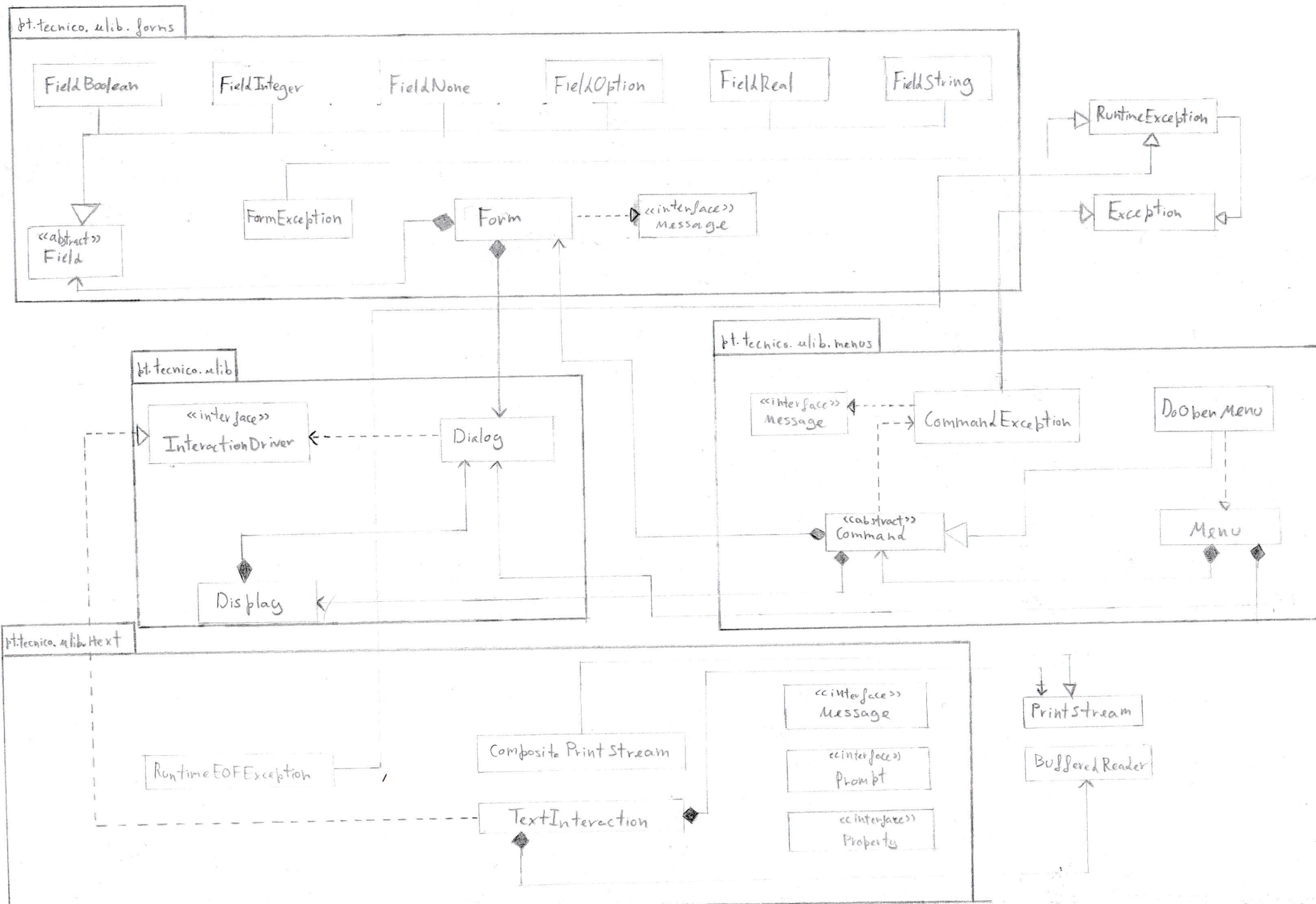Declaro por minha honra que este diagrama foi realizado apenas pelos elementos que constituem o grupo de projeto: Bruno Silva

pt.tecnico.ulib.forms
- FieldBoolean
- FieldInteger
- FieldNone
- FieldOption
- FieldReal
- FieldString
- «abstract» Field
- FormException
- Form
- «interface» Message
- RuntimeException
- Exception

pt.tecnico.ulib
- «interface» InteractionDriver
- Dialog
- Display

pt.tecnico.ulib.menus
- «interface» Message
- CommandException
- DoOpenMenu
- «abstract» Command
- Menu

pt.tecnico.ulib.text
- RuntimeEOFException
- Composite PrintStream
- «interface» Message
- «interface» Prompt
- «interface» Property
- TextInteraction
- PrintStream
- BufferedReader

«abstract» Field

- -prompt : String
- -clear : boolean
- #_value : Type

- # Field()
- # Field(prompt : String)
- + prompt() : String
- + set(value : Type) : void
- + value() : Type
- + clear() : void
- # dirty() : void
- + cleared() : boolean
- + isReadOnly() : boolean
- + «abstract» parse(in : String) : boolean

FieldBoolean

- - «final» BOOLEAN_WORD_YES: String = "Sin"
- - «final» BOOLEAN_WORD_NO: String = "nao"
- - «final» BOOLEAN_CHAR_YES: String = 's'
- - «final» BOOLEAN_CHAR_NO: char = 'n'

- ~ FieldBoolean(prompt: String)
- + parse(in: String): boolean

FieldInteger

- ~ FieldInteger(prompt: String)
- + parse(in: String): boolean

FieldNone

- ~ FieldNone(prompt: String)
- + parse(in: String): boolean
- + isReadOnly(): boolean

