Atividade-05
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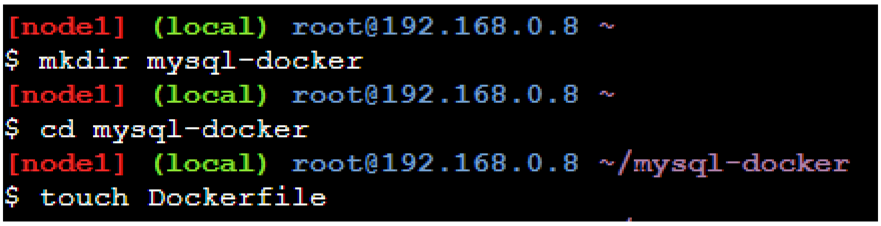
Evidenciar a execução do Prompt-02 da aula do dia 13/01/2025.

Prompt-02
Como um programador de Banco de Dados, crie um Tutorial para instalar um Banco de Dados Mysql no PlaywithDocker. Crie um Docker file que cria uma imagem e em seguia cria um banco de dados chamado BD_ALUNOS com a senha de root kid_aluno e cria as tabelas TB_ALUNOS e TB_PROFESSORES.

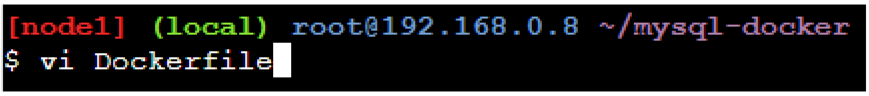
Execução:

1. Criando o diretório mysql-docker e o arquivo Dockerfile:



```
[node1] (local) root@192.168.0.8 ~
$ mkdir mysql-docker
[node1] (local) root@192.168.0.8 ~
$ cd mysql-docker
[node1] (local) root@192.168.0.8 ~/mysql-docker
$ touch Dockerfile
```

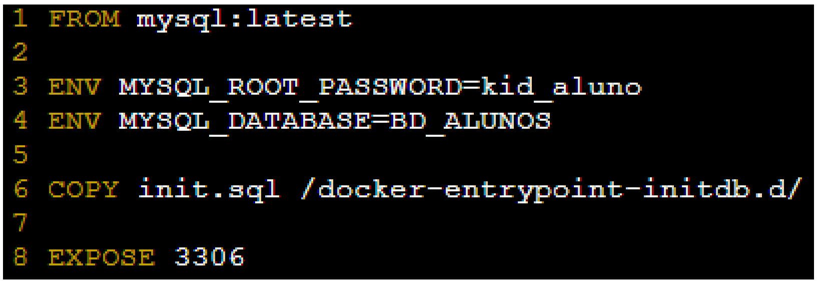
2. Abrindo o arquivo Dockerfile no editor vi:



```
[node1] (local) root@192.168.0.8 ~/mysql-docker
$ vi Dockerfile
```

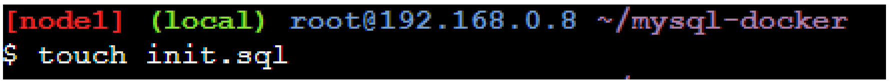
3. Acrescentando conteúdo ao arquivo Dockerfile:

   Linha 1: utilizando a imagem oficial MySQL.
   Linha 3 e 4: definindo variáveis do ambiente.
   Linha 6: copiando o script de inicialização para o contêiner.
   Linha 8: expondo a porta padrão do MySQL (3306).



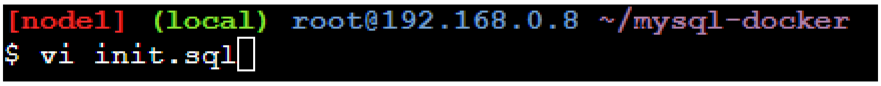
```
1 FROM mysql:latest
2
3 ENV MYSQL_ROOT_PASSWORD=kid_aluno
4 ENV MYSQL_DATABASE=BD_ALUNOS
5
6 COPY init.sql /docker-entrypoint-initdb.d/
7
8 EXPOSE 3306
```

4. Criando o script de inicialização com o arquivo init.sql:



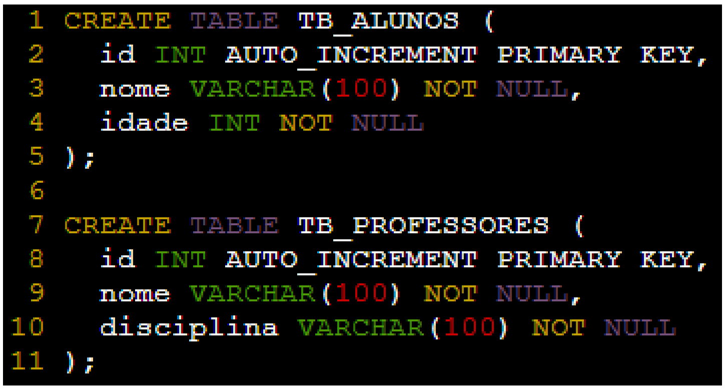
```
[node1] (local) root@192.168.0.8 ~/mysql-docker
$ touch init.sql
```

5. Abrindo o arquivo init.sql no editor vi:



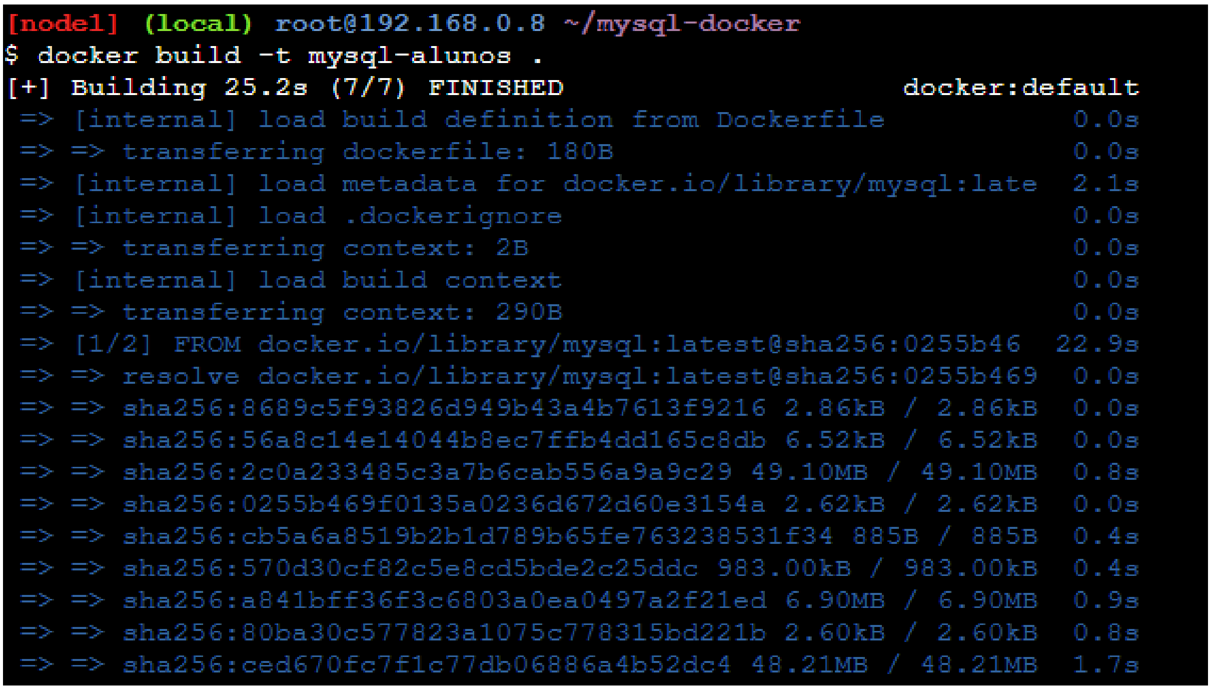
```
[node1] (local) root@192.168.0.8 ~/mysql-docker
$ vi init.sql
```

