

SearchifyEngine Documentation

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Namespace SearchifyEngine

Classes

Config

Application Constants

Utils

Static class housing a number of utility methods

Class Config

Application Constants

Inheritance

System.Object
Config

Inherited Members

System.Object.Equals(System.Object)
System.Object.Equals(System.Object, System.Object)
System.Object.GetHashCode()
System.Object.GetType()
System.Object.MemberwiseClone()
System.Object.ReferenceEquals(System.Object, System.Object)
System.Object.ToString()

Namespace: [SearchifyEngine](#)

Assembly: SearchifyEngine.dll

Syntax

```
public static class Config
```

Fields

Codec

Codec for integer compression

Declaration

```
public static readonly Codec Codec
```

Field Value

| TYPE | DESCRIPTION |
|-------|-------------|
| Codec | |

DatabaseHost

Dynamo database host

Declaration

```
public static readonly string DatabaseHost
```

Field Value

| TYPE | DESCRIPTION |
|---------------|-------------|
| System.String | |

DatabasePort

Dynamo database port

Declaration

```
public static readonly int DatabasePort
```

Field Value

| TYPE | DESCRIPTION |
|--------------|-------------|
| System.Int32 | |

Class Utils

Static class housing a number of utility methods

Inheritance

System.Object
Utils

Inherited Members

System.Object.Equals(System.Object)
System.Object.Equals(System.Object, System.Object)
System.Object.GetHashCode()
System.Object.GetType()
System.Object.MemberwiseClone()
System.Object.ReferenceEquals(System.Object, System.Object)
System.Object.ToString()

Namespace: [SearchifyEngine](#)

Assembly: SearchifyEngine.dll

Syntax

```
public static class Utils
```

Methods

CleanText(String)

Converts multiple spaces to one an strips punctuation from text, converts text to lowercase

Declaration

```
public static string CleanText(string text)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|------|------------------|
| System.String | text | any string value |

Returns

| TYPE | DESCRIPTION |
|---------------|--------------|
| System.String | cleaned text |

ToDeltaList(List<UInt32>)

Creates a list where elements are replaced by the value of the delta between each element and the previous element

Declaration

```
public static List<uint> ToDeltaList(List<uint> list)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|--|------|------------------------------|
| System.Collections.Generic.List<System.UInt32> | list | list of nonnegative integers |

Returns

| TYPE | DESCRIPTION |
|--|----------------------------|
| System.Collections.Generic.List<System.UInt32> | list of delta ulong values |

Namespace SearchifyEngine.Database

Classes

[DbClient](#)

Client library for interactions with DynamoDB

Class DbClient

Client library for interactions with DynamoDB

Inheritance

System.Object
DbClient

Inherited Members

System.Object.Equals(System.Object)
System.Object.Equals(System.Object, System.Object)
System.Object.GetHashCode()
System.Object.GetType()
System.Object.MemberwiseClone()
System.Object.ReferenceEquals(System.Object, System.Object)
System.Object.ToString()

Namespace: [SearchifyEngine.Database](#)
Assembly: SearchifyEngine.dll

Syntax

```
public static class DbClient
```

Fields

Store

[InvertedIndexDynamoDbStore](#) instance associated with the client

Declaration

```
public static InvertedIndexDynamoDbStore Store
```

Field Value

| TYPE | DESCRIPTION |
|--|-------------|
| InvertedIndexDynamoDbStore | |

Methods

CreateClient(Boolean)

Connects to DynamoDB, and instantiates [Store](#) value

Declaration

```
public static bool CreateClient(bool useLocal)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|----------------|----------|--|
| System.Boolean | useLocal | set to true if you are using dynamodblocal |

Returns

| TYPE | DESCRIPTION |
|----------------|--|
| System.Boolean | status of client creation, true for success, false for failure |

CreateTables()

Creates necessary database tables if they do not already exist

Declaration

