Research API

Summary

The research API is an interface that will communicate information from and to the sql database and the user interface of the ResearchDatabase application.

Class ResearchID

This object is used to send and retrieve information about research sources in the database from c++

variables

- id – stores the research id that will point to a source in the research table in the database.

Functions

- **ResearchID()**
- **ResearchID(const unsigned int& id)**

- ***static ResearchID generateNewSource(const QString& sourceTitle)***– generate a new research source record in the database.
- ***void setId(unsigned int newId)*** – set the research
- ***unsigned int getId() const*** - get the research id.
- ***bool isValid() const*** - check if the research id is valid record in the database.
- **void setTitle(const QString& title)** – Set the title of the source
- ***void setAuthor(const QString& author)*** – Set the author of the source
- ***void setPublicationDate(const QDate& publication_date)*** – Set the publication date of the source.
- **void setAbstraction(const QString& abstraction)** – Set the abstraction of the source.
- **void setDOI(const QString& doi) -** Set the (DOI) the Document Object Identifier of the source
- **void setURL(const QString& url)** – Set the url of the source.
- **void insertKeyword(const QString keyword)** – Create a new keyword if not already existing and attach it to the research source.
- **bool attachFile(const QString& fileName, const QByteArray& data)** – Attach a file to the source.
- **QString getTitle() const** – Get the title of the source
- **QString getAuthor() const –** Get the author of the source
- **QDate getPublicationDate() const –** Get the publication date of the source

- **QString getAbstraction() const –** Get the abstraction of the source
- **QString getDOI() const** - Get the DOI of the source
- **QString getURL() const –** Get the url of the source
- **QStringList getKeywords() const** – Get the keywords linked to the source
- **QList<FileID> getFiles() const** – Get a list of file records attached to the source
- **void destroy()** - deletes the research source and anything tied to it

Class Keyword

This object is used to send and retrieve information about keywords sources in the database from c++

variables

- id – stores the keyword_def id that will point to a keyword in the keyword_def and keywords tables in the database.

Functions

- **Keyword();**
- **Keyword(const unsigned int& id);**

- ***static unsigned int getKeywordIdByStr(const QString& keyword)*** **-** Gets the keyword_def_id from a inputed string if it exists. If not this will return 0.
- ***void setId(unsigned int newId)*** - set the keyword_def_id
- ***unsigned int getId() const*** - get the keyword_def_id.
- ***bool isValid() const*** - check if the keyword id is valid record in the database.
- **QString text() const; -** Get the text of the keyword
- ***void setAuthor(const QString& author)*** **-** Set the author of the source
- **QList<unsigned int> getResearchIds() -** Get all of the research_id's that are associated with this keyword.
- **void destroy() -** destroys the keyword and any ties it has to research

Class FileID

This object is used to send and retrieve information about files in the database from c++

variables

- **id** – stores the file id that will point to a file in the files table in the database.

Functions

- **FileID()**
- **FileID(const unsigned int& id)**

- ***void setId(const unsigned int& id)*** – set the file id
- ***unsigned int getId() const*** - get the file id.
- ***bool isValid() const*** - check if the file id is valid record in the database.
- ***QString getName()*** *const* - Get the name of the file record
- ***QByteArray getData()*** *const* - Get the data of the file
- ***unsigned int getResearchID() const*** - *G*et the research id the file is attached to.
- **void** ***destroy()***-Destroy the File From the Database.