6. Criando as tabelas TB_ALUNOS (linhas 1-5) e TB_PROFESSORES (linhas 7-11) no arquivo init.sql:

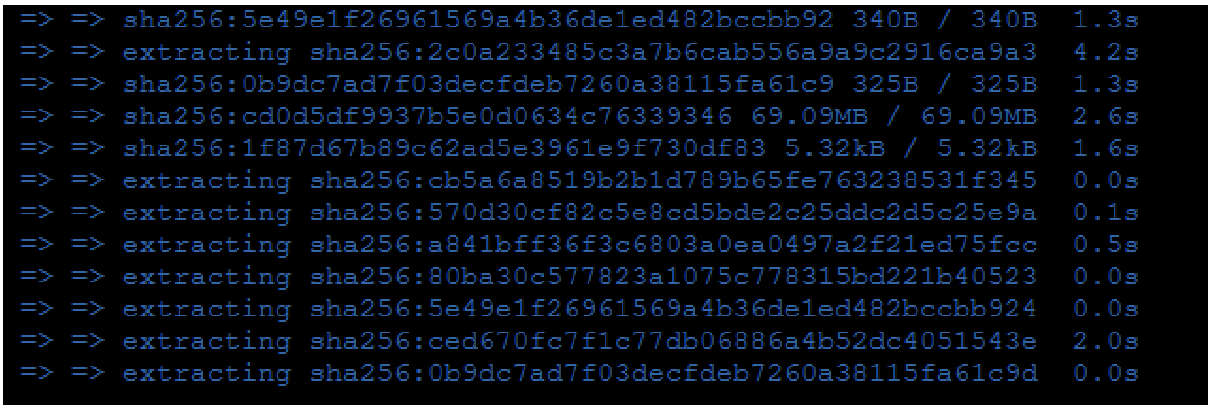


```
 1 CREATE TABLE TB_ALUNOS (
 2   id INT AUTO_INCREMENT PRIMARY KEY,
 3   nome VARCHAR(100) NOT NULL,
 4   idade INT NOT NULL
 5 );
 6
 7 CREATE TABLE TB_PROFESSORES (
 8   id INT AUTO_INCREMENT PRIMARY KEY,
 9   nome VARCHAR(100) NOT NULL,
10   disciplina VARCHAR(100) NOT NULL
11 );
```

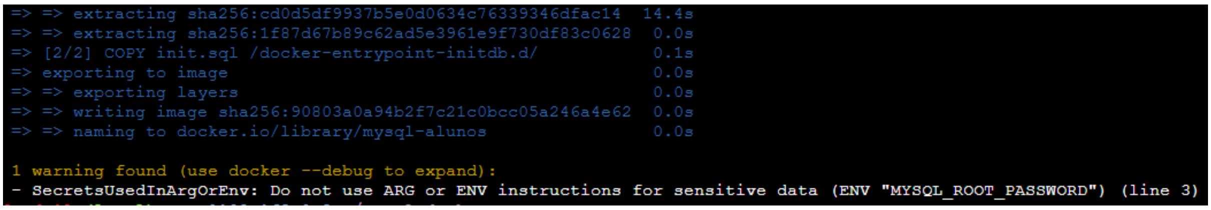
7. Construindo a imagem Docker:



```
[node1] (local) root@192.168.0.8 ~/mysql-docker
$ docker build -t mysql-alunos .
[+] Building 25.2s (7/7) FINISHED                    docker:default
 => [internal] load build definition from Dockerfile           0.0s
 => => transferring dockerfile: 180B                           0.0s
 => [internal] load metadata for docker.io/library/mysql:late  2.1s
 => [internal] load .dockerignore                              0.0s
 => => transferring context: 2B                                0.0s
 => [internal] load build context                              0.0s
 => => transferring context: 290B                              0.0s
 => [1/2] FROM docker.io/library/mysql:latest@sha256:0255b46  22.9s
 => => resolve docker.io/library/mysql:latest@sha256:0255b469  0.0s
 => => sha256:8689c5f93826d949b43a4b7613f9216 2.86kB / 2.86kB  0.0s
 => => sha256:56a8c14e14044b8ec7ffb4dd165c8db 6.52kB / 6.52kB  0.0s
 => => sha256:2c0a233485c3a7b6cab556a9a9c29 49.10MB / 49.10MB  0.8s
 => => sha256:0255b469f0135a0236d672d60e3154a 2.62kB / 2.62kB  0.0s
 => => sha256:cb5a6a8519b2b1d789b65fe763238531f34 885B / 885B  0.4s
 => => sha256:570d30cf82c5e8cd5bde2c25ddc 983.00kB / 983.00kB  0.4s
 => => sha256:a841bff36f3c6803a0ea0497a2f21ed 6.90MB / 6.90MB  0.9s
 => => sha256:80ba30c577823a1075c778315bd221b 2.60kB / 2.60kB  0.8s
 => => sha256:ced670fc7f1c77db06886a4b52dc4 48.21MB / 48.21MB  1.7s
```

