Overview
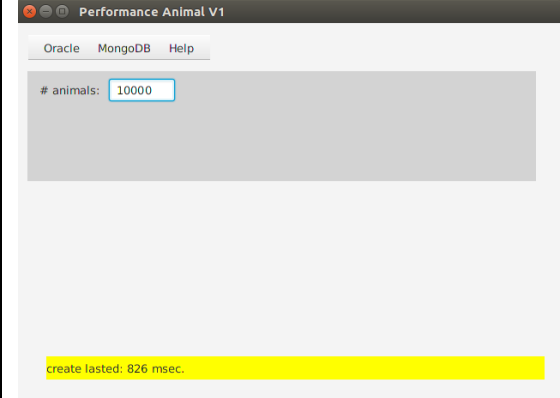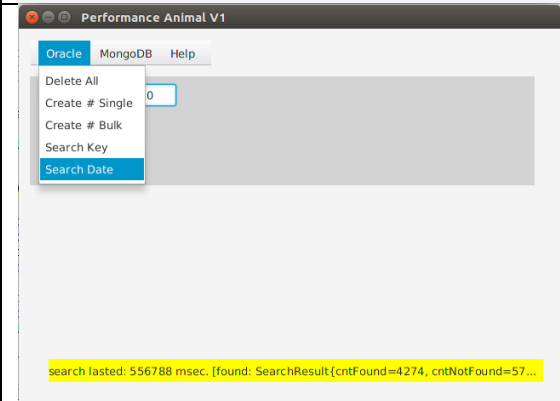
Simulation of read/write - accesses on a table/collection of animals; both databases are installed on the identical server

User's View

Performance Animal V1 Oracle MongoDB Help \# animals: 10000 create lasted: 826 msec.	creating 10000 documents lasts 826 msec
Performance Animal V1 Oracle MongoDB Help Delete All Create \# Single Create \# Bulk Search Key Search Date search lasted: 556788 msec. [found: SearchResult{cntFound=4274, cntNotFound=57...	searching in 100000 documents for a random date needs more than 9 min.

Developer's Hints

```java
public class Animal {
    private int aid;
    private String aname;
    transient private LocalDate adate;
    private String adetails;
```

```java
public class MyMath {

    private static final int MONTH_UPPER = 12;
    private static final int DAY_UPPER = 28;
    private static final int YEAR_UPPER = 2100;
    private static final int YEAR_LOWER = 1500;

    /**...7 lines */
    static public long random(long lower, long upper) throws Exception {
        long interval = (long) ((upper - lower) * Math.random());

        return (lower + interval);
    }

    /** return msecs of timespan ...5 lines */
    static public long getMiliSecsBetween(LocalTime start, LocalTime end) throws Exception {
        return Math.abs((start.toNanoOfDay() - end.toNanoOfDay()) / 1000000);
    }

    /**...5 lines */
    static public String getRandomDate() throws Exception {
        String day = Long.toString(MyMath.random(1, DAY_UPPER)+100).substring(1);
        String month = Long.toString(MyMath.random(1, MONTH_UPPER)+100).substring(1);
        String year = Long.toString(MyMath.random(YEAR_LOWER, YEAR_UPPER));
        return day + "." + month + "." + year;
    }
}
```

Best Results Oracle

	10000 entries	100000 entries	
delete all entries	150 msec	890 msec	
create single entries	4600 msec	46700 msec	each add-call is sent to db
create with bulk	350 msec	4800 msec	bulk => 1 call to db
search key	4400 msec	4500 msec	10000x searches =>size of table does not matter
search date	15100 msec	47700 msec	date-field not indexed

Best Results MongoDB

	10000 entries	100000 entries	
delete all entries	160 msec	1390 msec	
create single entries	5760 msec	49100 msec	each add-call is sent to db
create with bulk	220 msec	2540 msec	bulk => 1 call to db
search key	4670 msec	5380 msec	10000x searches =>size of table does not matter
search date	78300 msec	557000 msec	date-field not indexed