Technology Group

Complexity

Simplified

Functional Programming

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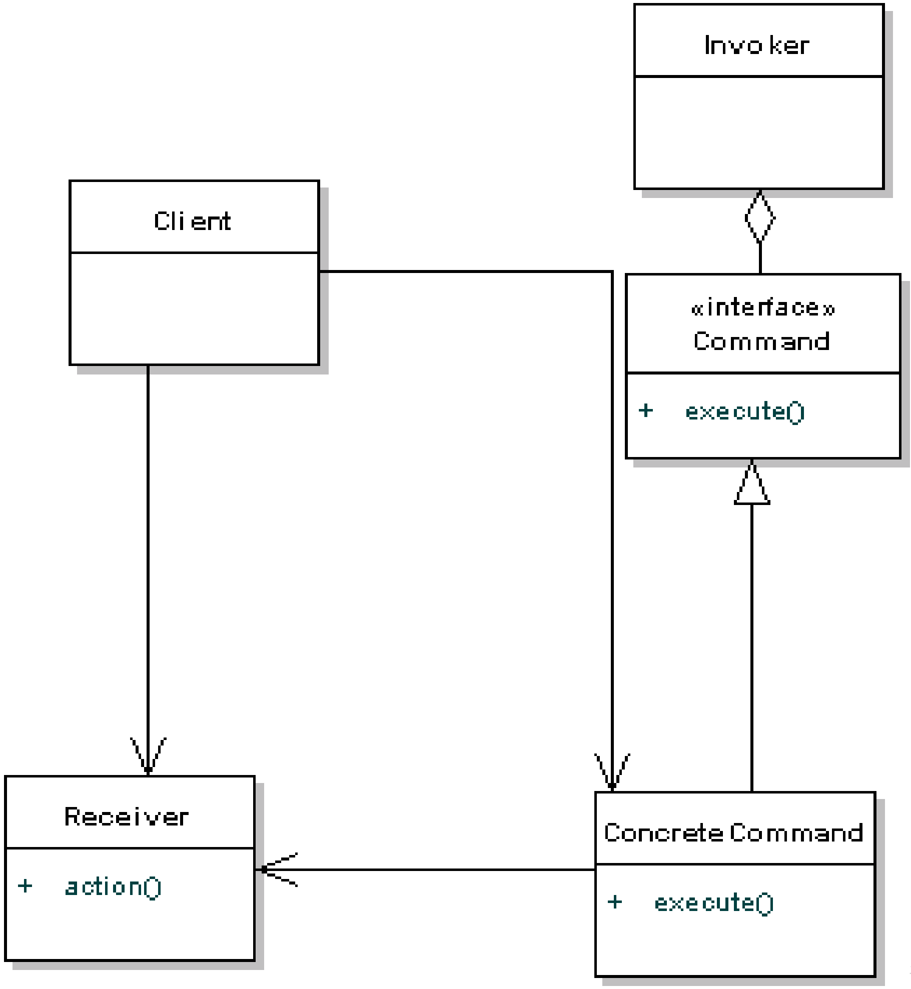
Agenda

- 5-6 sessions
- Not about glamourous things
  - 99.9999999% availability!
  - 5 times code reduction and also productivity!
  - 10-11 times performance achievement!
  - Drastic drop in defects!
- Thought process! (OrgChart!)

Command pattern



Story

- **Evil king Java.**
- **His quest for world-wide verb stamp-outage.**

(Beginning with the verb "to stamp out", which is being replaced by a call to VerbEliminatorFactory.createVerbEliminator(currentContext).operate() . But that's getting waaaaay ahead of ourselves...
)

Use case

- Taking out the garbage. As in, "Johnny, take out that garbage! It's overflowing!“
- Probably we all will think about the use case as follows

  get the garbage bag from under the sink

  carry it out to the garage

  dump it in the garbage can

  walk back inside

  wash your hands

  plop back down on the couch

  resume playing your video game (or whatever you were doing)

Use case - Contd

- The Elaboration is language independent
- Our thoughts always have verbs/actions
    - We live
    - We breathe
    - We cry
    - We laugh
- We being living beings like freedom and like to act!
- Rocks are not free!!
- Freedom = ability to do things!
- Our thought are also filled with Nouns. We eat nouns, we buy nouns.
- Nouns are things! (Table, chair, blackboard)
- Changes happening to Noun make them interesting.
- Changes require action!!
- Nouns are everywhere but life is constant change and constant interest is in verbs!

Use case - Contd

- *Hence first word in our use case elaboration was always a verb!*

get the garbage bag from under the sink

carry it out to the garage

dump it in the garbage can

walk back inside

wash your hands

plop back down on the couch

resume playing your video game (or whatever you were doing)

- Won't it be strange if suddenly decide not to use verbs!

Lets hear the story about Evil King!

The Kingdom of Nouns!

- King Java rules with silicon fist.
- People are not allowed the way normal human being thinks!
- Nouns are most important citizens by order of King himself!
- Noun parade around looking distinguished in their showy finery, which is provided by the Adjectives
- Adjectives are not as important as Nouns. But they are lucky not to be verbs!
- Verbs are slaves. They are owned by Nouns!
- Verbs have to do all the chores and manual work in the Kingdom.
- Verbs can’t roam around freely in the Kingdom!
- If at all they have to be seen in public! They must be “escorted” all time by Noun! (Employee.dosomework())
- “escort” is a verb which needs to be “procured” by VerbEscorter to “facilitate” escorting!