```
public static async Task CreateTables()
```

Returns

| TYPE | DESCRIPTION |
|-----------------------------|-------------|
| System.Threading.Tasks.Task | |

GetTableDescription(String)

Provides TableDescription for table specified. If table doesn't exist, null is returned.

Declaration

```
public static async Task<TableDescription> GetTableDescription(string tableName)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|-----------|-------------|
| System.String | tableName | table name |

Returns

| TYPE | DESCRIPTION |
|---|-------------------|
| System.Threading.Tasks.Task<TableDescription> | table description |

Namespace SearchifyEngine.Indexer

Classes

[ExtractDoc](#)

Indexer Utility class for document download

[Indexer](#)

Indexer class builds and maintains internal search index

[IndexTerm](#)

Index term representation, stores file delta, frequency and positions of word

[IndexTermJsonConverter](#)

Custom converter class to aid the serialization of [IndexTerm](#) to JSON string `json = JsonConvert.SerializeObject(ReverseIndex, Formatting.None, new IndexTermJsonConverter());`

Class ExtractDoc

Indexer Utility class for document download

Inheritance

System.Object
ExtractDoc

Inherited Members

System.Object.Equals(System.Object)
System.Object.Equals(System.Object, System.Object)
System.Object.GetHashCode()
System.Object.GetType()
System.Object.MemberwiseClone()
System.Object.ReferenceEquals(System.Object, System.Object)
System.Object.ToString()

Namespace: [SearchifyEngine.Indexer](#)
Assembly: SearchifyEngine.dll

Syntax

```
public class ExtractDoc
```

Methods

Delete(String)

Deletes file at specified path if the file exists

Declaration

```
public static void Delete(string path)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|------|--------------------|
| System.String | path | absolute file path |

Extract(String)

This function downloads a document from a valid url

Declaration

```
public static string Extract(string url)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|------|--------------------|
| System.String | url | valid document url |

Returns

| TYPE | DESCRIPTION |
|---------------|---------------------------------|
| System.String | filepath to downloaded document |

Class Indexer

Indexer class builds and maintains internal search index

Inheritance

System.Object
Indexer

Inherited Members

System.Object.Equals(System.Object)
System.Object.Equals(System.Object, System.Object)
System.Object.GetHashCode()
System.Object.GetType()
System.Object.MemberwiseClone()
System.Object.ReferenceEquals(System.Object, System.Object)
System.Object.ToString()

Namespace: [SearchifyEngine.Indexer](#)
Assembly: SearchifyEngine.dll

Syntax

```
public class Indexer
```

Constructors

Indexer(IStore)

Instantiates an Indexer object

Declaration

```
public Indexer(IStore store)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|------------------------|-------|---|
| IStore | store | object that implements IStore > |

Fields

LastId

Last File ID indexed

Declaration

```
public uint LastId
```

Field Value

| TYPE | DESCRIPTION |
|---------------|-------------|
| System.UInt32 | |

Methods

GetLoadedTermList(String)

Returns array of index terms from cache. If term hasn't been cached, an empty array is returned.

Returns array of index terms from cache. If term hasn't been cached, an empty array is returned.

Declaration

```
public IndexTerm[] GetLoadedTermList(string term)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | term | term |

Returns

| TYPE | DESCRIPTION |
|-------------|----------------------|
| IndexTerm[] | array of index terms |

Index(String, UInt32)

Powerhouse function for indexing documents

Declaration

```
public async Task Index(string fileUrl, uint fileId)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|---------|---|
| System.String | fileUrl | a path or link to an indexable document |
| System.UInt32 | fileId | unique integer id for document |

Returns

| TYPE | DESCRIPTION |
|-----------------------------|-------------|
| System.Threading.Tasks.Task | |

LoadInvertedIndex(String[])

Caches terms from store

Declaration

```
public async Task LoadInvertedIndex(string[] terms)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|-----------------|-------|----------------|
| System.String[] | terms | array of terms |

Returns

| TYPE | DESCRIPTION |
|-----------------------------|-------------|
| System.Threading.Tasks.Task | |

Class IndexTerm

Index term representation, stores file delta, frequency and positions of word

Inheritance

System.Object
IndexTerm

Inherited Members

System.Object.Equals(System.Object)
System.Object.Equals(System.Object, System.Object)
System.Object.GetHashCode()
System.Object.GetType()
System.Object.MemberwiseClone()
System.Object.ReferenceEquals(System.Object, System.Object)
System.Object.ToString()

Namespace: [SearchifyEngine.Indexer](#)
Assembly: SearchifyEngine.dll

Syntax

```
public class IndexTerm
```

Constructors

IndexTerm(UInt32)

Instantiates a new IndexTerm object

Declaration

```
public IndexTerm(uint fileDelta)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|-----------|-------------|
| System.UInt32 | fileDelta | delta value |

Fields

FileDelta

File ID delta value

Declaration

```
public readonly uint FileDelta
```

Field Value

| TYPE | DESCRIPTION |
|---------------|-------------|
| System.UInt32 | |

Properties

Frequency

Number of occurrences of term in document

Number of occurrences of term in document

Declaration

```
public uint Frequency { get; }
```

Property Value

| TYPE | DESCRIPTION |
|---------------|-------------|
| System.UInt32 | |

Positions

Array of positions where term can be found in the document

Declaration

```
public uint[] Positions { get; }
```

Property Value

| TYPE | DESCRIPTION |
|-----------------|-------------|
| System.UInt32[] | |

Methods

AddPositions(UInt32[])

Sets positions for term

Declaration

```
public void AddPositions(uint[] positions)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|-----------------|-----------|--|
| System.UInt32[] | positions | array of positions in delta uint array |

Class IndexTermJsonConverter

Custom converter class to aid the serialization of [IndexTerm](#) to JSON string `json = JsonConvert.SerializeObject(ReverseIndex, Formatting.None, new IndexTermJsonConverter());`

Inheritance

System.Object
IndexTermJsonConverter

Namespace: [SearchifyEngine.Indexer](#)

Assembly: SearchifyEngine.dll

Syntax

```
public class IndexTermJsonConverter : JsonConverter<IndexTerm>
```

Methods

ReadJson(JsonReader, Type, IndexTerm, Boolean, JsonSerializer)

Declaration

```
public override IndexTerm ReadJson(JsonReader reader, Type objectType, IndexTerm existingValue, bool hasExistingValue, JsonSerializer serializer)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------------------|------------------|-------------|
| JsonReader | reader | |
| System.Type | objectType | |
| IndexTerm | existingValue | |
| System.Boolean | hasExistingValue | |
| JsonSerializer | serializer | |

Returns

| TYPE | DESCRIPTION |
|---------------------------|-------------|
| IndexTerm | |

WriteJson(JsonWriter, IndexTerm, JsonSerializer)

Declaration

```
public override void WriteJson(JsonWriter writer, IndexTerm term, JsonSerializer serializer)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------------------|--------|-------------|
| JsonWriter | writer | |
| IndexTerm | term | |
| | | |

| TYPE | NAME | DESCRIPTION |
|----------------|------------|-------------|
| JsonSerializer | serializer | |

Namespace SearchifyEngine.Ranker

Classes

Ranker

Maintains and calculates document scores for a query

Class Ranker

Maintains and calculates document scores for a query

Inheritance

System.Object
Ranker

Inherited Members

System.Object.Equals(System.Object)
System.Object.Equals(System.Object, System.Object)
System.Object.GetHashCode()
System.Object.GetType()
System.Object.MemberwiseClone()
System.Object.ReferenceEquals(System.Object, System.Object)
System.Object.ToString()

Namespace: [SearchifyEngine.Ranker](#)
Assembly: SearchifyEngine.dll

Syntax

```
public class Ranker
```

Constructors

Ranker(Indexer)

