Model Report

Starter Class Diagram

Version 1.0 • Proposed

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Starter Class Diagram

Package in package 'Model'

Starter Class Diagram
Version 1.0 Phase 1.0 Proposed
User created on 2019-04-16. Last modified 2018-02-07

DiagrammeDeClasses_FileChecksumCalculator diagram

Class diagram in package 'Starter Class Diagram'

DiagrammeDeClasses_FileChecksumCalculator
Version 1.0
User created on 2019-04-16. Last modified 2019-04-16

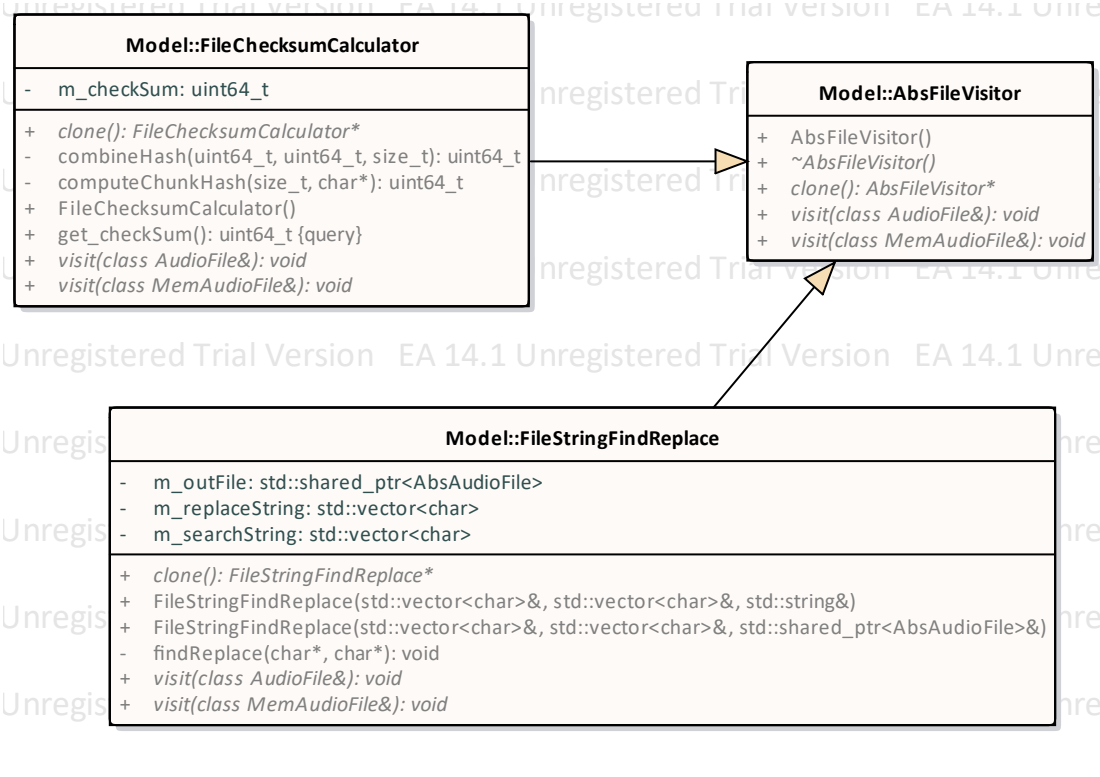

Figure 1: DiagrammeDeClasses_FileChecksumCalculator

AbsFileVisitor

Class in package 'Model'

AbsFileVisitor
Version 1.0 Phase 1.0 Proposed
User created on 2019-04-16. Last modified 2019-04-16

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from FileStringFindReplace to AbsFileVisitor

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from FileChecksumCalculator to AbsFileVisitor
[Direction is 'Source -> Destination'.]

