ScrollPane(ta));
        bpane.setTop(hBox);

        Scene scene = new Scene(bpane, 420, 180);
        primaryStage.setTitle("Dispaly JOB Information");
        primaryStage.setScene(scene);
        primaryStage.show();
    }//end method start

    private void initializeDB() {
        try {
            //Add code that does the following
            //Create a connection to your Oracle database using the orcluser account

            //Use the connection to create a statement

            //Use the Database MetaData to generate a resultSet based on tables that
            //contain the word job

            //Add the returned table names to the comboBox, selecting the first item

        }catch (Exception ex) {
            ex.printStackTrace();
        }//end try catch
    }//end method initializeDB

    private void showData() {
        ta.clear();
        String tableName = cboTableName.getValue();
        try {

            //Create query that will select from the chosen table name

            //Create a ResultSet object to hold the data from the executed query.

            //Use the MetaData from the ResultSet to append the column names to the text
```

```java
            //area

            //Use a while loop to display the values of the returned data to the text
            //area

        }catch (SQLException e) {
            e.printStackTrace();
        }//end try catch
     }//end method showData

    public static void main(String[] args) {
            launch(args);
    }//end method main
}//end class DisplayJobs
```