Instantiates a ranker object

Declaration

```
public Ranker(Indexer indexer)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|-------------------------|---------|--|
| Indexer | indexer | an instance of Indexer |

Methods

RankedResultsList()

Returns an ordered array of file ids based on scores

Declaration

```
public uint[] RankedResultsList()
```

Returns

| TYPE | DESCRIPTION |
|-----------------|------------------|
| System.UInt32[] | list of file ids |

Score(UInt32, List<Pointer>)

Computes and stores file score

Declaration

```
public void Score(uint fieldId, List<Pointer> pointerList)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|--|-------------|---|
| System.UInt32 | fieldId | id of file |
| System.Collections.Generic.List<Pointer> | pointerList | pointer list of query terms that can be found in the file |

Namespace SearchifyEngine.Searcher

Classes

Pointer

Search Pointer object aids the k-way linear merge algorithm by storing the pointer to each index term being iterated reverse index

Searcher

Searcher class operates on an indexer

Class Pointer

Search Pointer object aids the k-way linear merge algorithm by storing the pointer to each index term being iterated reverse index

Inheritance

System.Object
Pointer

Implements

System.IComparable
System.IComparable<Pointer>

Inherited Members

System.Object.Equals(System.Object)
System.Object.Equals(System.Object, System.Object)
System.Object.GetHashCode()
System.Object.GetType()
System.Object.MemberwiseClone()
System.Object.ReferenceEquals(System.Object, System.Object)
System.Object.ToString()

Namespace: SearchifyEngine.Searcher

Assembly: SearchifyEngine.dll

Syntax

```
public class Pointer : IComparable, IComparable<Pointer>
```

Constructors

Pointer(String, UInt32, UInt32)

Instantiate a Pointer object

Declaration

```
public Pointer(string term, uint p, uint fileId)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|--------|--|
| System.String | term | word |
| System.UInt32 | p | current index of IndexTermList iteration |
| System.UInt32 | fileId | file id |

Fields

FileId

FileId of Index Term

Declaration

```
public readonly uint FileId
```


Field Value

| TYPE | DESCRIPTION |
|---------------|-------------|
| System.UInt32 | |

P

Index of current iteration of the Index Term list

Declaration

```
public readonly uint P
```

Field Value

| TYPE | DESCRIPTION |
|---------------|-------------|
| System.UInt32 | |

Term

The key of the reverse index

Declaration

```
public readonly string Term
```

Field Value

| TYPE | DESCRIPTION |
|---------------|-------------|
| System.String | |

Methods

CompareTo(Pointer)

IComparable Pointer implementation

Declaration

```
public int CompareTo(Pointer other)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------|-------|-------------------------------|
| Pointer | other | Pointer object for comparison |

Returns

| TYPE | DESCRIPTION |
|--------------|--|
| System.Int32 | 1 when this.FileId gt other.FileId -1 when this.FileId lt other.FileId 0 otherwise |

Exceptions

| TYPE | CONDITION |
|--------------------------|---------------------------------|
| System.ArgumentException | Raised when comparing with null |

CompareTo(Object)

Comparable implementation

Declaration

```
public int CompareTo(object other)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|-------|-----------------------|
| System.Object | other | object for comparison |

Returns

| TYPE | DESCRIPTION |
|--------------|--|
| System.Int32 | 1 when this.FileId > other.FileId -1 when this.FileId < other.FileId 0 otherwise |

Exceptions

| TYPE | CONDITION |
|--------------------------|---------------------------------|
| System.ArgumentException | Raised when comparing with null |

Implements

- System.IComparable
- System.IComparable<T>

Class Searcher

Searcher class operates on an indexer

Inheritance

System.Object
Searcher

Inherited Members

System.Object.Equals(System.Object)
System.Object.Equals(System.Object, System.Object)
System.Object.GetHashCode()
System.Object.GetType()
System.Object.MemberwiseClone()
System.Object.ReferenceEquals(System.Object, System.Object)
System.Object.ToString()

Namespace: [SearchifyEngine.Searcher](#)
Assembly: SearchifyEngine.dll

Syntax

