

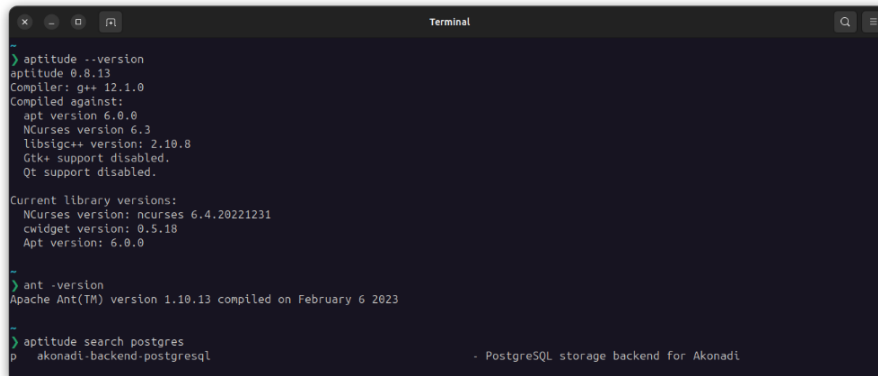
T03 – Montagem do Ambiente de Trabalho

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1. Instalação dos programas aptitude e ant:

Rodei os comandos de verificação da versão instalada, comprovando sua instalação:



```
Terminal
> aptitude --version
aptitude 0.8.13
Compiler: g++ 12.1.0
Compiled against:
  apt version 6.0.0
  NCurses version 6.3
  libsigc++ version: 2.10.8
  Gtk+ support disabled.
  Qt support disabled.

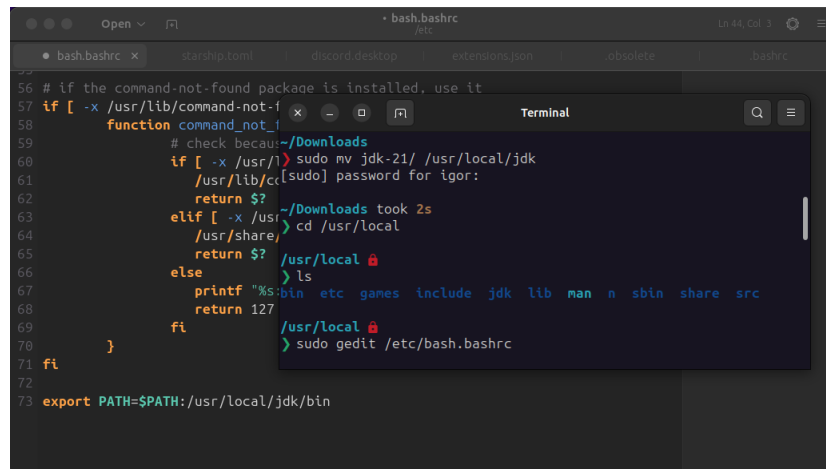
Current library versions:
  NCurses version: ncurses 6.4.20221231
  cwidget version: 0.5.18
  Apt version: 6.0.0

> ant -version
Apache Ant(TM) version 1.10.13 compiled on February 6 2023

> aptitude search postgres
p   akonadi-backend-postgresql - PostgreSQL storage backend for Akonadi
```

