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Department of Computer Science & Engineering

Cloud Computing Lab (20CP322P)

B.Tech-Computer Science & Engineering (Sem-VI)

Lab 10 Assignment: Working on Docker Compose.

Aim: Create two containers named MYSQL and WordPress by using the docker compose file. Students should submit their docker-compose.yml file along with any additional configuration files or documentation they created.

Step 1: docker-compose.yml

```
version: '3.8'

services:
  db:
    image: mysql:5.7
    restart: always
    environment:
      MYSQL_ROOT_PASSWORD: example
      MYSQL_DATABASE: wordpress
      MYSQL_USER: wordpress
      MYSQL_PASSWORD: wordpress
    volumes:
      - db_data:/var/lib/mysql

  wordpress:
    depends_on:
      - db
    image: wordpress:latest
    ports:
      - "8000:80"
    restart: always
    environment:
      WORDPRESS_DB_HOST: db:3306
      WORDPRESS_DB_NAME: wordpress
      WORDPRESS_DB_USER: wordpress
      WORDPRESS_DB_PASSWORD: wordpress
    volumes:
      - wordpress_data:/var/www/html

volumes:
  db_data:
  wordpress_data:
```

Output:

```

pdev2@dev-MINOW64 ~/OneDrive/Documents/NOTES/SEM 6/CLOUD/lab
$ docker-compose up
[+] Running 34/34
  ✓ wordpress 21 layers [=====] 0B/0B Pulled 70.2s
    ✓ 13808c22b207 Pull complete 37.1s
    ✓ 8ea3cfe6db5a Pull complete 37.2s
    ✓ ff65b997523e Pull complete 49.8s
    ✓ 46d87a00aaae Pull complete 49.9s
    ✓ 6b61c519885f Pull complete 51.7s
    ✓ 4833ee2f6ebe Pull complete 51.8s
    ✓ ef4edbe797ac Pull complete 51.9s
    ✓ b89f01946fc Pull complete 52.3s
    ✓ bf2a981fb28a Pull complete 52.4s
    ✓ 532fd16ffa9e Pull complete 54.1s
    ✓ 25a973e7be21 Pull complete 54.2s
    ✓ 38c2947a515d Pull complete 54.2s
    ✓ 13e7ae825cb0 Pull complete 54.3s
    ✓ 41d0d5e5a3c1 Pull complete 57.7s
    ✓ bd3738dc3a64 Pull complete 59.3s
    ✓ 3a89997eca83 Pull complete 59.4s
    ✓ 770210210dc7 Pull complete 59.5s
    ✓ d69dd6debb8f Pull complete 59.6s
    ✓ db6dd6d30cff4 Pull complete 65.3s
    ✓ 555cf58bc691 Pull complete 65.4s
    ✓ eb91a1da0a9e Pull complete 65.5s
  ✓ db 11 layers [=====] 0B/0B Pulled 54.1s
    ✓ 20e4dcae4c69 Pull complete 22.8s
    ✓ 1c56c3d4ce74 Pull complete 22.9s
    ✓ e9f03a1c24ce Pull complete 23.0s
    ✓ 68c3898c2015 Pull complete 23.8s
    ✓ 6b95a940e7b6 Pull complete 23.8s
    ✓ 90986b8bde6e Pull complete 23.9s
    ✓ ae71319cb779 Pull complete 25.8s
    ✓ ffc89a9dfdb8 Pull complete 25.9s
    ✓ 43d05e938198 Pull complete 49.7s
    ✓ 064b2d298fba Pull complete 49.8s
    ✓ df9a4d85569b Pull complete 49.8s
[+] Building 0.0s (0/0)
[+] Running 5/5
  ✓ Network lab_default Created 0.4s
  ✓ Volume "lab_wordpress_data" Created 0.0s
  ✓ Volume "lab_db_data" Created 0.0s
  ✓ Container lab-db-1 Created 0.8s
  ✓ Container lab-wordpress-1 Created 0.2s
attaching to lab-db-1, lab-wordpress-1
lab-db-1 | 2024-04-16 17:48:43+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 5.7.44-1.el7 started.
lab-db-1 | 2024-04-16 17:48:44+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
lab-db-1 | 2024-04-16 17:48:44+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 5.7.44-1.el7 started.
lab-db-1 | 2024-04-16 17:48:44+00:00 [Note] [Entrypoint]: Initializing database files
lab-db-1 | 2024-04-16T17:48:44.516456Z 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (
see documentation for more details).