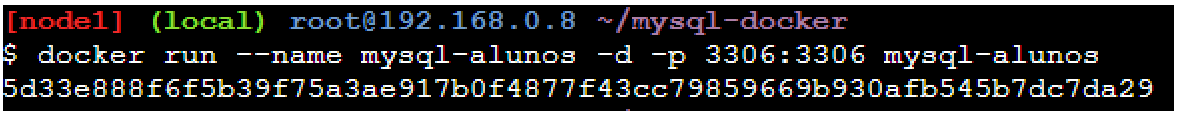


```
=> => sha256:5e49e1f26961569a4b36de1ed482bccbb92 340B / 340B  1.3s
=> => extracting sha256:2c0a233485c3a7b6cab556a9a9c2916ca9a3  4.2s
=> => sha256:0b9dc7ad7f03decfdeb7260a38115fa61c9 325B / 325B  1.3s
=> => sha256:cd0d5df9937b5e0d0634c76339346 69.09MB / 69.09MB  2.6s
=> => sha256:1f87d67b89c62ad5e3961e9f730df83 5.32kB / 5.32kB  1.6s
=> => extracting sha256:cb5a6a8519b2b1d789b65fe763238531f345  0.0s
=> => extracting sha256:570d30cf82c5e8cd5bde2c25ddc2d5c25e9a  0.1s
=> => extracting sha256:a841bff36f3c6803a0ea0497a2f21ed75fcc  0.5s
=> => extracting sha256:80ba30c577823a1075c778315bd221b40523  0.0s
=> => extracting sha256:5e49e1f26961569a4b36de1ed482bccbb924  0.0s
=> => extracting sha256:ced670fc7f1c77db06886a4b52dc4051543e  2.0s
=> => extracting sha256:0b9dc7ad7f03decfdeb7260a38115fa61c9d  0.0s
```



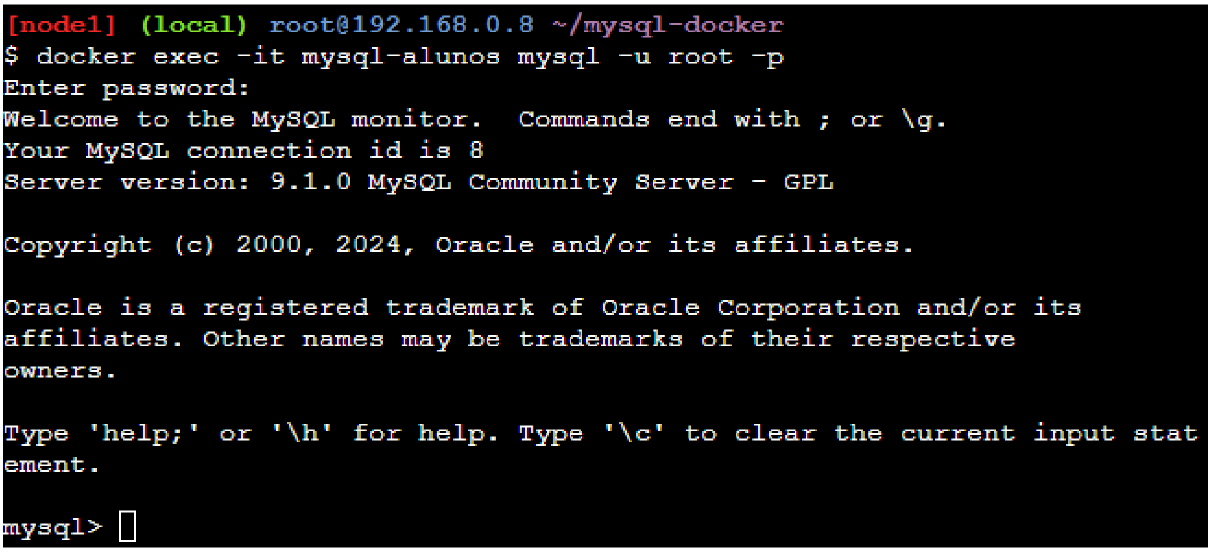
```
=> => extracting sha256:cd0d5df9937b5e0d0634c76339346dfac14  14.4s
=> => extracting sha256:1f87d67b89c62ad5e3961e9f730df83c0628  0.0s
=> [2/2] COPY init.sql /docker-entrypoint-initdb.d/           0.1s
=> exporting to image                                         0.0s
=> => exporting layers                                        0.0s
=> => writing image sha256:90803a0a94b2f7c21c0bcc05a246a4e62  0.0s
=> => naming to docker.io/library/mysql-alunos                0.0s

1 warning found (use docker --debug to expand):
- SecretsUsedInArgOrEnv: Do not use ARG or ENV instructions for sensitive data (ENV "MYSQL_ROOT_PASSWORD") (line 3)
```