2. Instalação da JDK e edição do seu PATH no bash.bashrc:

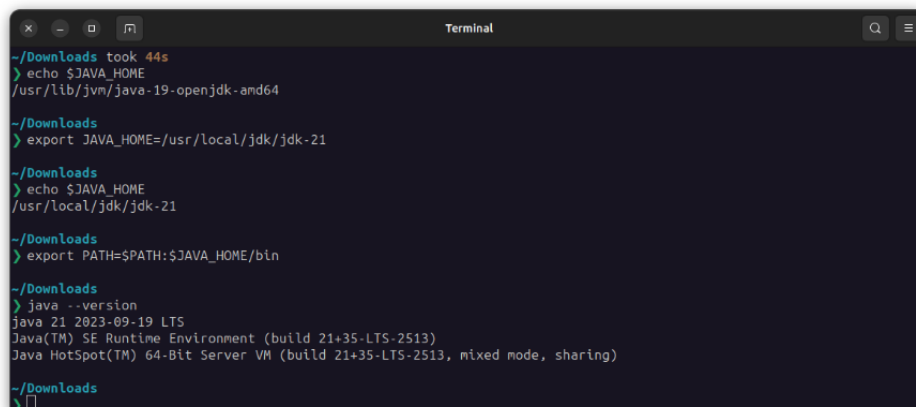
Instalei a da JDK 21 (a mais recente), movi para /usr/local/ e editei o path no arquivo:



```
bash.bashrc
/etc
Ln 44, Col 3

56 # if the command-not-found package is installed, use it
57 if [ -x /usr/lib/command-not-found ]; then
58     function command_not_found_handle {
59         # check because ~Downloads took 2s
60         if [ -x /usr/lib/cc[...]/bin/cc ]; then
61             return $?
62         elif [ -x /usr/share/... ]; then
63             return $?
64         else
65             printf "%s\n" bin etc games include jdk lib man n sbin share src
66             return 127
67         fi
68     }
69 fi
70
71 export PATH=$PATH:/usr/local/jdk/bin
```

Há outra forma (mais fácil) de se fazer:



```
Terminal
~/Downloads took 44s
> echo $JAVA_HOME
/usr/lib/jvm/java-19-openjdk-amd64

~/Downloads
> export JAVA_HOME=/usr/local/jdk/jdk-21

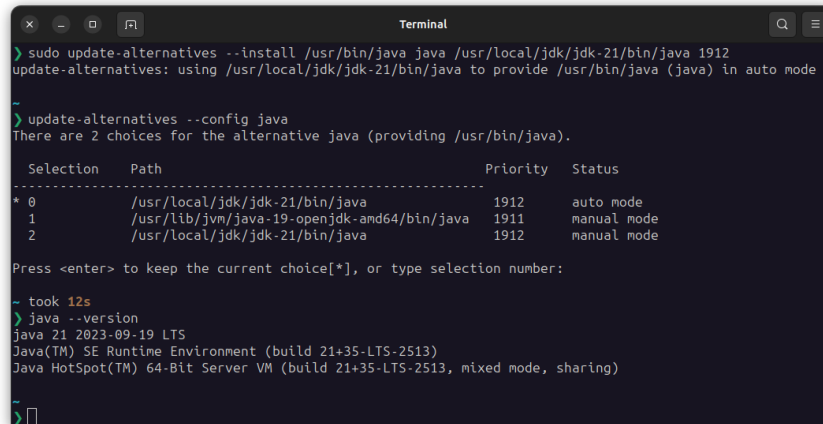
~/Downloads
> echo $JAVA_HOME
/usr/local/jdk/jdk-21

~/Downloads
> export PATH=$PATH:$JAVA_HOME/bin

~/Downloads
> java --version
java 21 2023-09-19 LTS
Java(TM) SE Runtime Environment (build 21+35-LTS-2513)
Java HotSpot(TM) 64-Bit Server VM (build 21+35-LTS-2513, mixed mode, sharing)
```