Dialog

- - «final» ACTION_CHANEL: String = "ui"
- - «final» CHANEL_SWING: String= "swing"
- - «final» CHANEL_NEW_SWING: String= "newswing"
- - «final» CHANEL_TEXT: String = "text"
- + UI: Dialog
- - _backend: InteractionDriver

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

Field Option

- -_options : String[]

- ~ FieldOption(prompt: String, options: String[])
- + parse(in: String): boolean

Menu

- -_ui : Dialog
- -_title : String
- -_commands : Command<?>[]

- + Menu(ui: Dialog, title: String, commands: Command<?>...
- + menu(title: String, commands: Command<?>...
- + size(): int
- + entry(n: int): Command<?>
- + open(): void

«interface» InteractionDriver

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

«interface» Message

- + operationFailed(error: String): String

Field Real

- ~ FieldReal(prompt: String)
- + parse(in: String): boolean

Field String

- ~ FieldString(prompt: String)
- + parse(in: String): boolean

DoOpenMenu

- + DoOpenMenu(label: String, reciever: Menu)
- # «final» execute(): void

«abstract» Command <Reciever>

- -_last : boolean
- -_title : String
- #_reciever : Reciever
- #_valid : Predicate<Reciever>
- - «final» _form: Form
- #«final» _display: Display

- + Command(last: boolean, title: String
- + Command(last: boolean, title: String, reciever: Reciever)
- + Command(last: boolean, title: String, reciever: Reciever, valid: Predicate<Reciever>)
- + Command(title: String, reciever: Reciever)
- + Command(title: String, reciever: Reciever, valid: Predicate<Reciever>)
- + 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 throws CommandException

Form

```
- _mi: Dialog
- _title: String
- _fields: Map<String, Field<?>>
```
```
+ Form()
+ Form(title: String)
+ Form(mi: Dialog, title: String)
+ addBooleanField(key: String, label: String): void
+ addStringField(key: String, label: String): void
+ addRealField(key: String, label: String): void
+ addIntegerField(key: String, label: String): void
+ addOptionField(key: String, label: String, option: String...): void
+ parse(): Form
+ parse(clear: boolean): Form
+ clear(): void
+ confirm(prompt: String): Boolean
+ requestInteger(prompt: String): Integer
+ requestReal(prompt: String): Double
+ requestString(prompt: String): String
+ requestOption(prompt: String, options: String...): String
```

Display

```
- _mi: Dialog
- _title: String = ""
- _text: StringBuilder
```
```
+ Display()
+ Display(title: String)
+ Display(mi: Dialog, title: String)
+ add(toAdd: Object): Display
+ addAll(items: Collection<?>): Display
+ addLine(toAdd: Object): Display
+ addNewLine(toAdd: Object, force: boolean): Display
+ display(): void
+ displayText(): void
+ popup(toPop: Object): void
+ popup(toPop: Collection<?>): void
+ clear(): void
```

Form Exception

```
- SerialVersionUID: long
```
```
+ FormException(msg: String)
```

RuntimeEOFException

```
- SerialVersionUID: long
```
```
+ RuntimeEOFException()
+ RuntimeEOFException(msg: String)
```

Command Exception «abstract»

```
- SerialVersionUID: long
```
```
+ CommandException(msg: String)
+ CommandException(msg: String, throwable: Throwable)
```

«interface» Prompt

```
+ option(): String
+ exit(): String
```

«interface» Property

```
+ WRITE_INPUT: String
+ BOTH_CHANNELS: String
+ INPUT_CHANNEL: String
+ OUTPUT_CHANNEL: String
+ LOG_CHANNEL: String
```

«interface» Message

```
+ keyAlreadyExists(form: String, key: String): String
+ formNotFilled(form: String): String
+ keyNotFound(form: String, key: String): String
+ typeMismatch(form: String, key: String, actualType: String, requestedType: String): String
```

Text Interaction

```
- _in: BufferedReader
- _out: PrintStream
- _log: PrintStream
- _writeInput: boolean
```
```
+ TextInteraction()
+ close(): void
+ open(menu: Menu): void
+ fill(form: Form): void
+ render(title: String, text: String): void
- readString(prompt: String): String
- readInteger(prompt: String): int
```

Composite PrintStream

```
- _streams : Collection < PrintStream >
- _error : boolean
```

```
+ CompositePrintStream ()
+ CompositePrintStream ( printStreams : printStream ... )
+ add ( ps : PrintStream ) : void
+ checkError () : boolean
+ close() : void
+ flush() : void
+ print ( b : boolean ) : void
+ print ( c : char ) : void
+ print ( c : char [ ] ) : void
+ print ( d : double ) : void
+ print ( f : float ) : void
+ print ( i : int ) : void
+ print ( l : long ) : void
+ print ( o : Object ) : void
+ print ( s : String ) : void
+ println ( b : boolean ) : void
+ println ( c : char ) : void
+ println ( c : char [ ] ) : void
+ println ( d : double ) : void
+ println ( f : float ) : void
+ println ( i : int ) : void
+ println ( l : long ) : void
+ println ( o : Object ) : void
+ println ( s : String ) : void
+ write ( buf : byte [ ] , off : int , len : int ) : void
+ write ( b : int ) : void
+ write ( b : byte [ ] ) : void
# setError () : void
```

<<interface>>
Message

```
+ invalidOperation ( error : String ) : String
+ invalidOption () : String
+ errorEOF ( e : EOFException ) : String
+ errorIO ( ioe : IOException ) : String
+ errorInvalidNumber ( e : NumberFormatException ) : String
+ errorREOF ( e : RuntimeEOFException ) : String
+ inputError ( e : FileNotFoundException ) : String
+ errorClosingInput ( e : IOException ) : String
+ endOfInput () : String
+ outputError ( e : FileNotFoundException ) : String
+ logError ( e : FileNotFoundException ) : String
```