## CommandFactoryI + virtual std::unique \_ptr< Commandl > MakeOpenFile Command(std::string file \_path)=0 + virtual std::unique ptr< CommandI > MakeCreate FileCommand()=0 + virtual std::unique \_ptr< Commandl > MakeDelete ElementCommand(sdf::ElementPtr element\_to\_delete)=0 + virtual std::unique ptr< Commandl > MakeAddElement Command(sdf::ElementPtr parent \_element, sdf::ElementPtr new \_element)=0 + virtual std::unique \_ptr< Commandl > MakeUndoCommand()=0 + virtual std::unique \_ptr< Commandl > MakeRedoCommand()=0 + virtual std::unique ptr< CommandI > MakeSaveFile Command()=0+ virtual std::unique ptr < CommandI > MakeModify AttributeCommand(sdf::ParamPtr attribute\_to\_modify, std::string new\_value)=0 + virtual std::unique ptr< Commandl > MakeModify AttributeCommand(sdf::ParamPtr attribute\_to\_modify, bool new value)= $\overline{0}$ + virtual std::unique ptr< CommandI > MakeModify ElementCommand(sdf::ElementPtr element\_to\_modify, std::string

- new\_value)=0 and 7 more... virtual void Initialize (std::shared\_ptr< GUII
  > gui, std::shared\_ptr
  < SDFormatParserI > sdformatParser,
  - std::shared\_ptr< ModelViewerl > model\_viewer)=0

CommandFactory

std::shared\_ptr< SDFormat Parserl > sdformatParser

std::shared\_ptr< GUII

> gui

std::shared ptr< ModelViewer I > model\_viewer std::stack < std::unique

\_ptr< Commandl > > undo

- commands stack std::stack< std::unique \_ptr< Commandl > > redo
- commands\_stack + CommandFactory(std
- ::shared\_ptr< GUII > gui, std::shared\_ptr < SDFormatParserl > sdformat
- Parser, std::shared\_ptr< ModelViewer I > model\_viewer) std::unique Command I > Make Open Model Viewer Command
- () override + std::unique\_ptr< Command I > MakeCloseModelViewerCommand
- () override void Initialize(std
- ::shared\_ptr< GUII > gui, std::shared\_ptr < SDFormatParserl > sdformat
- I > model\_viewer) std::unique\_ptr< Command I > MakeOpenFileCommand (std::string file path)

Parser, std::shared\_ptr< ModelViewer

override std::unique\_ptr< Command I > MakeDeleteElementCommand

(sdf::ElementPtr element to

- \_delete) override std::unique ptr< Command I > MakeAddElementCommand
- (sdf::ElementPtr parent element, sdf::ElementPtr new\_element) override
- std::unique\_ptr< Command I > MakeSaveFileCommand () override std::unique\_ptr< Command
- I > MakeRenderModelCommand (bool render collisions in \_model\_viewer) override
- std::unique\_ptr< Command I > MakeCreateFileCommand () override std::unique\_ptr< Command
- I > MakeUndoCommand() override std::unique\_ptr< Command I > MakeRedoCommand()
  - override std::unique\_ptr< Command I > MakeModifyAttributeCommand (sdf::ParamPtr attribute\_to \_modify, std::string new\_value)
- override and 9 more...