lab-wordpress-1 | WordPress not found in /var/www/html - copying now...
lab-db-1 | 2024-04-16T17:48:45.396445Z 0 [Warning] InnoDB: New log files created, LSN=45790
lab-db-1 | 2024-04-16T17:48:45.555650Z 0 [Warning] InnoDB: Creating foreign key constraint system tables.
lab-db-1 | 2024-04-16T17:48:45.605030Z 0 [Warning] No existing UUID has been found, so we assume that this is the first time that this server has been started. Gene
rating a new UUID: 928cccaab-fc49-11ee-82dd-02420a82002.
lab-db-1 | 2024-04-16T17:48:45.625017Z 0 [Warning] Gtid table is not ready to be used. Table 'mysql.gtid_executed' cannot be opened.
lab-db-1 | 2024-04-16T17:48:46.470876Z 0 [Warning] A deprecated TLS version TLSv1 is enabled. Please use TLSv1.2 or higher.
lab-db-1 | 2024-04-16T17:48:46.471045Z 0 [Warning] A deprecated TLS version TLSv1.1 is enabled. Please use TLSv1.2 or higher.
lab-db-1 | 2024-04-16T17:48:46.475202Z 0 [Warning] CA certificate ca.pem is self signed.
lab-db-1 | 2024-04-16T17:48:46.655783Z 1 [Warning] root@localhost is created with an empty password ! Please consider switching off the --initialize-insecure option
lab-wordpress-1 | Complete! WordPress has been successfully copied to /var/www/html
lab-wordpress-1 | No 'wp-config.php' found in /var/www/html, but 'WORDPRESS_...' variables supplied; copying 'wp-config-docker.php' (WORDPRESS_DB_HOST WORDPRESS_DB_NAME WO
RDPRESS_DB_PASSWORD WORDPRESS_DB_USER)
lab-wordpress-1 | AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 192.168.32.3. Set the 'ServerName' directive globally to s
uppress this message
lab-wordpress-1 | AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 192.168.32.3. Set the 'ServerName' directive globally to s
uppress this message
lab-wordpress-1 | [Tue Apr 16 17:48:50.733889 2024] [mpm_prefork:notice] [pid 1] AH00163: Apache/2.4.57 (Debian) PHP/8.2.18 configured -- resuming normal operations
lab-db-1 | 2024-04-16 17:48:55+00:00 [Note] [Entrypoint]: Database files initialized
lab-db-1 | 2024-04-16 17:48:55+00:00 [Note] [Entrypoint]: Starting temporary server
lab-db-1 | 2024-04-16 17:48:55+00:00 [Note] [Entrypoint]: Waiting for server startup
lab-db-1 | 2024-04-16T17:48:56.088758Z 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (
see documentation for more details).
lab-db-1 | 2024-04-16T17:48:56.121237Z 0 [Note] mysqld (mysqld 5.7.44) starting as process 125 ...
lab-db-1 | 2024-04-16T17:48:56.236908Z 0 [Note] InnoDB: PUNCH HOLE support available
lab-db-1 | 2024-04-16T17:48:56.237203Z 0 [Note] InnoDB: Mutexes and rw_locks use GCC atomic builtins
lab-db-1 | 2024-04-16T17:48:56.237221Z 0 [Note] InnoDB: Uses event mutexes
lab-db-1 | 2024-04-16T17:48:56.237227Z 0 [Note] InnoDB: GCC builtin __atomic_thread_fence() is used for memory barrier
lab-db-1 | 2024-04-16T17:48:56.237233Z 0 [Note] InnoDB: Compressed tables use zlib 1.2.13
lab-db-1 | 2024-04-16T17:48:56.237238Z 0 [Note] InnoDB: Using Linux native AIO
lab-db-1 | 2024-04-16T17:48:56.248717Z 0 [Note] InnoDB: Number of pools: 1
lab-db-1 | 2024-04-16T17:48:56.250652Z 0 [Note] InnoDB: Using CPU crc32 instructions
lab-db-1 | 2024-04-16T17:48:56.303488Z 0 [Note] InnoDB: Initializing buffer pool, total size = 128M, instances = 1, chunk size = 128M
lab-db-1 | 2024-04-16T17:48:56.481201Z 0 [Note] InnoDB: Completed initialization of buffer pool
lab-db-1 | 2024-04-16T17:48:56.537142Z 0 [Note] InnoDB: If the mysqld execution user is authorized, page cleaner thread priority can be changed. See the man page of
setpriority().
