



## Dialog

- << final >> ACTION\_CHANNEL: String = "ui"
- << final >> CHANNEL\_SWING: String = "swing"
- << final >> CHANNEL\_NEW\_SWING: String = "newswing"
- 
- << final >> CHANNEL\_TEXT: String = "text"
- + UI: Dialog
- backend: InteractionDriver

- + open(menu: Menu): void
- + fill(form: Form): void
- + render(title: String, text: String): void
- + close(): void

## << interface >>

### InteractionDriver

- + open(menu: Menu): void
- + fill(form: Form): void
- + render(title: String, text: String): void
- + close(): void

## Display

- ui: Dialog
- title: String = ""
- text: String Builder

- + add(toAdd: Object): Display
- + addAll(items: Collection<?>): Display
- + addLine(toAdd: Object): Display
- + addNewLine(toAdd: Object, force: boolean): Display
- + << final >> display(): void
- + << final >> displayText(): void
- + popup(toPop: Collection<?>): void
- + clear(): void
- + popup(toPop: Object): void

<<abstract>>  
Command

- \_last: boolean  
- \_title: String  
#<<final>> - receiver: Receiver  
# - valid: Predicate <Receiver>  
- <<final>> - form: Form  
#<<final>> - display: Display

+ isValid(): boolean  
+ addBooleanField(Key: String, prompt: String): void  
+ addRealField(Key: String, prompt: String): void  
+ addIntegerField(Key: String, prompt: String): void  
+ addStringField(Key: String, prompt: String): void  
+ addOptionField(Key: String, prompt: String, options: String[]): void  
+ booleanField(Key: String): boolean  
+ realField(Key: String): Double  
+ integerField(Key: String): Integer  
+ stringField(Key: String): String  
+ optionField(Key: String): String  
+<<final>> performCommand(): void  
#<<abstract>> execute(): void

Menu

- \_ui: Dialog  
- \_title: String  
- \_commands: Command <?>[]  
+ size(): int  
+ entry(m: int): Command <?>  
+ open(): Void

DoOpenMenu

#<<final>> execute(): void

<<interface>>  
Message

operationFailed(error: String): String

CommandException

- <<final>> serialVersionUID: long = 20207015  
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## Form

- \_ui: Dialog  
- \_title: String  
- fields: Map<String, Field<?>>

+ entries(): Collection<Field<?>>  
+ field(Key: String, type: String): Field<?>  
- add(Key: String, im: Field<?>): void  
+ add Boolean Field(Key: String, label: String): void  
+ add String Field(Key: String, label: String): void  
+ add Real Field(Key: String, label: String): void  
+ add Integer Field(Key: String, label: String): void  
+ add Option Field(Key: String, label: String, options: String[]): void  
\* - get(Key: String, type: String): Object  
+ boolean Field(Key: String): Boolean  
+ String Field(Key: String): String  
+ option Field(Key: String): String  
+ real Field(Key: String): Double  
+ integer Field(Key: String): Integer  
+ parse(): Form  
+ parse(clean: boolean): Form  
+ clear(): void  
+ confirm(prompt: String): Boolean  
+ request Integer(prompt: String): Integer  
+ request Real(prompt: String): Double  
+ request String(prompt: String): String  
+ request Option(prompt: String, options: String[]): String

## <<Abstract>> Field

- \_prompt: String  
- \_clean: boolean  
# \_value: Type  
+ set(value: Type): void  
+ clear(): void  
# dirty(): void  
+ isReadOnly(): Boolean  
+ <<abstract>> parse(im: String): Boolean

## Field Boolean

- <<final>> BOOLEAN\_WORD\_YES: String = "yes"  
- <<final>> BOOLEAN\_WORD\_NO: String = "no"  
- <<final>> BOOLEAN\_CHAR\_YES: Char = "y"  
- <<final>> BOOLEAN\_CHAR\_NO: Char = "n"  
+ parse(im: String): Boolean

## Form Exception

<<final>> void VERSION\_USED: long = 202010272736L

## <<interface>> Message

~ keyAlreadyExists(form: String, key: String): String  
~ formNotField(form: String): String  
~ keyNotFound(form: String, key: String): String  
~ typeMismatch(form: String, key: String, actualType: String, requestedType: String): String

## Field Option

- \_options: String[]  
+ parse(im: String): Boolean

## Field Integer

+ parse(im: String): Boolean

## Field Real

+ parse(im: String): Boolean

## Field String

+ parse(im: String): Boolean

## Field None

+ parse(im: String): Boolean  
+ isReadOnly(): Boolean

## Text Interaction

- `_in`: Buffered Reader
- `_out`: PrintStream
- `_log`: PrintStream
- `_writeInput`: boolean

- + `close()`: void
- + `open(fileName: Name)`: void
- + `fill(form: Form)`: void
- + `readers(title: String, text: String)`: void
- + `readString(prompt: String): String`
- + `readInteger(prompt: String): Integer`

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## Composite PrintStream

- `_stream`: Collection <PrintStream>
- `_write`: boolean = false

~~no @final~~  
~~no @final~~

~~no @final~~

`~ << final >> add(p2: PrintStream) void`

Exceptions and Interfaces have been omitted <sup>for</sup> ~~being~~ being irrelevant to the diagram (repetitive and doesn't add functionality).