2.1. Remoção dos links dos programas java e javac que existem para a pasta etc/alternatives

Não é necessário remover outras versões da JDK, como é possível observar abaixo, pode-se adicionar a nova JDK às opções alternativas, coloquei-a com maior prioridade que a outra (e seu respectivo caminho em usr/local/jdk) para que a mesma possa ser selecionada automaticamente.



```
> sudo update-alternatives --install /usr/bin/java java /usr/local/jdk/jdk-21/bin/java 1912
update-alternatives: using /usr/local/jdk/jdk-21/bin/java to provide /usr/bin/java (java) in auto mode

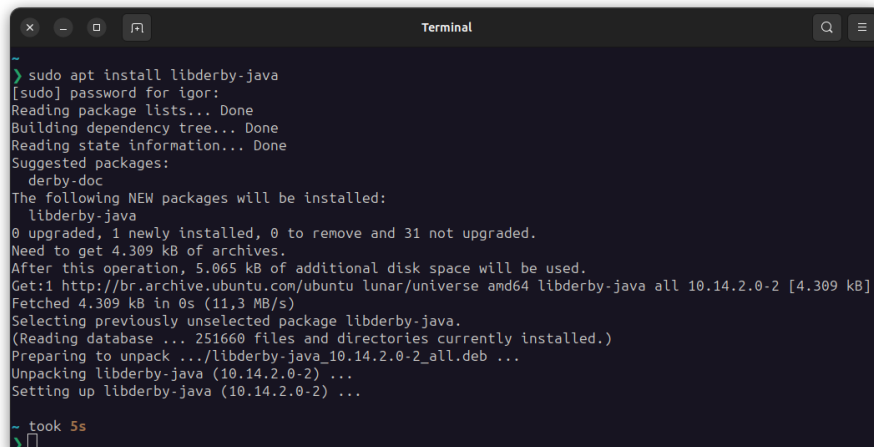
~
> update-alternatives --config java
There are 2 choices for the alternative java (providing /usr/bin/java).

  Selection    Path                                          Priority  Status
  ----
* 0            /usr/local/jdk/jdk-21/bin/java              1912     auto mode
  1            /usr/lib/jvm/java-19-openjdk-amd64/bin/java  1911     manual mode
  2            /usr/local/jdk/jdk-21/bin/java              1912     manual mode

Press <enter> to keep the current choice[*], or type selection number:

~ took 12s
> java --version
java 21 2023-09-19 LTS
Java(TM) SE Runtime Environment (build 21+35-LTS-2513)
Java HotSpot(TM) 64-Bit Server VM (build 21+35-LTS-2513, mixed mode, sharing)
```

2.2. Instalação da biblioteca Derby

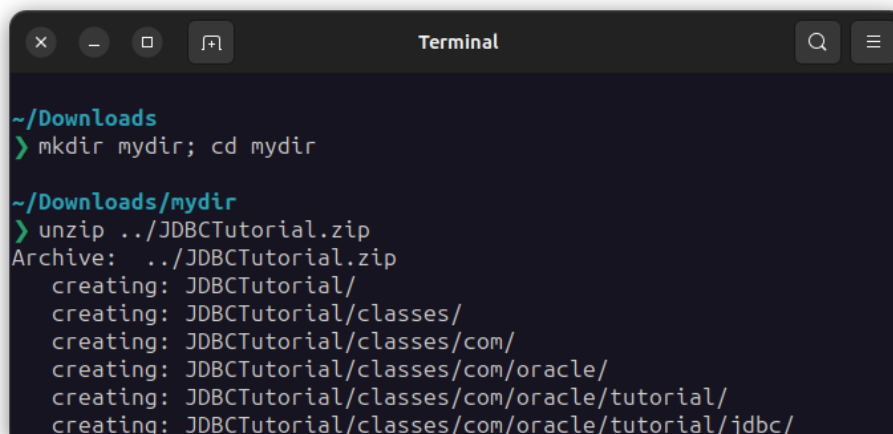


```
> sudo apt install libderby-java
[sudo] password for igor:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Suggested packages:
  derby-doc
The following NEW packages will be installed:
  libderby-java
0 upgraded, 1 newly installed, 0 to remove and 31 not upgraded.
Need to get 4.309 kB of archives.
After this operation, 5.065 kB of additional disk space will be used.
Get:1 http://br.archive.ubuntu.com/ubuntu lunar/universe amd64 libderby-java all 10.14.2.0-2 [4.309 kB]
Fetched 4.309 kB in 0s (11,3 MB/s)
Selecting previously unselected package libderby-java.
(Reading database ... 251660 files and directories currently installed.)
Preparing to unpack .../libderby-java_10.14.2.0-2_all.deb ...
Unpacking libderby-java (10.14.2.0-2) ...
Setting up libderby-java (10.14.2.0-2) ...

~ took 5s
>
```

2.3. Extração tutorial JDBC

Criei um diretório “mydir”, acessei-o e extraí o tutorial para dentro dele:

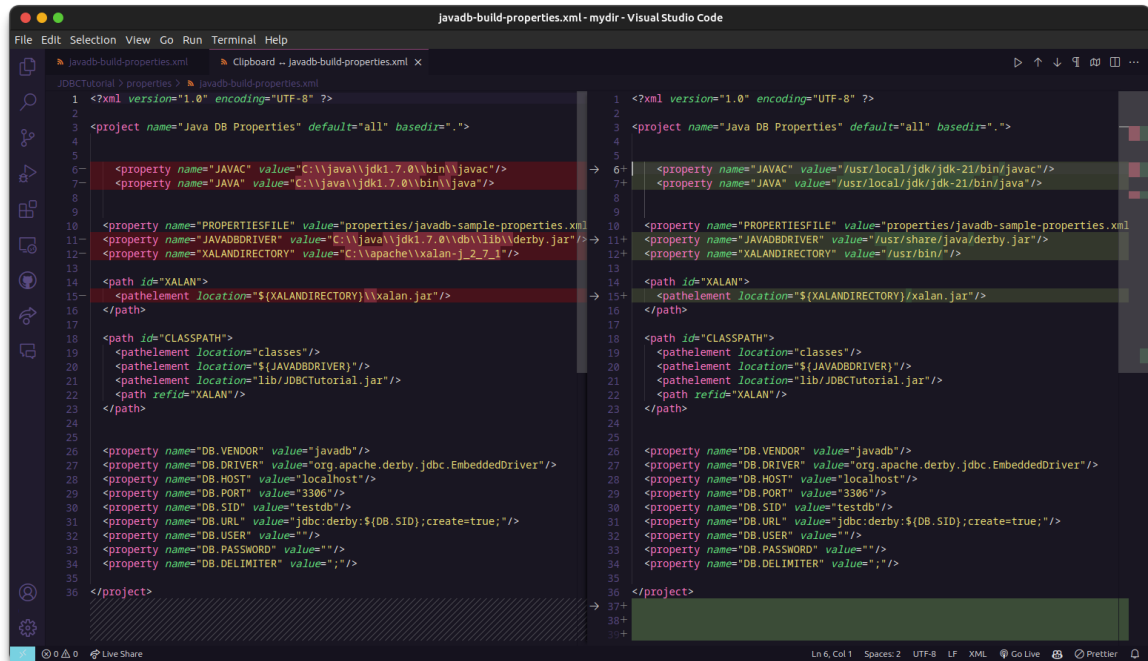


```
~/Downloads
> mkdir mydir; cd mydir

~/Downloads/mydir
> unzip ../JDBCTutorial.zip
Archive:  ../JDBCTutorial.zip
  creating: JDBCTutorial/
  creating: JDBCTutorial/classes/
  creating: JDBCTutorial/classes/com/
  creating: JDBCTutorial/classes/com/oracle/
  creating: JDBCTutorial/classes/com/oracle/tutorial/
  creating: JDBCTutorial/classes/com/oracle/tutorial/jdbc/
```

