

Java

JDBC

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Отметьтесь на портале.



Flashback



Database



SQL



JDBC



Flashback



Database



SQL



JDBC

Try with resources

```
try (A a = getA(); B b = a.getB())  
    ...  
} catch (SQLException | IOException e) {  
    ...  
}
```

A implements AutoClosable

B implements AutoClosable

Thread and Runnable

```
class Thread implements Runnable {  
    // here all the interface for thread management  
}
```

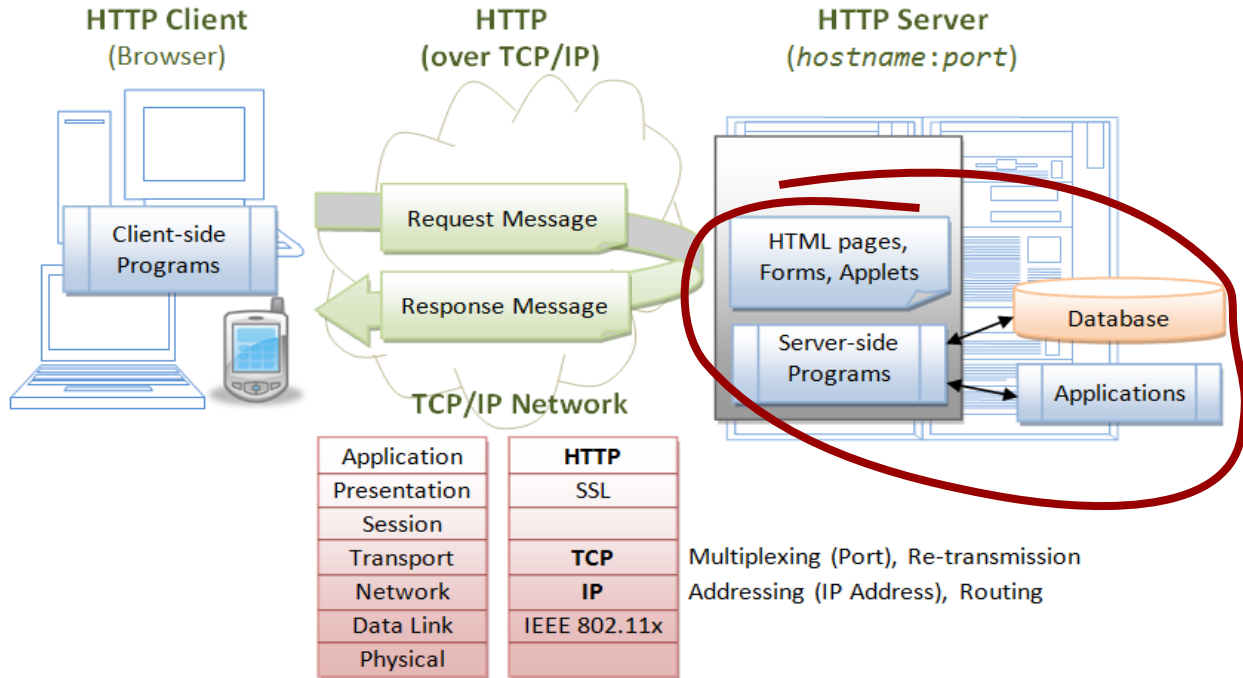
@FunctionalInterface

```
interface Runnable {  
    // will be executed when thread starts  
    public abstract void run();  
}
```

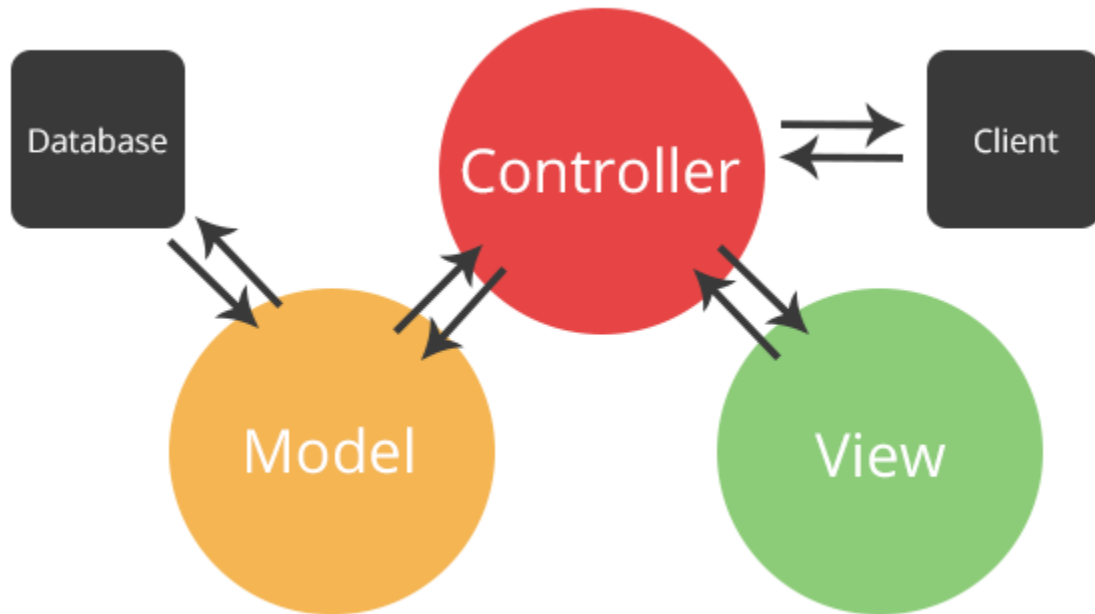
Thread public methods (some)