```
public class Searcher
```

Constructors

Searcher(Indexer)

Instantiates a Searcher object

Declaration

```
public Searcher(Indexer indexer)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|-------------------------|---------|---|
| Indexer | indexer | instance of SearchifyEngine.Indexer |

Methods

ExecuteQuery(String)

Returns a ranked array of file ids associated with a query

Declaration

```
public async Task<uint[]> ExecuteQuery(string query)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|-------|---------------------------|
| System.String | query | any nonempty string value |

Returns

| TYPE | DESCRIPTION |
|--|--------------------------|
| System.Threading.Tasks.Task<System.UInt32[]> | Ranked array of file ids |

Namespace SearchifyEngine.Store

Classes

[InvertedIndexDynamoDbStore](#)

Inverted Index Store for DynamoDB. Provides methods for CRU operations on the Inverted Index in DynamoDB

[InvertedIndexMemoryStore](#)

Interfaces

[IStore](#)

Defines methods that must be possessed by an Inverted Index Store

Class InvertedIndexDynamoDbStore

Inverted Index Store for DynamoDB. Provides methods for CRU operations on the Inverted Index in DynamoDB

Inheritance

System.Object
InvertedIndexDynamoDbStore

Implements

IStore

Inherited Members

System.Object.Equals(System.Object)
System.Object.Equals(System.Object, System.Object)
System.Object.GetHashCode()
System.Object.GetType()
System.Object.MemberwiseClone()
System.Object.ReferenceEquals(System.Object, System.Object)
System.Object.ToString()

Namespace: SearchifyEngine.Store

Assembly: SearchifyEngine.dll

Syntax

```
public class InvertedIndexDynamoDbStore : IStore
```

Constructors

InvertedIndexDynamoDbStore(AmazonDynamoDBClient)

Instantiates a new InvertedIndexDynamoDbStore object

Declaration

```
public InvertedIndexDynamoDbStore(AmazonDynamoDBClient client)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|----------------------|--------|-----------------|
| AmazonDynamoDBClient | client | dynamodb client |

Methods

AppendIndexTerm(String, IndexTerm)

Appends to list of index terms for a particular term. If the term has not been indexed yet, a new list is instantiated and the term is then appended

Declaration

```
public async Task<HttpStatusCode> AppendIndexTerm(string term, IndexTerm indexTerm)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|------|------|-------------|
| | | |

| TYPE | NAME | DESCRIPTION |
|---------------------------|-----------|----------------------------------|
| System.String | term | term |
| IndexTerm | indexTerm | IndexTerm object |

Returns

| TYPE | DESCRIPTION |
|--|--------------------------|
| System.Threading.Tasks.Task<System.Net.HttpStatusCode> | status code of operation |

CheckTermIndexed(String)

Checks if a term has been indexed

Declaration

```
public async Task<bool> CheckTermIndexed(string term)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | term | term |

Returns

| TYPE | DESCRIPTION |
|---|---|
| System.Threading.Tasks.Task<System.Boolean> | true if term has been indexed, else false |

GetIndexTermList(String)

Returns index term list for a particular term. An empty list is returned if the term has not been indexed

Declaration

```
public async Task<List<IndexTerm>> GetIndexTermList(string term)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | term | term |

Returns

| TYPE | DESCRIPTION |
|------|-------------|
| | |

| TYPE | DESCRIPTION |
|---|---|
| System.Threading.Tasks.Task<System.Collections.Generic.List< IndexTerm >> | list of IndexTerm objects |

GetLastId()

Returns the id of last file indexed, zero if no file was indexed.

Declaration

```
public async Task<uint> GetLastId()
```

Returns

| TYPE | DESCRIPTION |
|--|-------------------------|
| System.Threading.Tasks.Task<System.UInt32> | id of last file indexed |

SetLastId(UInt32)

Sets the value of the last document indexed

Declaration

