Package database

Class Summary

[Buffer](#)

> Buffer stores an information from a database file.

[Catalog](#)

> Catalog parses the xml file

[DbAttr](#)

> DBattr stores database attributes

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> DBRel stores database relations

[SampleGenerator](#)

> A sample data generator

[Tuple](#)

> Tuple contains data of all attributes

---

database

Class Buffer

```
java.lang.Object
    |
    +--database.Buffer
```

< [Constructors](#) > < [Methods](#) >

---

public class **Buffer**
extends java.lang.Object

Buffer stores an information from a database file.

Constructors

Buffer

```
public   Buffer(java.io.File db,
                int numTuples,
                int pageNumber,
                java.util.List dbAttr)
         throws java.lang.Exception
```

Creates a buffer.

Parameters:

db - database file
numTuples - the number of tuples for a buffer
pageNumber - the page number for the database file
dbAttr - database attributes

Throws:

java.lang.Exception - IO exception

Methods

getBufferSize

```
public int getBufferSize()
```

getNumTuples

```
public int getNumTuples()
```

getTutple

```
public Tuple getTutple(int tuppleNumber)
```

getTutpleLength

```
public int getTutpleLength()
```

database

Class Catalog

```
java.lang.Object
    |
    +--database.Catalog
```

< <u>Constructors</u> > < <u>Methods</u> >

---

public class **Catalog**
extends java.lang.Object

Catalog parses the xml file

Constructors

Catalog

```
public   Catalog(java.io.File catalogFile)
         throws java.lang.Exception
```

       Creates a catalog

       Parameters:

              catalogFile - the xml file which contains catalog information

       Throws:

              java.lang.Exception - IO exception

Methods

getDbAttrs

```
public java.util.List getDbAttrs(java.lang.String relName)
```

---

getDbRels

```
public java.util.List getDbRels()
```

---

getTupleLength

```
public int getTupleLength(java.lang.String relName)
```

---

main

```
public static void main(java.lang.String[] args)
```

---

database

Class DbAttr

```
java.lang.Object
    |
    +--database.DbAttr
```

< [Constructors](#) > < [Methods](#) >

---

public class **DbAttr**
extends java.lang.Object

DBattr stores database attributes

Constructors

DbAttr

```
public  DbAttr(java.lang.String attrName,
               java.lang.String attrType,
               java.lang.String attrLength)
```

Creates a DBattr

Parameters:

attrName - attribute name
attrType - attribute type
attrLength - attribute length

Methods

getAttrLength

```
public int getAttrLength()
```

---

getAttrName

```
public java.lang.String getAttrName()
```

---

getAttrType

```
public java.lang.String getAttrType()
```

---

toString

```
public java.lang.String toString()
```

> **Overrides:**
>> toString in class java.lang.Object

---

database

Class DbRel

```
java.lang.Object
    |
    +--database.DbRel
```

< [Constructors](#) > < [Methods](#) >

---

public class **DbRel**
extends java.lang.Object

DBRel stores database relations

Constructors

DbRel

```
public   DbRel(java.lang.String relName,
               java.lang.String numOfAttributes)
```

> Creates a DBRel
>
> **Parameters:**
>
>> relName - relation name
>> numOfAttributes - the number of attributes

Methods

getNumOfAttributes

```
public int getNumOfAttributes()
```

---

getRelName

```
public java.lang.String getRelName()
```

---

toString

```
public java.lang.String toString()
```

> **Overrides:**
>
>> toString in class java.lang.Object

---

database

Class SampleGenerator

```
java.lang.Object
    |
    +--database.SampleGenerator
```

< <u>Constructors</u> > < <u>Methods</u> >

---

public class **SampleGenerator**
extends java.lang.Object

A sample data generator

Constructors

SampleGenerator

```
public  SampleGenerator()
```

Methods

main

```
public static void main(java.lang.String[] args)
```

---

database

Class Tuple

```
java.lang.Object
     |
     +--database.Tuple
```

< [Constructors](#) > < [Methods](#) >

---

public class **Tuple**
extends java.lang.Object

Tuple contains data of all attributes

Constructors

Tuple

```
public  Tuple(java.util.List dbAttr,
              byte[] buffer)
```

> Creates a tuple
>
> **Parameters:**
>
> > dbAttr - database attributes
> > buffer - an array of bytes which corresponds a tuple

Methods

contains

```
public boolean contains(java.lang.String attr)
```

---

getData

```
public byte[] getData(java.lang.String attrName)
```

---

join

```
public boolean join(DbAttr attr,
                    Tuple tuple)
```

Package spj

Class Summary

Iterator

SPiterator

Sel

---

spj

Class Iterator

```
java.lang.Object
    |
    +--spj.Iterator
```

< Constructors > < Methods >

---

public class **Iterator**
extends java.lang.Object

Constructors

Iterator

```
public   Iterator(java.lang.String rel1,
                  java.lang.String rel2,
                  DbAttr key,
                  SPiterator it)
```

Methods

close

```
public void close()
```

---

getNext

public Tuple **getNext**()

---

hasNext

public boolean **hasNext**()

---

open

public void **open**()

---

spj

Class SPiterator

```
java.lang.Object
     |
     +--spj.SPiterator
```

< Constructors > < Methods >

---

public class **SPiterator**
extends java.lang.Object

Constructors

SPiterator

public **SPiterator**()

Methods

getNext

public Tuple **getNext**()

hasNext

```
public boolean hasNext()
```

Class Sel

```
java.lang.Object
     |
     +--spj.Sel
```

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

public class **Sel**
extends java.lang.Object

Author:
> Daolin Cheng Class for selection condition

Fields

attr

[DbAttr](#) **attr**

data

byte[] **data**

Constructors

Sel

```
public   Sel([DbAttr](#) attr,
          byte[] data)
```

Methods

satisfiedBy

```
public boolean satisfiedBy(Tuple t)
```