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ESOF 322
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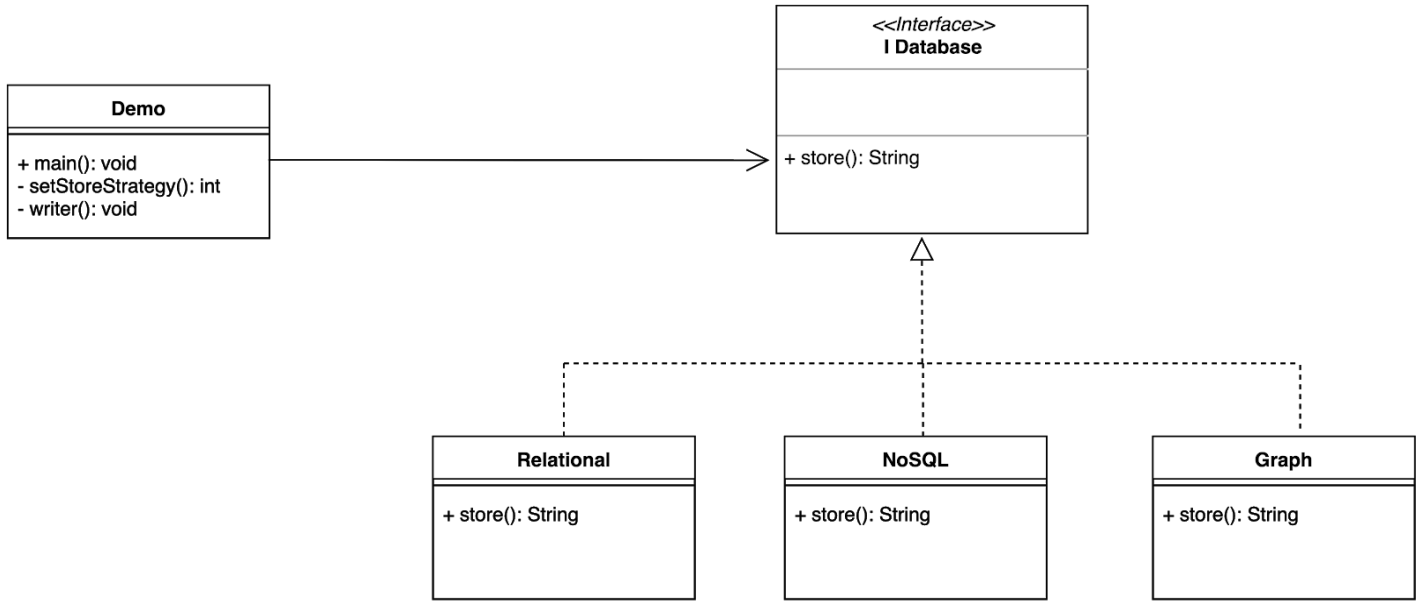
Homework 2

Part A:



Part B:

```
//the interface
public interface Database {
   String store();
}

//implements from interface
public class Graph implements Database {
   public String store(){
      return "Graph";
   }
}

//implements from interface
public class NoSQL implements Database {
   public String store(){
```