- `start();` `// executes run() of provided Runnable`
- `static sleep(long millis);`
- `interrupt();` `//Throws InterruptedException if waiting`
`// sets Thread.isInterrupted otherwise`
- `targetThread.join();` `//Block current Thread until target finishes`

Tinder Server



MVC





Flashback



Database



SQL



JDBC

RAM vs File

RAM vs File

- Capacity
- Speed
- Durability

File vs Database

File vs Database

- Store overhead
- Consistency
- Guarantees
- ...
- x-x и в продакшн

DataBase Management System

- Collection of related data
- Data can be easily accessed
- Management over data

Transaction is a unit of work

Recovery

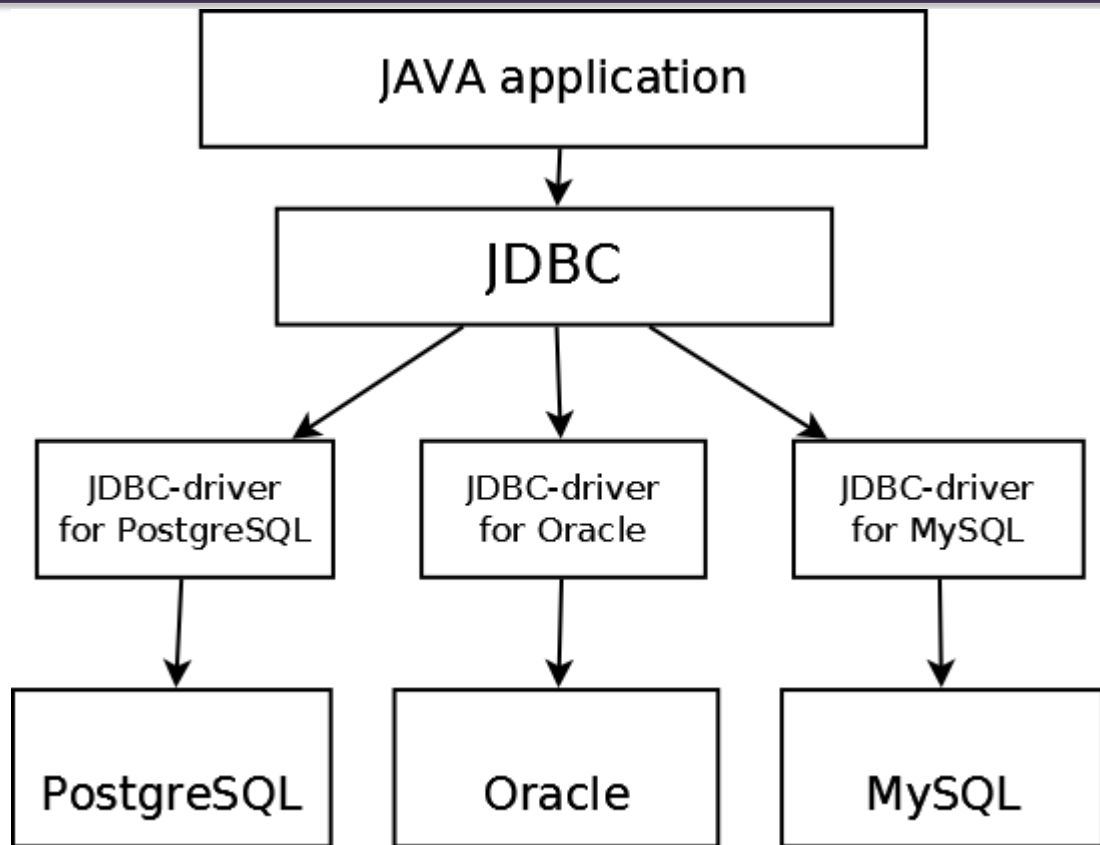
and **ACID**

- Atomicity
- Consistency
- Isolation
- Durability

Java Database Connectivity

- Collection of related data
- Data can be easily accessed
- Management over data