lab-db-1 | 2024-04-16T17:48:56.574159Z 0 [Note] InnoDB: Highest supported file format is Barracuda.
lab-db-1 | 2024-04-16T17:48:56.651267Z 0 [Note] InnoDB: Creating shared tablespace for temporary tables
lab-db-1 | 2024-04-16T17:48:56.651603Z 0 [Note] InnoDB: Setting file './ibtmp1' size to 12 MB. Physically writing the file full; Please wait ...
lab-db-1 | 2024-04-16T17:48:56.810894Z 0 [Note] InnoDB: File './ibtmp1' size is now 12 MB.
lab-db-1 | 2024-04-16T17:48:56.813689Z 0 [Note] InnoDB: 96 redo rollback segment(s) found. 96 redo rollback segment(s) are active.
lab-db-1 | 2024-04-16T17:48:56.813819Z 0 [Note] InnoDB: 32 non-redo rollback segment(s) are active.
lab-db-1 | 2024-04-16T17:48:56.820181Z 0 [Note] InnoDB: 5.7.44 started; log sequence number 2769347
lab-db-1 | 2024-04-16T17:48:56.823232Z 0 [Note] InnoDB: Loading buffer pool(s) from /var/lib/mysql/ib_buffer_pool
lab-db-1 | 2024-04-16T17:48:56.828063Z 0 [Note] Plugin 'FEDERATED' is disabled.
lab-db-1 | 2024-04-16T17:48:56.831164Z 0 [Note] InnoDB: Buffer pool(s) load completed at 240416 17:48:56
lab-db-1 | 2024-04-16T17:48:56.902407Z 0 [Note] Found ca.pem, server-cert.pem and server-key.pem in data directory. Trying to enable SSL support using them.
lab-db-1 | 2024-04-16T17:48:56.903146Z 0 [Note] Skipping generation of SSL certificates as certificate files are present in data directory.
lab-db-1 | 2024-04-16T17:48:56.903242Z 0 [Warning] A deprecated TLS version TLSv1 is enabled. Please use TLSv1.2 or higher.
lab-db-1 | 2024-04-16T17:48:56.903253Z 0 [Warning] A deprecated TLS version TLSv1.1 is enabled. Please use TLSv1.2 or higher.

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lab-db-1 | 2024-04-16T17:49:07.210726Z 0 [Note] Shutting down plugin 'MEMORY'
lab-db-1 | 2024-04-16T17:49:07.210739Z 0 [Note] Shutting down plugin 'CSV'
lab-db-1 | 2024-04-16T17:49:07.210744Z 0 [Note] Shutting down plugin 'sha256_password'
lab-db-1 | 2024-04-16T17:49:07.210748Z 0 [Note] Shutting down plugin 'mysql_native_password'
lab-db-1 | 2024-04-16T17:49:07.210991Z 0 [Note] Shutting down plugin 'binlog'
lab-db-1 | 2024-04-16T17:49:07.212896Z 0 [Note] mysqld: Shutdown complete
lab-db-1 |
lab-db-1 | 2024-04-16 17:49:07+00:00 [Note] [Entrypoint]: Temporary server stopped
lab-db-1 |
lab-db-1 | 2024-04-16 17:49:07+00:00 [Note] [Entrypoint]: MySQL init process done. Ready for start up.
lab-db-1 |
lab-db-1 | 2024-04-16T17:49:07.562565Z 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (
see documentation for more details).
lab-db-1 | 2024-04-16T17:49:07.563829Z 0 [Note] mysqld (mysqld 5.7.44) starting as process 1 ...