OPERATIONS

AbsFileVisitor () : Public

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

~AbsFileVisitor () : Public

Properties:
bodyLocation = classDec
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

clone () : AbsFileVisitor* Public
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

visit (prm1 : class AudioFile&) : void Public
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

visit (prm1 : class MemAudioFile&) : void Public
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

FileChecksumCalculator

Class in package 'Model'

FileChecksumCalculator
Version 1.0 Phase 1.0 Proposed
User created on 2019-04-16. Last modified 2019-04-16

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from FileChecksumCalculator to AbsFileVisitor
[Direction is 'Source -> Destination'.]

ATTRIBUTES

m_checkSum : uint64_t Private
[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

ASSOCIATIONS

Source: Public (Class) ChecksumCommand

Target: Private m_visitor (Class) FileChecksumCalculator

OPERATIONS

clone () : FileChecksumCalculator* Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

combineHash (h1 : uint64_t , h2 : uint64_t , i : size_t) : uint64_t Private
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

computeChunkHash (chunkSize : size_t , chunkData : char*) : uint64_t Private
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

FileChecksumCalculator () : Public

Properties:
initializer = m_checkSum(0)
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

get_checkSum () : uint64_t Public

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query True . Is synchronized False.]

visit (prm1 : class AudioFile&) : void Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

visit (prm1 : class MemAudioFile&) : void Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

FileStringFindReplace

Class in package 'Model'

FileStringFindReplace
Version 1.0 Phase 1.0 Proposed
User created on 2019-04-16. Last modified 2019-04-16

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from FileStringFindReplace to AbsFileVisitor
[Direction is 'Source -> Destination'.]

ATTRIBUTES

ATTRIBUTES

m_outFile : std::shared_ptr<AbsAudioFile> Private

[Is static True. Containment is Not Specified.]

m_replaceString : std::vector<char> Private

[Is static True. Containment is Not Specified.]

m_searchString : std::vector<char> Private

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) StringFindReplaceCommand

Target: Private m_visitor (Class) FileStringFindReplace

OPERATIONS

clone () : FileStringFindReplace* Public

[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

FileStringFindReplace (sOrig : std::vector<char>& , sNew : std::vector<char>& , outFileName : std::string&) : Public

Properties:
initializer = m_searchString(sOrig),m_replaceString(sNew),m_outFile(std::make_shared<MemAudioFile>(outFileName))

[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

FileStringFindReplace (sOrig : std::vector<char>& , sNew : std::vector<char>& , outFile : std::shared_ptr<AbsAudioFile>&) : Public

Properties:
initializer = m_searchString(sOrig),m_replaceString(sNew),m_outFile(outFile)

[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

findReplace (p_beg : char* , p_end : char*) : void Private

[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

visit (prm1 : class AudioFile&) : void Public

[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

visit (prm1 : class MemAudioFile&) : void Public

[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

DiagrammeDeClasses_FileStringFindReplace diagram

Class diagram in package 'Starter Class Diagram'

DiagrammeDeClasses_FileStringFindReplace
Version 1.0
User created on 2019-04-16. Last modified 2019-04-16