JDBC. Architecture



Structured Query Language

```
SELECT *  
FROM persons  
WHERE age < 20  
ORDER BY name
```

CRUD – persistent storage primitives

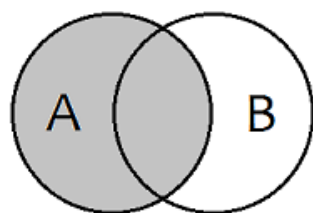
- INSERT
- SELECT
- UPDATE
- DELETE

Data Access Object

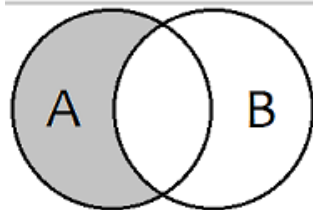
Low level abstraction over database type (table)

@See `ru.atom.model.dao`

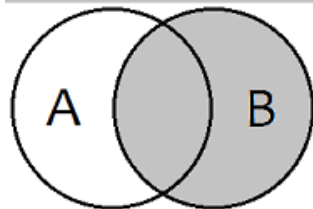
```
INSERT INTO persons (name, gender, age)
VALUES
    ('Marge Simpson', 'FEMALE', 34);
```



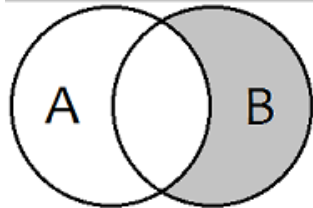
```
SELECT *  
FROM TableA a  
LEFT JOIN TableB b  
ON a.Key = b.Key
```



```
SELECT *  
FROM TableA a  
LEFT JOIN TableB b  
ON a.Key = b.Key  
WHERE b.Key IS NULL
```

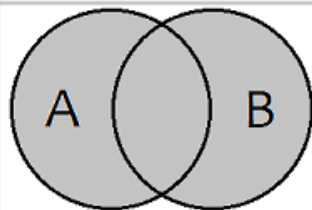


```
SELECT *  
FROM TableA a  
RIGHT JOIN TableB b  
ON a.Key = b.Key
```

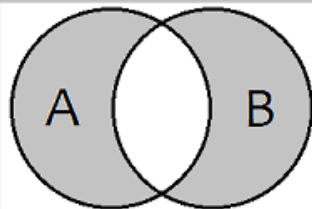


```
SELECT *  
FROM TableA a  
RIGHT JOIN TableB b  
ON a.Key = b.Key  
WHERE a.Key IS NULL
```

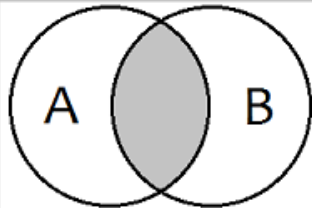
SQL JOINS



```
SELECT *  
FROM TableA a  
FULL OUTER JOIN TableB b  
ON a.Key = b.Key
```



```
SELECT *  
FROM TableA a  
FULL OUTER JOIN TableB b  
ON a.Key = b.Key  
WHERE a.Key IS NULL  
OR b.Key IS NULL
```



```
SELECT *  
FROM TableA a  
INNER JOIN TableB b  
ON a.Key = b.Key
```

SQL. INNER JOIN

```
SELECT persons.name  
FROM persons  
INNER JOIN images  
    ON persons.id = images.ownerId
```


- VARCHAR – String
- BIT – Boolean
- INTEGER – int
- BIGINT – long
- DOUBLE – double

RAM → DB migration

Entities

- Person
- Like
- Match

Like is ...

source \rightarrow target relation

Match is ...

Like is ...

source \rightarrow target relation

Match is ...

a like b & b like a

Persons table

Name	Data type	Length	Precision	Not NULL?	Primary key?
id	integer ▾			<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
name	character varying ▾	100		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
gender	character varying ▾	10		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
age	integer ▾			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Likes table

Name	Data type	Length	Precision	Not NULL?	Primary key?
id	integer ▼			<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
source	integer ▼			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
target	integer ▼			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Matches table

Name	Data type	Length	Precision	Not NULL?	Primary key?
id	integer ▼			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a	integer ▼			<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
b	integer ▼			<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes

Оставьте отзыв.

Спасибо за внимание!

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