3. Configuração do arquivo JDBCtutorial/properties/javadb-build-properties.xml:

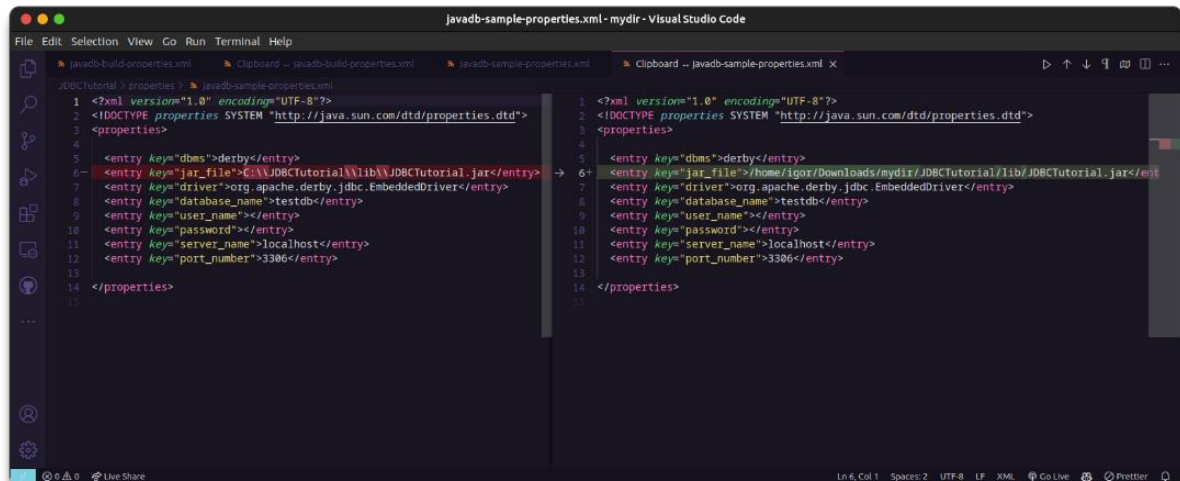
Editei os caminhos no VS Code, segue abaixo comparação entre o original e o modificado:



```
1 <?xml version="1.0" encoding="UTF-8" ?>
2
3 <project name="Java DB Properties" default="all" basedir=".">
4
5
6   <property name="JAVAC" value="C:\\java\\jdk1.7.0\\bin\\javac"/>
7   <property name="JAVA" value="C:\\java\\jdk1.7.0\\bin\\java"/>
8
9
10  <property name="PROPERTIESFILE" value="properties/javadb-sample-properties.xml"/>
11  <property name="JAVADBDRIVER" value="C:\\java\\jdk1.7.0\\lib\\derby.jar"/>
12  <property name="XALANDIRECTORY" value="C:\\apache\\xalan-j_2_7_1"/>
13
14  <path id="XALAN">
15    <pathelement location="${XALANDIRECTORY}\\xalan.jar"/>
16  </path>
17
18  <path id="CLASSPATH">
19    <pathelement location="classes"/>
20    <pathelement location="{JAVADBDRIVER}"/>
21    <pathelement location="lib/JDBCtutorial.jar"/>
22  </path>
23
24
25  <property name="DB_VENDOR" value="javadb"/>
26  <property name="DB_DRIVER" value="org.apache.derby.jdbc.EmbeddedDriver"/>
27  <property name="DB_HOST" value="localhost"/>
28  <property name="DB_PORT" value="3306"/>
29  <property name="DB_SID" value="testdb"/>
30  <property name="DB_URL" value="jdbc:derby:${DB_SID};create=true;/>
31  <property name="DB_USER" value=""/>
32  <property name="DB_PASSWORD" value=""/>
33  <property name="DB_DELIMITER" value=";"/>
34
35
36 </project>
```

```
1 <?xml version="1.0" encoding="UTF-8" ?>
2
3 <project name="Java DB Properties" default="all" basedir=".">
4
5
6   <property name="JAVAC" value="/usr/local/jdk/jdk-21/bin/javac"/>
7   <property name="JAVA" value="/usr/local/jdk/jdk-21/bin/java"/>
8
9
10  <property name="PROPERTIESFILE" value="properties/javadb-sample-properties.xml"/>
11  <property name="JAVADBDRIVER" value="/usr/share/java/derby.jar"/>
12  <property name="XALANDIRECTORY" value="/usr/bin"/>
13
14  <path id="XALAN">
15    <pathelement location="${XALANDIRECTORY}/xalan.jar"/>
16  </path>
17
18  <path id="CLASSPATH">
19    <pathelement location="classes"/>
20    <pathelement location="{JAVADBDRIVER}"/>
21    <pathelement location="lib/JDBCtutorial.jar"/>
22  </path>
23
24
25  <property name="DB_VENDOR" value="javadb"/>
26  <property name="DB_DRIVER" value="org.apache.derby.jdbc.EmbeddedDriver"/>
27  <property name="DB_HOST" value="localhost"/>
28  <property name="DB_PORT" value="3306"/>
29  <property name="DB_SID" value="testdb"/>
30  <property name="DB_URL" value="jdbc:derby:${DB_SID};create=true;/>
31  <property name="DB_USER" value=""/>
32  <property name="DB_PASSWORD" value=""/>
33  <property name="DB_DELIMITER" value=";"/>
34
35
36 </project>
```