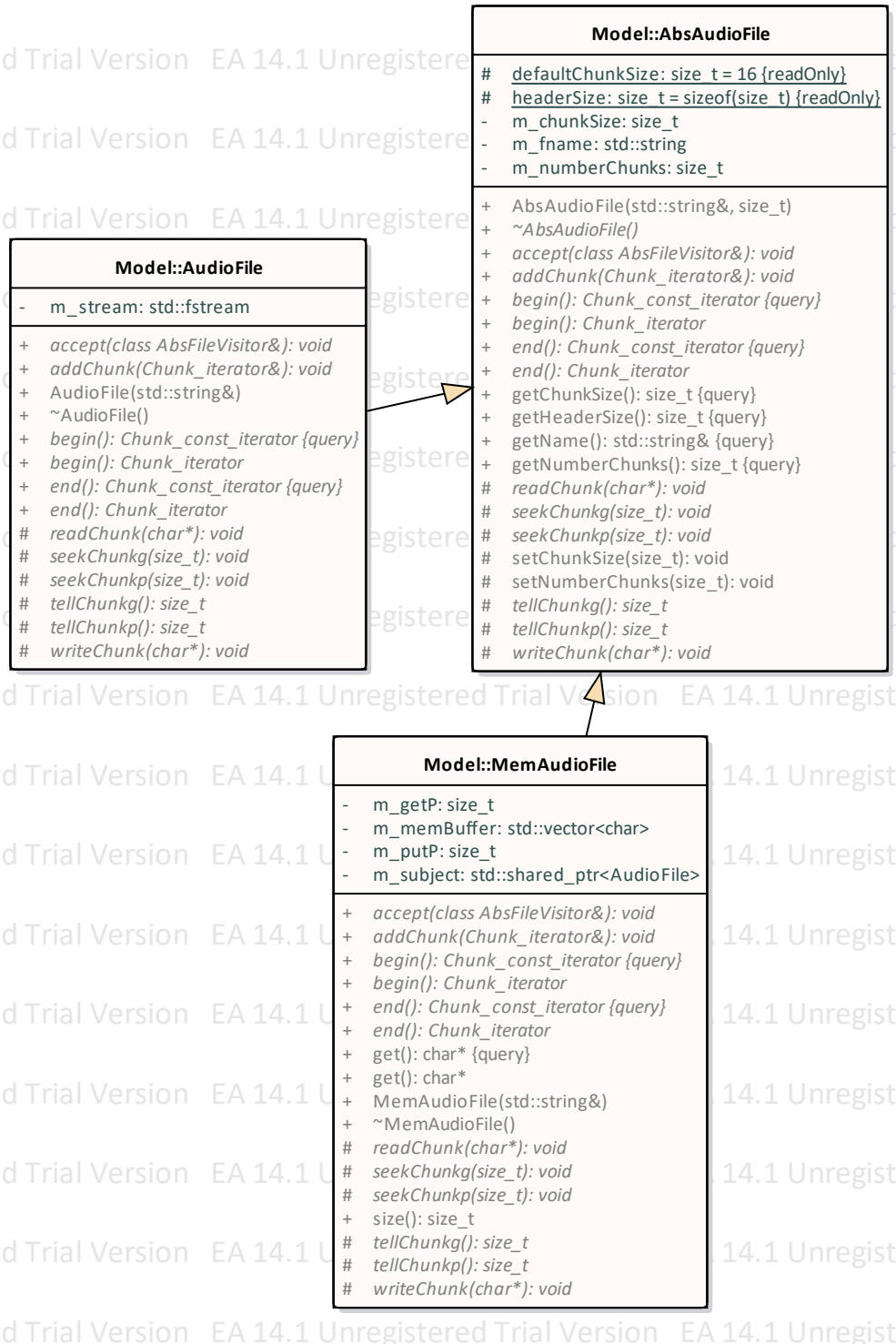

Figure 2: DiagrammeDeClasses_FileStringFindReplace

AbsAudioFile

Class in package 'Model'

AbsAudioFile
Version 1.0 Phase 1.0 Proposed
User created on 2019-04-16. Last modified 2019-04-16

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from MemAudioFile to AbsAudioFile
[Direction is 'Source -> Destination'.]

Generalization from AudioFile to AbsAudioFile
[Direction is 'Source -> Destination'.]

ATTRIBUTES

defaultChunkSize : size_t Protected Const = 16
[Is static True. Containment is Not Specified.]

headerSize : size_t Protected Const = sizeof(size_t)
[Is static True. Containment is Not Specified.]

m_chunkSize : size_t Private
[Is static True. Containment is Not Specified.]

m_fname : std::string Private
[Is static True. Containment is Not Specified.]

m_numberChunks : size_t Private
[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) Chunk_iterator_base Target: Private m_audioFile (Class) AbsAudioFile

OPERATIONS

AbsAudioFile (fname : std::string& , chunkSize : size_t) : Public

Properties:
initializer = m_fname(fname),m_chunkSize(chunkSize),m_numberChunks(0)
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