```
public async Task<HttpStatusCode> SetLastId(uint lastId)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|--------|-------------|
| System.UInt32 | lastId | document id |

Returns

| TYPE | DESCRIPTION |
|--|---------------------------|
| System.Threading.Tasks.Task<System.Net.HttpStatusCode> | status code for operation |

Implements

[IStore](#)

Class InvertedIndexMemoryStore

Inheritance

System.Object
InvertedIndexMemoryStore

Implements

[IStore](#)

Inherited Members

System.Object.Equals(System.Object)
System.Object.Equals(System.Object, System.Object)
System.Object.GetHashCode()
System.Object.GetType()
System.Object.MemberwiseClone()
System.Object.ReferenceEquals(System.Object, System.Object)
System.Object.ToString()

Namespace: [SearchifyEngine.Store](#)
Assembly: SearchifyEngine.dll

Syntax

```
public class InvertedIndexMemoryStore : IStore
```

Methods

AppendIndexTerm(String, IndexTerm)

Appends to list of index terms for a particular term. If the term has not been indexed yet, a new list is instantiated and the term is then appended

Declaration

```
public async Task<HttpStatusCode> AppendIndexTerm(string term, IndexTerm indexTerm)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------------------|-----------|----------------------------------|
| System.String | term | term |
| IndexTerm | indexTerm | IndexTerm object |

Returns

| TYPE | DESCRIPTION |
|--|--------------------------|
| System.Threading.Tasks.Task<System.Net.HttpStatusCode> | status code of operation |

CheckTermIndexed(String)

Checks if a term has been indexed

Declaration

```
public async Task<bool> CheckTermIndexed(string term)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | term | term |

Returns

| TYPE | DESCRIPTION |
|---|---|
| System.Threading.Tasks.Task<System.Boolean> | true if term has been indexed, else false |

GetIndexTermList(String)

Returns index term list for a particular term. An empty list is returned if the term has not been indexed

Declaration

```
public async Task<List<IndexTerm>> GetIndexTermList(string term)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | term | term |

Returns

| TYPE | DESCRIPTION |
|---|---|
| System.Threading.Tasks.Task<System.Collections.Generic.List<IndexTerm>> | list of IndexTerm objects |

GetLastId()

Returns the id of last file indexed, zero if no file was indexed.

Declaration

```
public async Task<uint> GetLastId()
```

Returns

| TYPE | DESCRIPTION |
|--|-------------------------|
| System.Threading.Tasks.Task<System.UInt32> | id of last file indexed |

SetLastId(UInt32)

Sets the value of the last document indexed

Declaration

```
public async Task<HttpStatusCode> SetLastId(uint lastId)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|--------|-------------|
| System.UInt32 | lastId | document id |

Returns

| TYPE | DESCRIPTION |
|--|---------------------------|
| System.Threading.Tasks.Task<System.Net.HttpStatusCode> | status code for operation |

Implements

[IStore](#)

Interface IStore

Defines methods that must be possessed by an Inverted Index Store

Namespace: [SearchifyEngine.Store](#)

Assembly: SearchifyEngine.dll

Syntax

```
public interface IStore
```

Methods

AppendIndexTerm(String, IndexTerm)

Appends to list of index terms for a particular term. If the term has not been indexed yet, a new list is instantiated and the term is then appended

Declaration

```
Task<HttpStatusCode> AppendIndexTerm(string term, IndexTerm indexTerm)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------------------|-----------|----------------------------------|
| System.String | term | term |
| IndexTerm | indexTerm | IndexTerm object |

Returns

| TYPE | DESCRIPTION |
|--|--------------------------|
| System.Threading.Tasks.Task<System.Net.HttpStatusCode> | status code of operation |

CheckTermIndexed(String)

Checks if a term has been indexed

Declaration

```
Task<bool> CheckTermIndexed(string term)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | term | term |

Returns

| TYPE | DESCRIPTION |
|------|-------------|
| | |

| TYPE | DESCRIPTION |
|---|---|
| System.Threading.Tasks.Task<System.Boolean> | true if term has been indexed, else false |

