ESOF 322 HW 2
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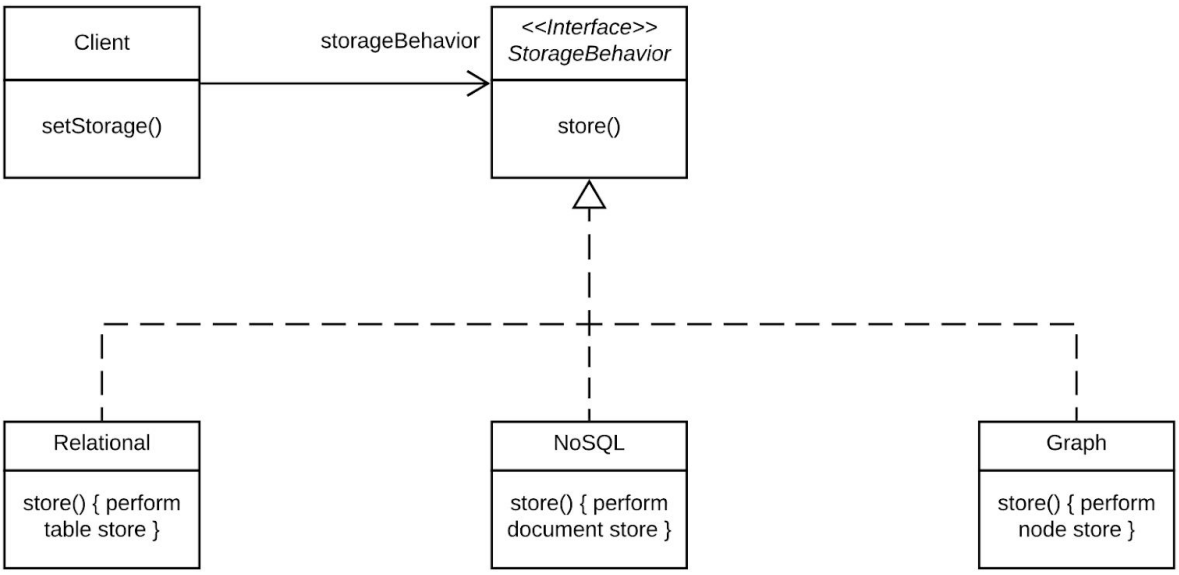
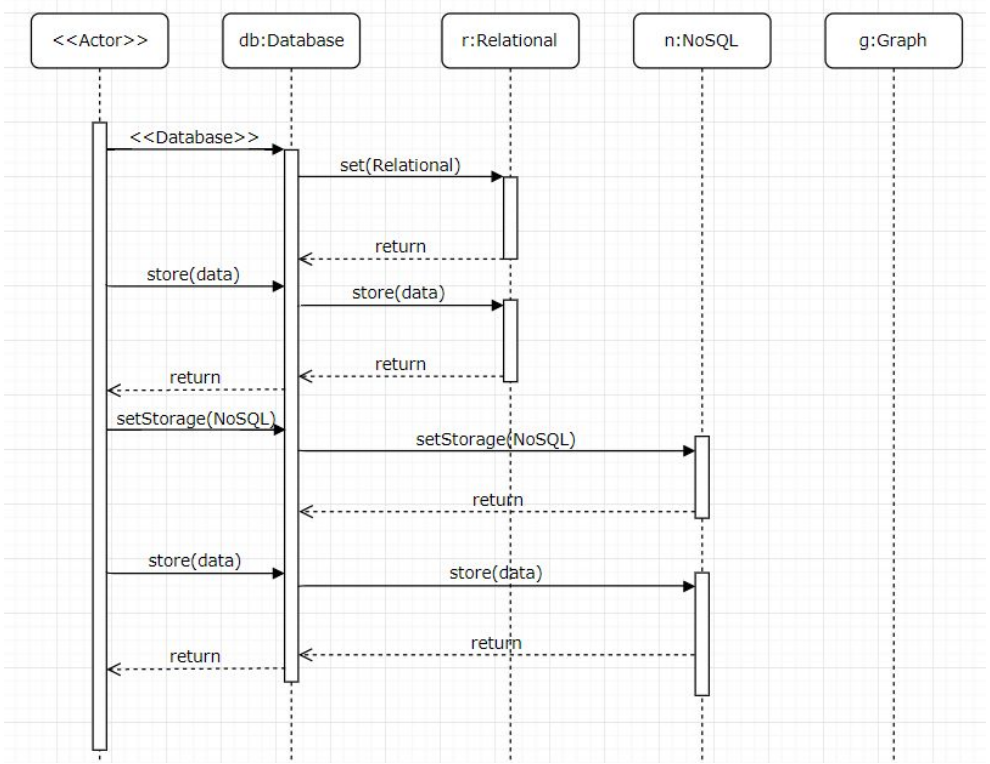
Part A) Strategy Pattern UML Diagram



Part B) Strategy Pattern Sequence Diagram



Part C) Code Output

```
run:
Storing Andy with Relational table storage
Setting storage behavior to NoSQL
Storing Billy with NoSQL document storage
Setting storage behavior to Graph
Storing Carl with Graph node storage
BUILD SUCCESSFUL (total time: 0 seconds)
```

Part D) Source Code

```
public class StrategyPattern {

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) {
        //Create database, store data
        Database db = new Database(new Relational());
        db.store("Andy");

        //Change database to NoSQL
        db.setStorage(new NoSQL());
        db.store("Billy");

        //Change database to Graph
        db.setStorage(new Graph());
        db.store("Carl");
    }
}

//Database main class
class Database{
    private StorageBehavior storage;

    public Database(StorageBehavior sb){
        storage = sb;
    }

    //Pass store to storage variable
    public void store(String data){
        storage.store(data);
```

```
    }

    //Change storage method
    public void setStorage(StorageBehavior sb){
        storage = sb;
        System.out.println("Setting storage behavior to "+sb.getName());
    }
}

class Relational implements StorageBehavior{

    @Override
    public void store(String data) {
        System.out.println("Storing "+data+" with Relational table storage");
    }

    @Override
    public String getName() {
        return "Relational";
    }
}

class NoSQL implements StorageBehavior{

    @Override
    public void store(String data) {
        System.out.println("Storing "+data+" with NoSQL document storage");
    }

    @Override
    public String getName() {
        return "NoSQL";
    }
}

class Graph implements StorageBehavior{

    @Override
    public void store(String data) {
        System.out.println("Storing "+data+" with Graph node storage");
    }

    @Override
```

```
    public String getName() {
        return "Graph";
    }
}

//Storage interface
interface StorageBehavior{
    void store(String data);
    String getName();
}
```