~AbsAudioFile () : Public

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

OPERATIONS

accept (v : class AbsFileVisitor&) : void Public
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

addChunk (iter : Chunk_iterator&) : void Public
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

begin () : Chunk_const_iterator Public
[Is static False. Is abstract True. Is return array False. Is query True . Is synchronized False.]

begin () : Chunk_iterator Public
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

end () : Chunk_const_iterator Public
[Is static False. Is abstract True. Is return array False. Is query True . Is synchronized False.]

end () : Chunk_iterator Public
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

getChunkSize () : size_t Public

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query True . Is synchronized False.]

getHeaderSize () : size_t Public

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query True . Is synchronized False.]

getName () : std::string& Public Const

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query True . Is synchronized False.]

getNumberChunks () : size_t Public

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query True . Is synchronized False.]

readChunk (buf : char*) : void Protected
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

seekChunkg (p : size_t) : void Protected

OPERATIONS

[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

seekChunkp (p : size_t) : void Protected
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

setChunkSize (chunkSize : size_t) : void Protected

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

setNumberChunks (numberChunks : size_t) : void Protected

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

tellChunkg () : size_t Protected
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

tellChunkp () : size_t Protected
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

writeChunk (buf : char*) : void Protected
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

AudioFile

Class in package 'Model'

AudioFile
Version 1.0 Phase 1.0 Proposed
User created on 2019-04-16. Last modified 2019-04-16

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from AudioFile to AbsAudioFile
[Direction is 'Source -> Destination'.]

ATTRIBUTES

m_stream : std::fstream Private
[Is static True. Containment is Not Specified.]

OPERATIONS

accept (v : class AbsFileVisitor&) : void Public

OPERATIONS

[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

addChunk (iter : Chunk_iterator&) : void Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

AudioFile (fname : std::string&) : Public

const size_t AbsAudioFile::defaultChunkSize;

Properties:
initializer = AbsAudioFile(fname)
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

~AudioFile () : Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

begin () : Chunk_const_iterator Public
[Is static False. Is abstract False. Is return array False. Is query True . Is synchronized False.]

begin () : Chunk_iterator Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

end () : Chunk_const_iterator Public
[Is static False. Is abstract False. Is return array False. Is query True . Is synchronized False.]

end () : Chunk_iterator Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

readChunk (buf : char*) : void Protected
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

seekChunkg (p : size_t) : void Protected
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

seekChunkp (p : size_t) : void Protected
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

tellChunkg () : size_t Protected
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

tellChunkp () : size_t Protected
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

writeChunk (buf : char*) : void Protected
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

MemAudioFile

Class in package 'Model'

MemAudioFile
Version 1.0 Phase 1.0 Proposed
User created on 2019-04-16. Last modified 2019-04-16

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from MemAudioFile to AbsAudioFile
[Direction is 'Source -> Destination'.]

ATTRIBUTES

m_getP : size_t Private
[Is static True. Containment is Not Specified.]

m_memBuffer : std::vector<char> Private
[Is static True. Containment is Not Specified.]

m_putP : size_t Private
[Is static True. Containment is Not Specified.]

m_subject : std::shared_ptr<AudioFile> Private
[Is static True. Containment is Not Specified.]

OPERATIONS

accept (v : class AbsFileVisitor&) : void Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

addChunk (iter : Chunk_iterator&) : void Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

begin () : Chunk_const_iterator Public
[Is static False. Is abstract False. Is return array False. Is query True . Is synchronized False.]

begin () : Chunk_iterator Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

end () : Chunk_const_iterator Public
[Is static False. Is abstract False. Is return array False. Is query True . Is synchronized False.]

end () : Chunk_iterator Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

OPERATIONS

get () : char* Public Const

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query True . Is synchronized False.]

