UML CLASS DIAGRAM

MainApp

+ start(Stage)
+ main(String[])

↓ loads

MainController

- imageService: ImageService
- items: ObservableList<ImageItem>

+ initialize(): void
+ onAddImages(): void
+ onConvert(): void
+ showImageDetails(item: ImageItem): void

↓uses

ImageService

+ addImage(File): ImageItem
+ convertImage(...): File
- getFileExtension(...)
- getBaseName(...)

↓creates

ImageItem

- file: File
- metadata: ImageMetadata
- thumbnail: Image

+ getFile()
+ getMetadata()
+ getThumbnail()

↓has

ImageMetadata

- width: int
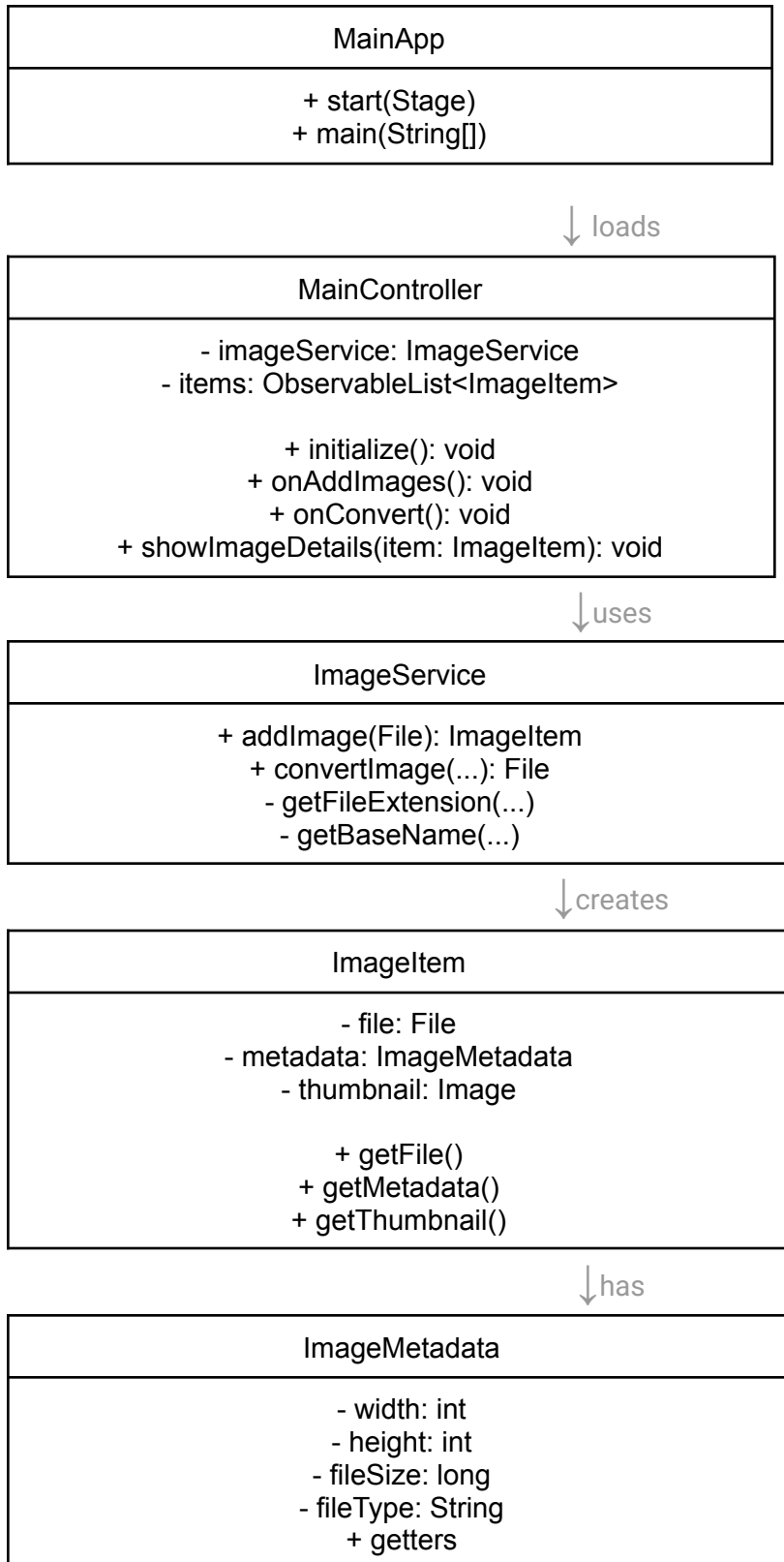- height: int
- fileSize: long
- fileType: String
+ getters

Interface

ImageConverter
+ getTargetFormatName() + getFileExtension() + convert(BufferedImage, File)

↓ implements (Strategy Pattern) ↓   (can add more later)

JpegConverter	PngConverter
+ getTargetFormatName() + getFileExtension() + convert(...)	+ getTargetFormatName() + getFileExtension() + convert(...)

ImageLoadException
extends Exception thrown when loading fails

ImageConversionException
extends Exception thrown during conversion