Execution! (command pattern!)

- King Java in consultation with “Sun” god!
- At times has threatened to banish all verbs!!
- Except for one called “execute”.
- “execute” and its cousins “run”, “start”, “go” can perform work of any verb by replacing verb with appropriate Executioner.execute().
  - Need to wait – Waiter.execute()
  - Brush your teeth - ToothBrusher(myTeeth).go() – generic
- In more patriotic corners there is no sign of verbs!
- But if one looks more closely, the secret is soon revealed: Nouns can rename their execute() Verb after themselves without changing its character in the slightest
  - FieldTiller till() // execute is replace by constructor
  - ChamberPotEmptier empty() // execute is replace by constructor
  - RegistrationManager register() // execute is replace by constructor

Neighboring kingdom!

- Taking out trash is simple! The way we think in english!
- They can mix and match Noun and Verbs – whatever makes sense in carrying out business!
- There is rarely a need to create wrapper Noun to do some “action”!
- They don’t have GarbageDisposalStrategy, GarbageDisposalDestinationLocator, PostGarbageActionCallback
- They just use verb take_out_garbage() to work on lying around noun to do a job!
- Neighboring kingdom also provide mechanism to create Nouns when the need arises!

Are Javalanders happy?

- They are very happy!! And they recite the famous cautionary tale!

For the lack of a nail,

```
throw new HorseshoeNailNotFoundException("no nails!");
```

For the lack of a horseshoe,

```
EquestrianDoctor.getLocalInstance().getHorseDispatcher().shoot();
```

For the lack of a horse,

```
RidersGuild.getRiderNotificationSubscriberList().getBroadcaster().run
(
new BroadcastMessage(StableFactory.getNullHorseInstance()));
```

Are Javalanders happy?

For the lack of a battle,

```
try {
synchronized(BattleInformationRouterLock.getLockInstance()) {
BattleInformationRouterLock.getLockInstance().wait();
}
} catch (InterruptedException ix) {
if (BattleSessionManager.getBattleStatus(
BattleResource.getLocalizedBattleResource(Locale.getDefault()),
BattleContext.createContext(
Kingdom.getMasterBattleCoordinatorInstance(
new TweedleBeetlePuddlePaddleBattle()).populate(
RegionManager.getArmpitProvince(Armpit.LEFTMOST)))) ==
BattleStatus.LOST) {
if (LOGGER.isLoggable(Level.TOTALLY_SCREWED)) {
LOGGER.logScrewage(BattleLogger.createBattleLogMessage(
BattleStatusFormatter.format(BattleStatus.LOST_WAR,
Locale.getDefault())));
```

Are Javalanders happy?

For the lack of a message,

```
((BattleNotificationSender)
BattleResourceMediator.getMediatorInstance().getResource(
BattleParticipant.PROXY_PARTICIPANT,
BattleResource.BATTLE_NOTIFICATION_SENDER)).sendNotification(
((BattleNotificationBuilder)
(BattleResourceMediator.getMediatorInstance().getResource(
BattleOrganizer.getBattleParticipant(Battle.Participant.GOOD_GUYS)
,
BattleResource.BATTLE_NOTIFICATION_BUILDER))).buildNotification(
BattleOrganizer.getBattleState(BattleResult.BATTLE_LOST),
BattleManager.getChainOfCommand().getCommandChainNotifier()));
```

Are Javalanders happy?

For the lack of a message,

```
((BattleNotificationSender)
BattleResourceMediator.getMediatorInstance().getResource(
BattleParticipant.PROXY_PARTICIPANT,
BattleResource.BATTLE_NOTIFICATION_SENDER)).sendNotificatio
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on(
BattleOrganizer.getBattleState(BattleResult.BATTLE_LOST),
BattleManager.getChainOfCommand().getCommandChainNotifier()));
```

Are Javalanders happy?

For the lack of a war,

new ServiceExecutionJoinPoint(

DistributedQueryAnalyzer.forwardQueryResult(

NotificationSchemaManager.getAbstractSchemaMapper(

new PublishSubscribeNotificationSchema()).getSchemaProxy().

executePublishSubscribeQueryPlan(

NotificationSchema.ALERT,

new NotificationSchemaPriority(SchemaPriority.MAX_PRIORITY),

new PublisherMessage(MessageFactory.getAbstractMessage(

MessageType.WRITTEN,

new

MessageTransport(MessageTransportType.WOUNDED_SURVIVOR)

,

…

…

All for the lack of a horseshoe nail

Achievements of Javaworld!

- Architecture is held in high esteem by King Java.
- Architecture is made of things!
- One of our first instincts as human beings is to find shelter from the elements; the stronger the shelter, the safer we feel
- In Javaland, there are many strong things to make the citizens feel safe.
- They marvel at the massive architectural creations and think "this must be a strong design”
- This feeling is reinforced when they try to make any changes to the structure; the architectural strength then becomes daunting enough that they feel *nobody* could bring this structure down.
- Javaland is nicely organized: you'll find every noun in its proper place
- Javalanders are bursting in pride

  StateManager.getConsiderationSetter("Noun Oriented Thinking", State.HARMFUL).run()

Any Questions?

Thank you!