get () : char* Public

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

MemAudioFile (fname : std::string&) : Public

Properties:
initializer = AbsAudioFile(fname),m_subject(std::make_shared<AudioFile>(fname)),m_memBuffer(m_subject->getNumberChunks() * m_subject->getChunkSize() + headerSize),m_putP(0),m_getP(0)
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

~MemAudioFile () : Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

readChunk (buf : char*) : void Protected
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

seekChunkg (p : size_t) : void Protected
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

seekChunkp (p : size_t) : void Protected
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

size () : size_t Public

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

tellChunkg () : size_t Protected
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

tellChunkp () : size_t Protected
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

writeChunk (buf : char*) : void Protected
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

iagrammeDeClasses_Command diagram

Class diagram in package 'Starter Class Diagram'

iagrammeDeClasses_Command
Version 1.0
User created on 2019-04-16. Last modified 2019-04-16

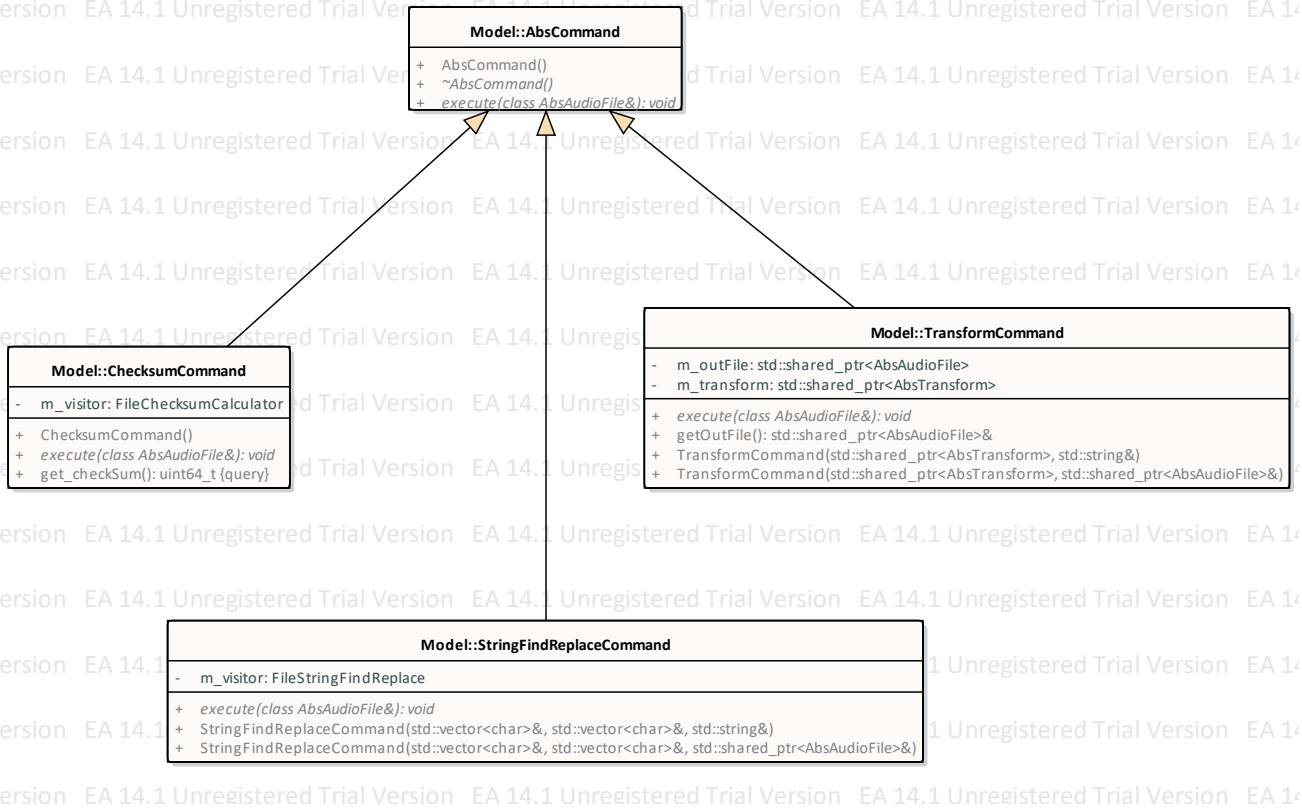

Figure 3: iagrammeDeClasses_Command

AbsCommand

Class in package 'Model'

