Task :

1. Run a WordPress website in Docker Compose
- Nginx As Frontend and Proxy Server in web tier (Mount nginx configuration files and code on host)
- PHP-FPM in Web tier (Mount Code on host)
- MariaDB Database with persistence in db tier (use docker volume to store MariaDB database)

Must have 3 containers - in 1 networks
Must have 1 docker volume

Solutions :
Code of this task : https://github.com/techay-mihir-simform/docker_compose_task.git

Step 1:
Create docker-compsoe file

```
#Version of docker-compose file
version : '3'
services:


#Create mariadb container
mariadb:
  image: mariadb
  #Use mysql volume for persistence database .
  volumes:
    - mysql:/var/lib/mysql
 # Environment variable use for run mariadb container
  environment:
    MYSQL_ROOT_PASSWORD: ${MYSQL_ROOT_PASSWORD}
    MYSQL_DATABASE: ${MYSQL_DATABASE}
    MYSQL_USER: ${MYSQL_USER}
    MYSQL_PASSWORD: ${MYSQL_PASSWORD}
  restart: always
```

```yaml
#Create wordpress container

wordpress:
  image: wordpress:php7.3-fpm-alpine
  #Mount code on host
  volumes:
    - ./data/html:/var/www/html
  environment:
    WORDPRESS_DB_HOST: ${WORDPRESS_DB_HOST}
    MYSQL_ROOT_PASSWORD: ${MYSQL_ROOT_PASSWORD}
    WORDPRESS_DB_NAME: ${WORDPRESS_DB_NAME}
    WORDPRESS_DB_USER: ${WORDPRESS_DB_USER}
    WORDPRESS_DB_PASSWORD: ${WORDPRESS_DB_PASSWORD}
    WORDPRESS_TABLE_PREFIX: ${WORDPRESS_TABLE_PREFIX}
    # - WORDPRESS_DEBUG=1
   #Here wordpress service is communicate with mariadb
  links:
    - mariadb
  #Wordpress is depends on mariadb container
  depends_on:
    - mariadb
  restart: always

#Create nginx container
nginx:
  image: nginx:alpine
  volumes:
    - ./nginx:/etc/nginx/conf.d
    - ./data/html:/var/www/html
  #Port maping to 8084 , so we can access by host machine .
  ports:
    - 8084:80
  links:
```

```
    - wordpress


#Create volumes
volumes:
mysql:
```

Step 2: Create .env file environment variable and nginx configuration file

.env :
```
#Environment variable for database
MYSQL_ROOT_PASSWORD=root
MYSQL_DATABASE=db1
MYSQL_USER=mariadb
MYSQL_PASSWORD=mariadb

#Environment variable for wordpress
WORDPRESS_DB_HOST=mariadb
WORDPRESS_DB_NAME=db1
WORDPRESS_DB_USER=mariadb
WORDPRESS_DB_PASSWORD=mariadb
WORDPRESS_TABLE_PREFIX=wp_
```

Nginx.conf in nginx folder :
```
server {
 listen 80;
 listen [::]:80;
 access_log off;
 root /var/www/html;
 index index.php;
 server_name example.com;
 server_tokens off;
 location / {
   # First attempt to serve request as file, then
```

```
    # as directory, then fall back to displaying a 404.
    try_files $uri $uri/ /index.php?$args;
  }
  # pass the PHP scripts to FastCGI server listening on
wordpress:9000
  location ~ \.php$ {
    fastcgi_split_path_info ^(.+\.php)(/.+)$;
    fastcgi_pass wordpress:9000;
    fastcgi_index index.php;
    include fastcgi_params;
    fastcgi_param SCRIPT_FILENAME
$document_root$fastcgi_script_name;
    fastcgi_param SCRIPT_NAME $fastcgi_script_name;
  }
}
```

Step 3: Run docker-compose file

 # docker-compose up –build

Down container by

#docker-compose down