GetIndexTermList(String)

Returns index term list for a particular term. An empty list is returned if the term has not been indexed

Declaration

| |
|---|
| Task<List<IndexTerm>> GetIndexTermList(string term) |
|---|

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|------|-------------|
| System.String | term | term |

Returns

| TYPE | DESCRIPTION |
|---|---------------------------|
| System.Threading.Tasks.Task<System.Collections.Generic.List<IndexTerm>> | list of IndexTerm objects |

GetLastId()

Returns the id of last file indexed, zero if no file was indexed.

Declaration

| |
|------------------------|
| Task<uint> GetLastId() |
|------------------------|

Returns

| TYPE | DESCRIPTION |
|--|-------------------------|
| System.Threading.Tasks.Task<System.UInt32> | id of last file indexed |

SetLastId(UInt32)

Sets the value of the last document indexed

Declaration

| |
|---|
| Task<HttpStatusCode> SetLastId(uint lastId) |
|---|

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|--------|-------------|
| System.UInt32 | lastId | document id |

Returns

| TYPE | DESCRIPTION |
|--|---------------------------|
| System.Threading.Tasks.Task<System.Net.HttpStatusCode> | status code for operation |

Namespace SearchifyEngine.Tokenizer

Classes

Stemmer

Porter Stemmer Class

Stopwords

Stopwords class

Tokenizer

Static class that houses tokenization logic

Class Stemmer

Porter Stemmer Class

Inheritance

System.Object
Stemmer

Inherited Members

System.Object.Equals(System.Object)
System.Object.Equals(System.Object, System.Object)
System.Object.GetHashCode()
System.Object.GetType()
System.Object.MemberwiseClone()
System.Object.ReferenceEquals(System.Object, System.Object)
System.Object.ToString()

Namespace: [SearchifyEngine.Tokenizer](#)
Assembly: SearchifyEngine.dll

Syntax

```
public class Stemmer
```

Methods

StemWord(String)

Stem the passed in word.

Declaration

```
public string StemWord(string word)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|------|------------------|
| System.String | word | Word to evaluate |

Returns

| TYPE | DESCRIPTION |
|---------------|-------------|
| System.String | |

Class Stopwords

Stopwords class

Inheritance

System.Object
Stopwords

Inherited Members

System.Object.Equals(System.Object)
System.Object.Equals(System.Object, System.Object)
System.Object.GetHashCode()
System.Object.GetType()
System.Object.MemberwiseClone()
System.Object.ReferenceEquals(System.Object, System.Object)
System.Object.ToString()

Namespace: [SearchifyEngine.Tokenizer](#)

Assembly: SearchifyEngine.dll

Syntax

```
public static class Stopwords
```

Methods

LoadStopWords()

returns set of English stopwords

Declaration

```
public static HashSet<string> LoadStopWords()
```

Returns

| TYPE | DESCRIPTION |
|---|--------------------|
| System.Collections.Generic.HashSet<System.String> | a set of stopwords |

Class Tokenizer

Static class that houses tokenization logic

Inheritance

System.Object
Tokenizer

Inherited Members

System.Object.Equals(System.Object)
System.Object.Equals(System.Object, System.Object)
System.Object.GetHashCode()
System.Object.GetType()
System.Object.MemberwiseClone()
System.Object.ReferenceEquals(System.Object, System.Object)
System.Object.ToString()

Namespace: [SearchifyEngine.Tokenizer](#)
Assembly: SearchifyEngine.dll

Syntax

```
public static class Tokenizer
```

Methods

Tokenize(String)

Tokenizes text

Declaration

```
public static string[] Tokenize(string text)
```

Parameters

| TYPE | NAME | DESCRIPTION |
|---------------|------|------------------|
| System.String | text | any string value |

Returns

| TYPE | DESCRIPTION |
|-----------------|--|
| System.String[] | array of stemmed words with stopwords filtered out |