4. Configuração do arquivo JDBCtutorial/properties/javadb-sample-properties.xml:

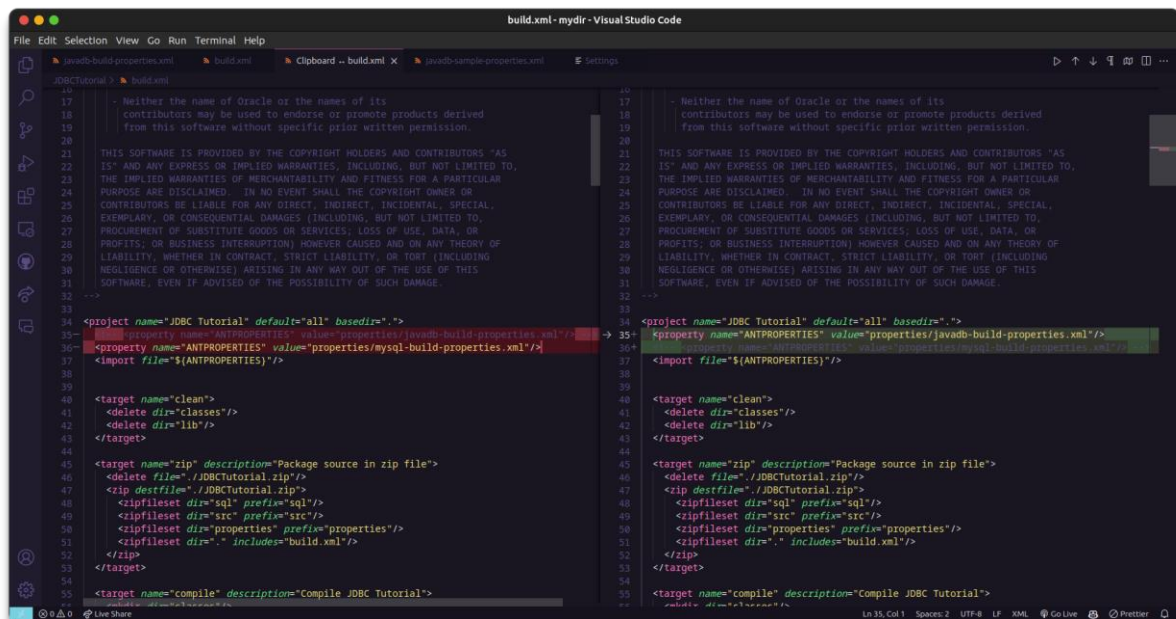


```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <!DOCTYPE properties SYSTEM "http://java.sun.com/dtd/properties.dtd">
3 <properties>
4
5   <entry key="dbms">derby</entry>
6   <entry key="jar_file">C:\\JDBCtutorial\\lib\\JDBCtutorial.jar</entry>
7   <entry key="driver">org.apache.derby.jdbc.EmbeddedDriver</entry>
8   <entry key="database_name">testdb</entry>
9   <entry key="user_name"></entry>
10  <entry key="password"></entry>
11  <entry key="server_name">localhost</entry>
12  <entry key="port_number">3306</entry>
13
14 </properties>
```

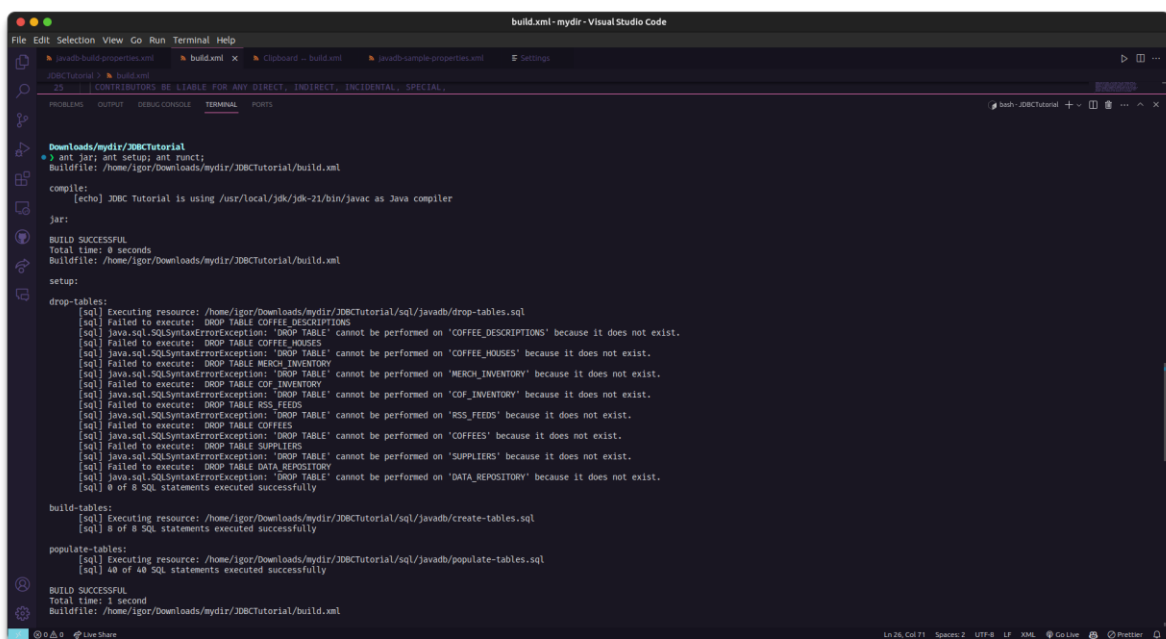
```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <!DOCTYPE properties SYSTEM "http://java.sun.com/dtd/properties.dtd">
3 <properties>
4
5   <entry key="dbms">derby</entry>
6   <entry key="jar_file">/home/igor/Downloads/mydir/JDBCtutorial/lib/JDBCtutorial.jar</entry>
7   <entry key="driver">org.apache.derby.jdbc.EmbeddedDriver</entry>
8   <entry key="database_name">testdb</entry>
9   <entry key="user_name"></entry>
10  <entry key="password"></entry>
11  <entry key="server_name">localhost</entry>
12  <entry key="port_number">3306</entry>
13
14 </properties>
```

