**Memento Pattern Example: Memento**

**Class: Originator**

**package** memento;

**class** Originator {

**private** String state;

**public** **void** set(String state) {

System.***out***.println("Originator: Setting state to " + state);

**this**.state = state;

}

**public** Memento saveToMemento() {

System.***out***.println("Originator: Saving to Memento.");

**return** **new** Memento(state);

}

**public** **void** restoreFromMemento(Memento m) {

state = m.getSavedState();

System.***out***.println("Originator: State after restoring from Memento: " + state);

}

}

**Class: Memento**

**package** memento;

**import** java.util.\*;

**class** Memento {

**private** String state;

**public** Memento(String stateToSave) {

state = stateToSave;

}

**public** String getSavedState() {

**return** state;

}

}

**Class: CareTaker**

**package** memento;

**import** java.util.ArrayList;

**class** Caretaker {

**private** ArrayList<Memento> savedStates = **new** ArrayList<Memento>();

**public** **void** addMemento(Memento m) {

savedStates.add(m);

}

**public** Memento getMemento(**int** index) {

**return** savedStates.get(index);

}

}

**Class: MementoExample**

**package** memento2;

**class** MementoExample {

**public** **static** **void** main(String[] args) {

Originator originator = **new** Originator();

Caretaker caretaker = **new** Caretaker();

originator.set("State1");

originator.set("State2");

caretaker.addMemento(originator.saveToMemento());

originator.set("State3");

caretaker.addMemento(originator.saveToMemento());

originator.set("State4");

originator.restoreFromMemento(caretaker.getMemento(1));

}

}

Result:

Originator: Setting state to State1

Originator: Setting state to State2

Originator: Saving to Memento.

Originator: Setting state to State3

Originator: Saving to Memento.

Originator: Setting state to State4

Originator: State after restoring from Memento: State3