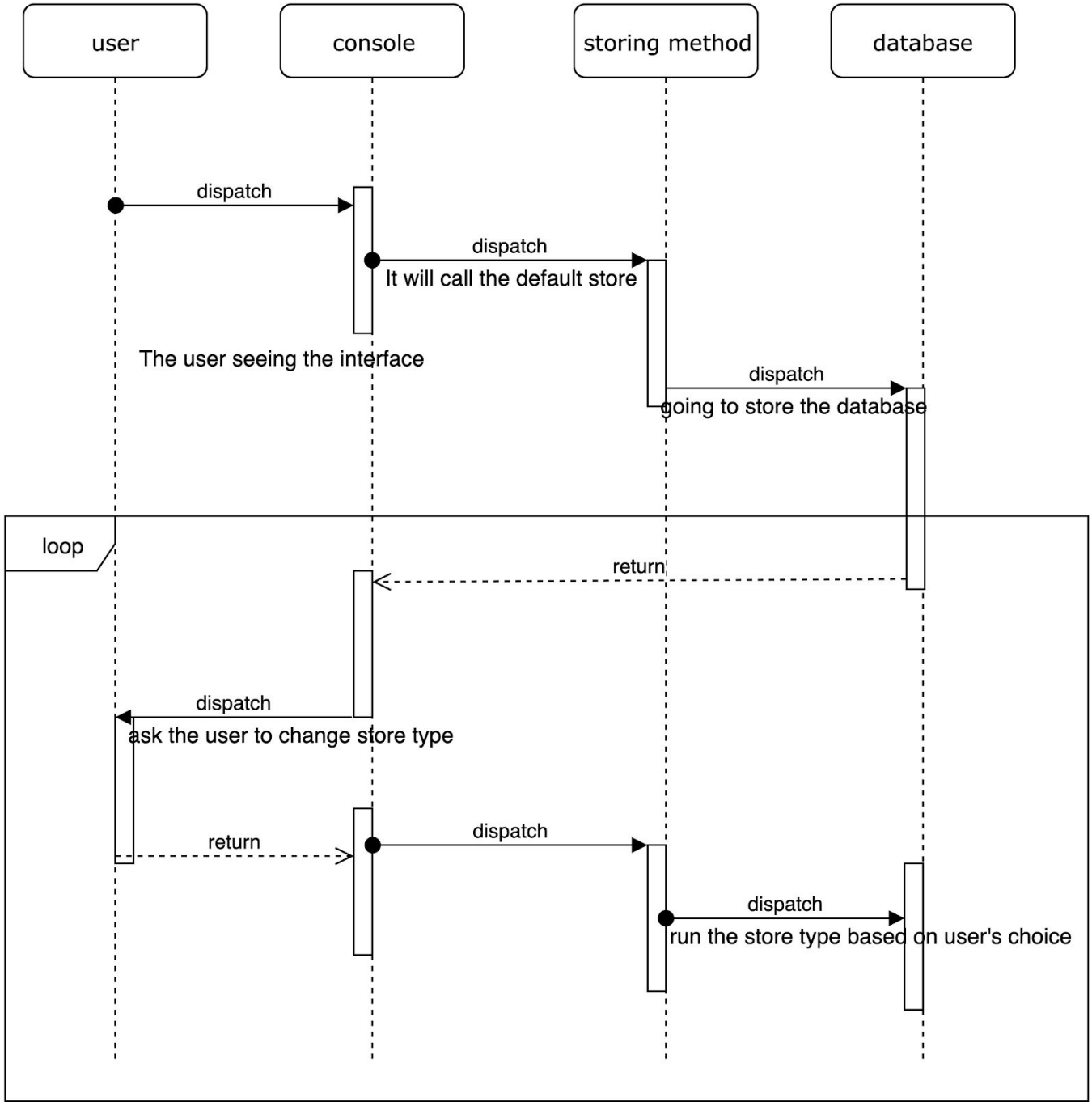
```
        return "NoSQL";
    }
}

//relational class that implements from interface
public class Relational implements Database {
    public String store(){
        return "Relational";
    }
}


//all functions that will run in demo
import java.io.*;
import java.util.Scanner;

public class Demo {
    public static void main(String[] args){

        String solution = "";
        int choice = 0;
        String words = "";
        Scanner input = new Scanner(System.in);
        Database db = new Relational();

        // a do while loop that will continue calling setStoreStrategy and write what is needed
        do {
            choice = Demo.setStoreStrategy();
            if(choice != 4) {
                System.out.println("Enter what you would like to store: ");
                words = input.nextLine();

            //call the different classes using the database interface
                switch (choice) {
                    case 1:
                        db = new Relational();
                        break;
                    case 2:
                        db = new NoSQL();
```

```
                break;
            case 3:
                db = new Graph();
                break;
        }

        // call the store after finding out which store to use
            solution = db.store();
            Demo.write(solution, words);
        }
    }while(choice !=4);
    input.close();

}
//call the different store types
private static int setStoreStrategy(){
    int choice = 0;
    Scanner scanner = new Scanner(System.in);
    System.out.println("Please select one of the following to switch storing option");
    System.out.println("1 for Relational Database");
    System.out.println("2 for NoSQL Database");
    System.out.println("3 for Graph Database");
    System.out.println("4 to exit");
    choice = scanner.nextInt();

    return choice;
}

//write each one to the file using bufferwriter
private static void write(String solution, String words){
    File outputFile = new File("output.txt");

    try {
        BufferedWriter output = new BufferedWriter(new FileWriter(outputFile, true));
        output.write(solution + " " + words + "\n");
        output.close();
    } catch (IOException e) {
        e.printStackTrace();
    }
```

```
    }

}
```

Sample output:
Graph test 1 for graph class
Relational the second test using relational
NoSQL I did a continuous loop for this program.

Part C:


user
console
storing method
database
dispatch
dispatch
It will call the default store
The user seeing the interface
dispatch
going to store the database
loop
return
dispatch
ask the user to change store type
return
dispatch
dispatch
run the store type based on user's choice