AbsCommand
Version 1.0 Phase 1.0 Proposed
User created on 2019-04-16. Last modified 2019-04-16

INCOMING STRUCTURAL RELATIONSHIPS
Generalization from TransformCommand to AbsCommand [Direction is 'Source -> Destination'.]
Generalization from ChecksumCommand to AbsCommand [Direction is 'Source -> Destination'.]
Generalization from StringFindReplaceCommand to AbsCommand [Direction is 'Source -> Destination'.]

OPERATIONS

AbsCommand () : Public

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

~AbsCommand () : Public

Properties:
bodyLocation = classDec
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

execute (prm1 : class AbsAudioFile&) : void Public
[Is static False. Is abstract True. Is return array False. Is query False. Is synchronized False.]

ChecksumCommand

Class in package 'Model'

ChecksumCommand
Version 1.0 Phase 1.0 Proposed
User created on 2019-04-16. Last modified 2019-04-16

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from ChecksumCommand to AbsCommand
[Direction is 'Source -> Destination'.]

ATTRIBUTES

m_visitor : FileChecksumCalculator Private
[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) ChecksumCommand

Target: Private m_visitor (Class) FileChecksumCalculator

OPERATIONS

ChecksumCommand () : Public

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

OPERATIONS

execute (prm1 : class AbsAudioFile&) : void Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

get_checkSum () : uint64_t Public

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query True . Is synchronized False.]

StringFindReplaceCommand

Class in package 'Model'

StringFindReplaceCommand
Version 1.0 Phase 1.0 Proposed
User created on 2019-04-16. Last modified 2019-04-16

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from StringFindReplaceCommand to AbsCommand
[Direction is 'Source -> Destination'.]

ATTRIBUTES

m_visitor : FileStringFindReplace Private
[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) StringFindReplaceCommand

Target: Private m_visitor (Class) FileStringFindReplace

OPERATIONS

execute (prm1 : class AbsAudioFile&) : void Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

StringFindReplaceCommand (sOrig : std::vector<char>& , sNew : std::vector<char>& , outFileName : std::string&) : Public

Properties:
initializer = m_visitor(sOrig, sNew, outFileName)
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

StringFindReplaceCommand (sOrig : std::vector<char>& , sNew : std::vector<char>& , outFile : std::shared_ptr<AbsAudioFile>&) : Public

OPERATIONS

Properties:
initializer = m_visitor(sOrig, sNew, outFile)
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

TransformCommand

Class in package 'Model'

TransformCommand
Version 1.0 Phase 1.0 Proposed
User created on 2019-04-16. Last modified 2019-04-16

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from TransformCommand to AbsCommand
[Direction is 'Source -> Destination'.]

ATTRIBUTES

m_outFile : std::shared_ptr<AbsAudioFile> Private
[Is static True. Containment is Not Specified.]

m_transform : std::shared_ptr<AbsTransform> Private
[Is static True. Containment is Not Specified.]

OPERATIONS

execute (prm1 : class AbsAudioFile&) : void Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

getOutFile () : std::shared_ptr<AbsAudioFile>& Public

Properties:
bodyLocation = classDec
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

TransformCommand (t : std::shared_ptr<AbsTransform> , outFileName : std::string&) : Public

Properties:
initializer = m_transform(t),m_outFile(std::make_shared<MemAudioFile>(outFileName))
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

TransformCommand (t : std::shared_ptr<AbsTransform> , outFile : std::shared_ptr<AbsAudioFile>&) : Public

Properties:
initializer = m_transform(t),m_outFile(outFile)
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]