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### HW3: Output and Challenges

#### Output for Options 1-2:

```
+-----+
|           CIA Database Menu           |
+-----+
| 1. List countries                     |
| 2. Add country                       |
| 3. Find countries based on gdp and inflation |
| 4. Update country's gdp and inflation |
| 5. Exit                             |
+-----+
+ Enter your choice (1-5): 1
Canada (CN), per capita gdp $43241, inflation rate 7.6%
France (FR), per capita gdp $46230, inflation rate 8.8%
Italy (IT), per capita gdp $99000, inflation rate 11.2%
Mexico (MX), per capita gdp $8346, inflation rate 8.7%
United Kingdom (UK), per capita gdp $78500, inflation rate 9.1%
United States of America (US), per capita gdp $63543, inflation rate 8.3%

+-----+
|           CIA Database Menu           |
+-----+
| 1. List countries                     |
| 2. Add country                       |
| 3. Find countries based on gdp and inflation |
| 4. Update country's gdp and inflation |
| 5. Exit                             |
+-----+
+ Enter your choice (1-5): 2
Country code.....: US
This country already exists.

+-----+
|           CIA Database Menu           |
+-----+
| 1. List countries                     |
| 2. Add country                       |
| 3. Find countries based on gdp and inflation |
| 4. Update country's gdp and inflation |
| 5. Exit                             |
+-----+
+ Enter your choice (1-5):
2
Country code.....: RS
Country name.....: Russia
Country per capita gdp (USD): 22000
Country inflation (pct).....: 6.5

Russia (RS) has been added to the CIA database!

+-----+
|           CIA Database Menu           |
+-----+
| 1. List countries                     |
| 2. Add country                       |
| 3. Find countries based on gdp and inflation |
| 4. Update country's gdp and inflation |
| 5. Exit                             |
+-----+
+ Enter your choice (1-5): 1
Canada (CN), per capita gdp $43241, inflation rate 7.6%
France (FR), per capita gdp $46230, inflation rate 8.8%
Italy (IT), per capita gdp $99000, inflation rate 11.2%
Mexico (MX), per capita gdp $8346, inflation rate 8.7%
Russia (RS), per capita gdp $22000, inflation rate 6.5%
United Kingdom (UK), per capita gdp $78500, inflation rate 9.1%
United States of America (US), per capita gdp $63543, inflation rate 8.3%
```

### Outputs for Options 3-4:

```
+-----+
|               CIA Database Menu               |
+-----+
| 1. List countries                             |
| 2. Add country                               |
| 3. Find countries based on gdp and inflation |
| 4. Update country's gdp and inflation        |
| 5. Exit                                     |
+-----+
+ Enter your choice (1-5): 3
Minimum per capita gdp (USD)...: 23000
Maximum per capita gdp (USD)...: 90000
Minimum inflation (pct).....: 5.0
Maximum inflation (pct).....: 10.1
Canada (CN), per capita gdp $43241, inflation rate 7.6%
France (FR), per capita gdp $46230, inflation rate 8.8%
United States of America (US), per capita gdp $63543, inflation rate 8.3%
United Kingdom (UK), per capita gdp $78500, inflation rate 9.1%

+-----+
|               CIA Database Menu               |
+-----+
| 1. List countries                             |
| 2. Add country                               |
| 3. Find countries based on gdp and inflation |
| 4. Update country's gdp and inflation        |
| 5. Exit                                     |
+-----+
+ Enter your choice (1-5): 4
Country code.....: YK
This country does not exist.

+-----+
|               CIA Database Menu               |
+-----+
| 1. List countries                             |
| 2. Add country                               |
| 3. Find countries based on gdp and inflation |
| 4. Update country's gdp and inflation        |
| 5. Exit                                     |
+-----+
+ Enter your choice (1-5): 4
Country code.....: CN
Country per capita gdp (USD): 80000
Country inflation (pct).....: 12.2

CN's gdp and inflation rates have been updated in the CIA Database!

+-----+
|               CIA Database Menu               |
+-----+
| 1. List countries                             |
| 2. Add country                               |
| 3. Find countries based on gdp and inflation |
| 4. Update country's gdp and inflation        |
| 5. Exit                                     |
+-----+
+ Enter your choice (1-5): 1
Canada (CN), per capita gdp $80000, inflation rate 12.2%
France (FR), per capita gdp $46230, inflation rate 8.8%
Italy (IT), per capita gdp $99000, inflation rate 11.2%
Mexico (MX), per capita gdp $8346, inflation rate 8.7%
Russia (RS), per capita gdp $22000, inflation rate 6.5%
United Kingdom (UK), per capita gdp $78500, inflation rate 9.1%
United States of America (US), per capita gdp $63543, inflation rate 8.3%
```

### Output for Option 5:

```
+-----+
|               CIA Database Menu               |
+-----+
| 1. List countries                             |
| 2. Add country                               |
| 3. Find countries based on gdp and inflation |
| 4. Update country's gdp and inflation        |
| 5. Exit                                       |
+-----+
+ Enter your choice (1-5): 7
+-----+
|               CIA Database Menu               |
+-----+
| 1. List countries                             |
| 2. Add country                               |
| 3. Find countries based on gdp and inflation |
| 4. Update country's gdp and inflation        |
| 5. Exit                                       |
+-----+
+ Enter your choice (1-5): no
Incorrect input. Please enter an integer 1-5.
+-----+
|               CIA Database Menu               |
+-----+
| 1. List countries                             |
| 2. Add country                               |
| 3. Find countries based on gdp and inflation |
| 4. Update country's gdp and inflation        |
| 5. Exit                                       |
+-----+
+ Enter your choice (1-5): 5
Closing program. Goodbye!
(base) dgiacobbi@Davids-MacBook-Pro hw3-dgiacobbi %
```

### Challenges/Obstacles Faced:

The biggest challenge I faced from this homework was trying to use the java connector to perform my work between the program and the database. I was struggling with this because I was trying to compile Main.java straight from the terminal. Rather, I needed to compile the whole project with all my objects so that the connector was able to reach my objects that required a connection to the database. Another issue I faced was simple syntax errors, using the execute query method. I had to read into what queries could be executed straight from a string object and which ones were in a prepared statement. Other than that the rest of the project went fairly well other than some minor design issues that were fixed early in the project.