lab-db-1 | 2024-04-16T17:49:07.570149Z 0 [Note] InnoDB: PUNCH HOLE support available
lab-db-1 | 2024-04-16T17:49:07.570258Z 0 [Note] InnoDB: Mutexes and rw_locks use GCC atomic builtins
lab-db-1 | 2024-04-16T17:49:07.570268Z 0 [Note] InnoDB: Uses event mutexes
lab-db-1 | 2024-04-16T17:49:07.570272Z 0 [Note] InnoDB: GCC builtin __atomic_thread_fence() is used for memory barrier
lab-db-1 | 2024-04-16T17:49:07.570276Z 0 [Note] InnoDB: Compressed tables use zlib 1.2.13
lab-db-1 | 2024-04-16T17:49:07.570280Z 0 [Note] InnoDB: Using Linux native AIO
lab-db-1 | 2024-04-16T17:49:07.570762Z 0 [Note] InnoDB: Number of pools: 1
lab-db-1 | 2024-04-16T17:49:07.571214Z 0 [Note] InnoDB: Using CPU crc32 instructions
lab-db-1 | 2024-04-16T17:49:07.574890Z 0 [Note] InnoDB: Initializing buffer pool, total size = 128M, instances = 1, chunk size = 128M
lab-db-1 | 2024-04-16T17:49:07.592362Z 0 [Note] InnoDB: Completed initialization of buffer pool
lab-db-1 | 2024-04-16T17:49:07.642872Z 0 [Note] InnoDB: If the mysqld execution user is authorized, page cleaner thread priority can be changed. See the man page of
setpriority(0).
lab-db-1 | 2024-04-16T17:49:07.684271Z 0 [Note] InnoDB: Highest supported file format is Barracuda.
lab-db-1 | 2024-04-16T17:49:07.746656Z 0 [Note] InnoDB: Creating shared tablespace for temporary tables
lab-db-1 | 2024-04-16T17:49:07.746875Z 0 [Note] InnoDB: Setting file './ibtmp1' size to 12 MB. Physically writing the file full; Please wait ...
lab-db-1 | 2024-04-16T17:49:07.945609Z 0 [Note] InnoDB: File './ibtmp1' size is now 12 MB.
lab-db-1 | 2024-04-16T17:49:07.946993Z 0 [Note] InnoDB: 96 redo rollback segment(s) found. 96 redo rollback segment(s) are active.
lab-db-1 | 2024-04-16T17:49:07.947110Z 0 [Note] InnoDB: 32 non-redo rollback segment(s) are active.
lab-db-1 | 2024-04-16T17:49:07.950424Z 0 [Note] InnoDB: 5.7.44 started; log sequence number 12220309
lab-db-1 | 2024-04-16T17:49:07.952043Z 0 [Note] InnoDB: Loading buffer pool(s) from /var/lib/mysql/ib_buffer_pool
lab-db-1 | 2024-04-16T17:49:07.953811Z 0 [Note] Plugin 'FEDERATED' is disabled.
lab-db-1 | 2024-04-16T17:49:07.956951Z 0 [Note] InnoDB: Buffer pool(s) load completed at 240416 17:49:07
lab-db-1 | 2024-04-16T17:49:07.995684Z 0 [Note] Found ca.pem, server-cert.pem and server-key.pem in data directory. Trying to enable SSL support using them.
lab-db-1 | 2024-04-16T17:49:07.995797Z 0 [Note] Skipping generation of SSL certificates as certificate files are present in data directory.
lab-db-1 | 2024-04-16T17:49:07.995813Z 0 [Warning] A deprecated TLS version TLSv1 is enabled. Please use TLSv1.2 or higher.
lab-db-1 | 2024-04-16T17:49:07.995817Z 0 [Warning] A deprecated TLS version TLSv1.1 is enabled. Please use TLSv1.2 or higher.
lab-db-1 | 2024-04-16T17:49:07.997126Z 0 [Warning] CA certificate ca.pem is self signed.
lab-db-1 | 2024-04-16T17:49:07.997299Z 0 [Note] Skipping generation of RSA key pair as key files are present in data directory.
lab-db-1 | 2024-04-16T17:49:07.997857Z 0 [Note] Server hostname (bind-address): '*'; port: 3306
lab-db-1 | 2024-04-16T17:49:08.001629Z 0 [Note] IPv6 is available.
lab-db-1 | 2024-04-16T17:49:08.002484Z 0 [Note] - '::' resolves to '::';
lab-db-1 | 2024-04-16T17:49:08.002691Z 0 [Note] Server socket created on IP: '::'.
lab-db-1 | 2024-04-16T17:49:08.012876Z 0 [Warning] Insecure configuration for --pid-file: Location '/var/run/mysqld' in the path is accessible to all OS users. Cons
ider choosing a different directory.
lab-db-1 | 2024-04-16T17:49:08.029270Z 0 [Note] Event Scheduler: Loaded 0 events
lab-db-1 | 2024-04-16T17:49:08.030634Z 0 [Note] mysqld: ready for connections.
lab-db-1 | Version: '5.7.44' socket: '/var/run/mysqld/mysqld.sock' port: 3306 MySQL Community Server (GPL)

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