5. Execução do tutorial do JDBC

Tive de mudar uma linha no arquivo de build.xml, pois antes estava dando erro pelo fato de que estava buscando pelas propriedades do mysql e não do javadb:



Rodei os três primeiros comandos do ant: jar, setup e runc de uma vez, dessa forma:



```
build.xml - mydir - Visual Studio Code
File Edit Selection View Go Run Terminal Help
java8-build-properties.xml build.xml clipboard - build.xml java8-sample-properties.xml Settings
JDBCtutorial > build.xml
25 | CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
[Java]
[Java] Modifying prices by percentage
[Java] Old price of Colombian is $9.98
[Java] New price of Colombian is $10.98
[Java] Performing update...
[Java]
[Java] COFFEES table after update:
[Java] Colombian, 101, 10.97, 175, 175
[Java] French Roast, 49, 11.23, 150, 150
[Java] Espresso, 150, 12.48, 60, 60
[Java] Colombian_Decaf, 101, 11.23, 155, 155
[Java] French Roast_Decaf, 49, 12.48, 90, 90
[Java] Kona, 150, 10.98, 0, 0
[Java] The new price, $10.98, is greater than the maximum price, $9.00. Rolling back the transaction...
[Java]
[Java] COFFEES table after rollback:
[Java] Colombian, 101, 9.98, 175, 175
[Java] French Roast, 49, 11.23, 150, 150
[Java] Espresso, 150, 12.48, 60, 60
[Java] Colombian_Decaf, 101, 11.23, 155, 155
[Java] French Roast_Decaf, 49, 12.48, 90, 90
[Java] Kona, 150, 10.98, 0, 0
[Java]
[Java] COFFEES table after modifying prices by percentage:
[Java] Colombian, 101, 9.98, 175, 175
[Java] French Roast, 49, 11.23, 150, 150
[Java] Espresso, 150, 12.48, 60, 60
[Java] Colombian_Decaf, 101, 11.23, 155, 155
[Java] French Roast_Decaf, 49, 12.48, 90, 90
[Java] Kona, 150, 10.98, 0, 0
[Java]
[Java] Performing batch updates: adding new coffees
[Java] Colombian, 101, 9.98, 175, 175
[Java] French Roast, 49, 11.23, 150, 150
[Java] Espresso, 150, 12.48, 60, 60
[Java] Colombian_Decaf, 101, 11.23, 155, 155
[Java] French Roast_Decaf, 49, 12.48, 90, 90
[Java] Kona, 150, 10.98, 0, 0
[Java] Amaretto, 49, 9.99, 0, 0
[Java] Hazelnut, 49, 9.99, 0, 0
[Java] Amaretto_decaf, 49, 10.99, 0, 0
[Java] Hazelnut_decaf, 49, 10.99, 0, 0
[Java] Releasing all open resources ...
BUILD SUCCESSFUL
Total time: 1 second
Downloads/mydir/JDBCTutorial took 4s
9 0 Live Share
Ln 26, Col 71 Spaces: 2 UTF-8 LF XML Go Live Preview
```