8. Executando o contêiner:



```
[node1] (local) root@192.168.0.8 ~/mysql-docker
$ docker run --name mysql-alunos -d -p 3306:3306 mysql-alunos
5d33e888f6f5b39f75a3ae917b0f4877f43cc79859669b930afb545b7dc7da29
```

9. Acessando o MySQL:



```
[node1] (local) root@192.168.0.8 ~/mysql-docker
$ docker exec -it mysql-alunos mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 9.1.0 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input stat
ement.

mysql> 
```
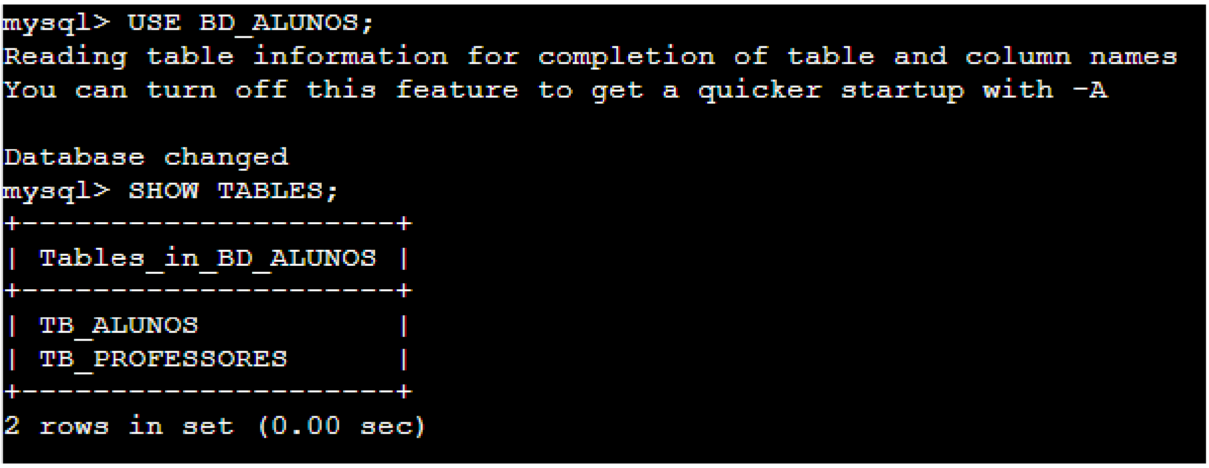

10. Verificando as tabelas:



```
mysql> USE BD_ALUNOS;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> SHOW TABLES;
+---------------------+
| Tables_in_BD_ALUNOS |
+---------------------+
| TB_ALUNOS           |
| TB_PROFESSORES      |
+---------------------+
2 rows in set (0.00 sec)
```