Lab 6

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Variation 1:

```java
import java.io.*;
import java.sql.*;
import java.util.*;

public class Variation1
{
    public static void main(String[] args)
    {
        System.out.println("Begin Variation 1");
        Variation1 var1=new Variation1();
        try {
      Class.forName("oracle.jdbc.driver.OracleDriver");
      String url = "jdbc:oracle:thin:@localhost:1521:orcl";
                        //@hostname:port:SID
    Connection connection = DriverManager.getConnection(url,"system","oracle");
    Statement sql = connection.createStatement();
    double t1=System.currentTimeMillis();
    var1.createTable(sql);
    var1.insertRows(sql);
    double t2=System.currentTimeMillis();
    System.out.println(t2-t1);
    sql.close();
        }
      catch(Exception e)
       {
            e.printStackTrace();
        }
    }


    public void createTable(Statement sql)
    {
        try
        {
        String lan="Create Table benchmark1("+
                                "theKey NUMBER PRIMARY KEY,"+
```

```java
                                                   "columnA NUMBER,"+
                                                    "columnB NUMBER,"+
                                              "filler CHAR(247))";

        sql.executeQuery(lan);
        }
        catch(Exception ex)
        {
            ex.printStackTrace();
        }
    }

    public void insertRows(Statement sql)
    {
      try{
        int temp=5000000;
        for(int i=0;i<temp;i++)
        {
            int temp1=(int)(Math.random()*4999999)+1;
            int temp2=(int)(Math.random()*4999999)+1;
            String              lan="insert              into              benchmark1
values("+String.valueOf(i+1)+","+String.valueOf(temp1)+","+String.valueOf(temp2)+",'"+UUID.
randomUUID().toString()+"')";
            //System.out.println(lan);
            sql.executeQuery(lan);
        }
          }
          catch(Exception e)
          {
             e.printStackTrace();
          }
    }
}
```

Running time: 6120227 ms = 1.7 hrs

Variation 2:

```java
import java.io.*;
import java.sql.*;
import java.util.*;

public class Variation2
{
```

```java
public static void main(String[] args)
{
    ArrayList<Integer> list=new ArrayList<Integer>();
    for(int i=0;i<5000000;i++)
        list.add(i+1);
    //System.out.println(list.get(1));
    Collections.shuffle(list);
    System.out.println("Begin Variation 2");
    Variation2 var2=new Variation2();
    try {
  Class.forName("oracle.jdbc.driver.OracleDriver");
  String url = "jdbc:oracle:thin:@localhost:1521:orcl";
                    //@hostname:port:SID
Connection connection = DriverManager.getConnection(url,"system","oracle");
Statement sql = connection.createStatement();
double t1=System.currentTimeMillis();
var2.createTable(sql);
var2.insertRows(sql,list);
double t2=System.currentTimeMillis();
System.out.println(t2-t1);
sql.close();
    }
  catch(Exception e)
    {
        e.printStackTrace();
    }
}


public void createTable(Statement sql)
{
    try
    {
    String lan="Create Table benchmark2("+
                                "theKey NUMBER PRIMARY KEY,"+
                                 "columnA NUMBER,"+
                                  "columnB NUMBER,"+
                                "filler CHAR(247))";
    sql.executeQuery(lan);
    }
    catch(Exception ex)
    {
        ex.printStackTrace();
    }
```

```java
    }

    public void insertRows(Statement sql,ArrayList<Integer> list)
    {
      try{
        int temp=5000000;
        for(int i=0;i<temp;i++)
        {
          int temp1=(int)(Math.random()*4999999)+1;
          int temp2=(int)(Math.random()*4999999)+1;
          String          lan="insert          into          benchmark2
values("+String.valueOf(list.get(i))+","+String.valueOf(temp1)+","+String.valueOf(temp2)+",'"+
UUID.randomUUID().toString()+"')";
          //System.out.println(lan);
          sql.executeQuery(lan);
        }
        }
        catch(Exception e)
        {
          e.printStackTrace();
        }
    }
}
```

Running time: 14960720 ms = 4.15576 hr