DOCKER ASSIGNMENT

Step 1: install docker and docker-compose up
Step 2: create a file docker-compose.yml
version: '3.7'

```yaml
services:
  nginx:
    image: nginx:latest
    container_name: nginx
    ports:
      - "80:80"
    volumes:
      - ./nginx/logs:/var/log/nginx
    networks:
      - efk

  elasticsearch:
    image: docker.elastic.co/elasticsearch/elasticsearch:7.9.3
    container_name: elasticsearch
    environment:
      - discovery.type=single-node
      - ES_JAVA_OPTS=-Xms512m -Xmx512m
    ports:
      - "9200:9200"
    networks:
      - efk

  kibana:
    image: docker.elastic.co/kibana/kibana:7.9.3
    container_name: kibana
    environment:
      - ELASTICSEARCH_HOSTS=http://elasticsearch:9200
    ports:
      - "5601:5601"
    networks:
      - efk

  filebeat:
    image: docker.elastic.co/beats/filebeat:7.9.3
    container_name: filebeat
    volumes:
      - ./filebeat.yml:/usr/share/filebeat/filebeat.yml
      - ./nginx/logs:/var/log/nginx
```

```
    environment:
      ELASTICSEARCH_HOSTS: "http://elasticsearch:9200"
      SETUP_KIBANA_HOST: "http://kibana:5601"

    networks:
      - efk
    depends_on:
- elasticsearch
```

Step 3: create a configuration file filebeat.yml

```
filebeat.inputs:
  - type: log
    enabled: true
    paths:
      - /var/log/nginx/access.log
      - /var/log/nginx/error.log

output.elasticsearch:
  hosts: ["http://elasticsearch:9200"]

setup.kibana:
  host: "http://kibana:5601"
```

Step 4: Running the Stack with the command

```
  docker-compose up -d
```

Step 5: Access the Components

- **Nginx:** http://localhost
- **Kibana:** http://localhost:5601

Visualizing Ngnix logs in kibana

Results: