

I. 개발환경

1. 프로젝트 기술 스택

Server : AWS EC2 Ubuntu 20.04 LTS

Visual Studio Code: 1.75.1

IntelliJ IDEA: 2022.3.1 (Ultimate Edition) 17.0.5+1-b653.23 amd64

JVM : OpenJDK 11.0.17 Docker : 20.10.17 Web3.js : 16.19.0

MariaDB: 10.10.2 Nginx: 1.23.3 Jenkins: 2.375.2

- 2. 설정 파일 목록
- · Frontend:
 - Jenkinsfile: /home/jenkins/workspace/Dev-Front/frontend/dist/index.html;
- Backend:
 - o Dockerfile:/home/jenkins/workspace/Dev-Back/backend/FANFTASY
 - Jenkinsfile: / home/jenkins/workspace/Dev-Back/backend/FANFTASY
 - $\circ \ \ application.yml: /home/jenkins/workspace/Dev-Back/backend/FANFTASY/src/main/resources\\$
- NGINX :
 - o nginx.conf:/etc/nginx/nginx.conf

0

- fanftasy.kro.kr.conf : /etc/nginx/sites-available
- defaulf : /etc/nginx/sites-available
- SSL:

fullchain.pem : /etc/nginx/sslprivkey.pem : /etc/nginx/ssl

- DOCKER:
 - o docker-compose.yml : /home/ubuntu/docker

Ⅱ. 설정 파일 목록

1. 젠킨스 설정

- 1. http://j8a306.p.ssafy.io:9090/로 접속
- 2. 서버 콘솔에서 docker logs jenkins를 입력하여 나온 결과 값(패스워드)를 입력
- 3. Install suggested plugins를 클릭하고 플러그인을 설치
- 4. Jenkins에서 사용할 계정 생성
- 5. Jenkins 접속 URL 확인 후 Save and Finish 클릭
- 6. Jenkins 페이지 접속 시, 생성한 계정으로 로그인
- 7. Jenkins 관리 플러그인 관리 Available plugins에서 gitlab 플러그인 설치
- 8. NodeJS 플러그인 설치

2. DB 덤프파일

▼ DB DATA.SOL

```
-- MySQL dump 10.13 Distrib 8.0.32, for Linux (x86_64)
-- Host: localhost Database: FANFTASY
-- Server version 8.0.32-0ubuntu0.20.04.2
/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!50503 SET NAMES utf8mb4 */;
/*!40103 SET @OLD_TIME_ZONE=@@TIME_ZONE */;
/*!40103 SET TIME_ZONE='+00:00' */;
/*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
/*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0 */;
/*!40101 \ \mathsf{SET} \ @OLD_SQL\_MODE=@@SQL\_MODE, \ \mathsf{SQL\_MODE='NO\_AUTO\_VALUE\_ON\_ZERO'} \ \ */;
/*!40111 \ \mathsf{SET} \ @\mathsf{OLD\_SQL\_NOTES} = & @\mathsf{OSQL\_NOTES}, \ \mathsf{SQL\_NOTES} = & \ */;
-- Table structure for table `Board
DROP TABLE IF EXISTS `Board`;
/*!40101 SET @saved_cs_client
                                       = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `Board` (
   `board_id` bigint NOT NULL AUTO_INCREMENT,
  `board_content` varchar(255) DEFAULT NULL,
`board_reg_date` datetime(6) DEFAULT NULL,
  `board_title` varchar(255) DEFAULT NULL,
  bounding the file befault NULL, 
`file_path` varchar(255) DEFAULT NULL, 
`file_type` varchar(255) DEFAULT NULL, 
`sale_price` double DEFAULT NULL,
   `type` varchar(255) DEFAULT NULL,
  `views` int NOT NULL,
   `board_write_user_id` bigint DEFAULT NULL,
  `nft_id` bigint DEFAULT NULL,
  PRIMARY KEY (`board_id`),
  KEY `FKr6jl2q5vlduilctxqwfx955vk` (`board_write_user_id`),
KEY `FK2f3qknl5w6v918aqdw1lgkvii` (`nft_id`),
  CONSTRAINT `FK2f3qknl5w6v918aqdw1lgkvii` FOREIGN KEY (`nft_id`) REFERENCES `NFT` (`nft_id`),
  {\tt CONSTRAINT `FKr6jl2q5vlduilctxqwfx955vk` FOREIGN KEY (`board\_write\_user\_id`) REFERENCES `users` (`user\_id`)} \\
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;
-- Dumping data for table `Board
LOCK TABLES `Board` WRITE;
/*!40000 ALTER TABLE `Board` DISABLE KEYS */;
/*!40000 ALTER TABLE `Board` ENABLE KEYS */;
UNLOCK TABLES;
```

```
-- Table structure for table `BoardLike`
DROP TABLE IF EXISTS `BoardLike`;

= @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `BoardLike` (
   `board_like_id` bigint NOT NULL AUTO_INCREMENT,
   `board_id` bigint DEFAULT NULL,
   `board_like_user_id` bigint DEFAULT NULL,
  PRIMARY KEY (`board_like_id`),
  KEY `FKsy4wlh80jhjnoi37gr4t4lag1` (`board_id`),
  KEY `FKe5m0cmlwq80ivlmreaama7i5` (`board_like_user_id`),
  CONSTRAINT `FKe5m0cmlwq80ivlmreaama7i5` FOREIGN KEY (`board_like_user_id`), REFERENCES `users` (`user_id`),
  {\tt CONSTRAINT `FKSy4wlh80jhjnoi37gr4t4lag1` FOREIGN KEY (`board\_id`) REFERENCES `Board` (`board\_id`)} \\
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;
-- Dumping data for table `BoardLike'
LOCK TABLES `BoardLike` WRITE;
/*!40000 ALTER TABLE `BoardLike` DISABLE KEYS */;
/*!40000 ALTER TABLE `BoardLike` ENABLE KEYS */;
UNLOCK TABLES;
-- Table structure for table `BoardReport`
DROP TABLE IF EXISTS `BoardReport`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `BoardReport` (
   `board_report_id` bigint NOT NULL AUTO_INCREMENT,
   `board_id` bigint DEFAULT NULL,
   `board_report_user_id` bigint DEFAULT NULL,
  PRIMARY KEY (`board_report_id`),
KEY `FKbi1mdacvii50gu9xx978irvqm` (`board_id`),
  KEY `FKhvai2ge5kvs4w5lqo8e09xket` (`board_report_user_id`),
  CONSTRAINT `FKbilmdacvii50gu9xx978irvqm` FOREIGN KEY (`board_id`) REFERENCES `Board` (`board_id`), CONSTRAINT `FKbvai2ge5kvs4w5lqo8e09xket` FOREIGN KEY (`board_report_user_id`) REFERENCES `users` (`user_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;
-- Dumping data for table `BoardReport`
LOCK TABLES `BoardReport` WRITE;
/*!40000 ALTER TABLE 'BoardReport' DISABLE KEYS */;
/*!40000 ALTER TABLE 'BoardReport' ENABLE KEYS */;
UNLOCK TABLES;
-- Table structure for table `CommentReport`
DROP TABLE IF EXISTS `CommentReport`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `CommentReport` (
   `comment_report_id` bigint NOT NULL AUTO_INCREMENT,
   `comment_id` bigint DEFAULT NULL,
   `comment_report_user_id` bigint DEFAULT NULL,
  PRIMARY KEY (`comment_report_id`),
KEY `FKmr0oyjdq61wlgqmv9ow6j01la` (`comment_id`),
  KEY `FKlf0u5q1kf0ocrm4raqjejegfw` (`comment_report_user_id`),
  {\tt CONSTRAINT `FKmr0oyjdq61wlgqmv9ow6j01la` FOREIGN KEY (`comment\_id`) REFERENCES `comments` (`comment\_id`)}
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4 0900 ai ci:
/*!40101 SET character_set_client = @saved_cs_client */;
-- Dumping data for table `CommentReport`
LOCK TABLES `CommentReport` WRITE;
/*!40000 ALTER TABLE `CommentReport` DISABLE KEYS */;
/*!40000 ALTER TABLE `CommentReport` ENABLE KEYS */;
UNLOCK TABLES;
-- Table structure for table `Log`
```

```
DROP TABLE IF EXISTS `Log`;
/*!40101 SET @saved_cs_client
                                                            = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `Log` (
     log_id` bigint NOT NULL AUTO_INCREMENT,
     `transaction_price` double DEFAULT NULL,
     transaction_time` bigint DEFAULT NULL,
     `buy_user_id` bigint DEFAULT NULL,
     `nft_id` bigint DEFAULT NULL,
     `sell_user_id` bigint DEFAULT NULL,
   PRIMARY KEY (`log_id`),
   KEY `FKhommpf9flwoe3iuiacc7q5tkl` (`buv user id`).
   KEY `FK2ov1y3co2slb0jp1gpukd4ec8` (`nft_id`),
   KEY `FKg5qvgkk9nh8dawv64xstka7d2` (`sell_user_id`),
   {\tt CONSTRAINT `FK2ov1y3co2slb0jp1gpukd4ec8` FOREIGN KEY (`nft\_id`) REFERENCES `NFT` (`nft\_id`),}
   CONSTRAINT `FKg5qvgkk9nh8dawv64xstka7d2` FOREIGN KEY (`sell_user_id`) REFERENCES `users` (`user_id`),
   {\tt CONSTRAINT `FKhommpf9flwoe3iujacc7q5tkl` FOREIGN KEY (`buy\_user\_id`) REFERENCES `users` (`user\_id`)}
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4 0900 ai ci:
/*!40101 SET character set client = @saved cs client */;
-- Dumping data for table `Log`
LOCK TABLES `Log` WRITE;
/*!40000 ALTER TABLE `Log` DISABLE KEYS */;
/*!40000 ALTER TABLE `Log` ENABLE KEYS */;
UNLOCK TABLES;
-- Table structure for table `NFT`
DROP TABLE IF EXISTS `NFT`:
/*!40101 SET @saved cs client
                                                            = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `NFT` (
     `nft id` bigint NOT NULL.
     current_price` double DEFAULT NULL,
     edition_num` bigint DEFAULT NULL,
     `is_on_sale` bit(1) DEFAULT NULL,
     nft_like_num` bigint DEFAULT NULL,
     `sale_contract` varchar(255) DEFAULT NULL,
     `transaction_time` datetime(6) DEFAULT NULL,
    `nft_source_id` bigint DEFAULT NULL,
     `owner id` bigint DEFAULT NULL,
   PRIMARY KEY (`nft_id`),
   KEY `FKd41r8jgf27x9i91ot4k8g4ot0` (`nft_source_id`),
    KEY `FKwi6p67ge90higvkv60c3u9wn` (`owner_id`),
   CONSTRAINT `FKd41r8jgf27x9i91ot4k8g4ot0` FOREIGN KEY (`nft_source_id`), REFERENCES `NFTSource` (`nft_source_id`),
   {\tt CONSTRAINT `FKwi6p67ge90higvkv60c3u9wn` FOREIGN KEY (`owner\_id`) REFERENCES `users` (`user\_id`)} \\
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4 0900 ai ci:
/*!40101 SET character set client = @saved cs client */:
-- Dumping data for table `NFT`
LOCK TABLES `NFT` WRITE:
/*!40000 ALTER TABLE `NFT` DISABLE KEYS */;
INSERT INTO `NFT` VALUES (71,500,1,_binary '',0,'0xB049716252c0374615AD3c78193e75a4F5b86331','2023-04-06 17:25:50.431378',2,1
0),(72,500,2,_binary '',1,'0x5442D3BF0AeefEA4185b80Dc9D14d5B8e6ebd9Bd','2023-04-06 17:28:12.703809',2,10),(73,1000,3,_binary
      ,0,'0x12214061bC79EbD6DfF845956597Ce36807f6C78','2023-04-06 17:30:14.522526',2,10),(74,1.5,1,_binary '\0',0,'0x6018226221303
4:21.298579',3,9),(80,111,1, _binary '',0,'0x162d1C902d29AD394F64F9843e781E87e5C7cC1e','2023-04-06 18:27:09.118645',5,11),(81,0.5,2,_binary '\0',0,'0x67e1a8134942bf12c50b34e17d44d29d7dcad5b1','2023-04-06 17:48:55.163347',5,9),(82,0.5,3,_binary '\0',0,'0xd
09643068a7dffbb1c5aaa15695b59135f924b1b','2023-04-06 17:48:55.163347',5,9),(83,0.5,4,_binary '\0',0,'0xa1a335d6a42053e56a8569ba
2521b5b4b638f97d','2023-04-06 17:48:55.163347',5,9),(84,0.5,5,_binary '\0',0,'0x1b20c16f423e907c9795958f9cb1eef412cebbb9','2023
-04-06 17:48:55.163347',5,9),(85,0.5,6,_binary '\0',0,'0x98472d5b46c65ddb2549736b3e83b73d6d31cdfd','2023-04-06 17:48:55.16334
9f63e2169db32f3f02771bd791adb2','2023-04-06 17:48:55.163347',5,9),(89,0.5,10,_binary '\0',0,'0xfa10351b0fc27b6564d106593a554bab
ef65909c','2023-04-06 17:48:55.163347',5,9),(90,0.3,1,_binary '\0',0,,0'0x5a520b7231555a3a3aa5676deda3622d77dc9ac8','2023-04-06 1
2,0.3,3,_binary '\0',0,'0x174c86892dc12e2f06a12dfe27c660751c5fea2b','2023-04-06 17:49:19.291791',6,9),(93,0.3,4,_binary '\0'
0,'0x1f6fe1dc1d2689149a03f6bd93abc52e11f681ef','2023-04-06 17:49:19.291791',6,9),(94,0.3,5,_binary '\0',0,'0x4acb4e6be2d1fbf425 3d9306cbe4da7f2c17c899','2023-04-06 17:49:19.291791',6,9),(95,20,1,_binary '',0,'0xd83d0b7703Bbb49d4c5b3EfB80a51ee218236c51','2 023-04-06 18:11:44.737018',7,11),(96,2,2,_binary '\0',0,'0xa403c97451df36734b97d83ed6846da815be1161','2023-04-06 17:50:39.48486
4',7,9),(97,2,3,_binary '\0',0,'0xabb13b3b86d01c3f6f6fc7a9d1e0b9284ac59afa','2023-04-06 17:50:39.484864',7,9),(98,2,4,_binary '\0',0,'0x809b2541cba6d976e71fc9f02447a35a44d834c5','2023-04-06 17:50:39.484864',7,9),(99,2,5,_binary '\0',0,'0x4575c3f0dd8896 a93971d763c02d8ac9785fac8e','2023-04-06 17:50:39.484864',7,9),(100,0.7,1,_binary '\0',0,'0x34dffef17433e62ff3735b965edddda50014
504d','2023-04-06 17:51:57.245307',8,9),(101,0.7,2,_binary '\0',0,'0x64464f4fdce25884ee17955da44d37f9538cb246','2023-04-06 17:5
1:57.245307',8,9), (110,5,1,\_binary \ '\ '\ ',0,'0x396ebb76e5c99a67b340253444e76bdd2c5f7880','2023-04-06 \ 17:54:20.396363',10,9), (111,10,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), (111,10), 
50,1,_binary '\0',0,'0x4c6600c8695ece1ccbfe1c636f73f82de3342435','2023-04-06 17:58:09.915620',11,9),(112,50,2,_binary '\0',0,'0
xfac07a6b9c1ab647c8a22bce657ba03e88f11231','2023-04-06 17:58:09.915620',11,9),(113,50,3,_binary '\0',0,'0x28c6398e827d1befd5837
1530c560ee188a2af04','2023-04-06\ 17:58:09.915620',11,9), (114,50,4,\_binary\ '\0',0,'0x58eeba9e55a603788059f69f226a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7de,26a39c5a76f7
```

```
3','2023-04-06 17:58:09.915620',11,9),(115,50,5,_binary '\0',0,'0x14cccd412a2342b6b725771241a3c67c8886eddf','2023-04-06 17:58:0
  9.915620', 11, 9), (116, 50, 6, \_binary \ '\ '\ ', 0', 0', 6x65a1b08e9e3b67588cdc7cad699cc3ba7fbded26', '2023-04-06 \ 17:58:09.915620', 11, 9), (117, 5a)
  28fb04a7a8408b1297'.'2023-04-06 17:58:09.915620'.11.9\,(120.50.10. binary '\0'.0.'0xfed574f65debed0cf0b1e91200bc6cbe38a6b46
  38.068262^{\text{'}},12,9), (122,0.8,2,\_\text{binary '}0^{\text{'}},0,^{\text{'}}0x0456cedb1c7afe1aa06f37ecc54548ec58c7641a',^{\text{'}}2023-04-06 18:00:38.068262^{\text{'}},12,9), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (122,0.8,2), (12
  3,0.8,3,_binary '\0',0,'0x644810d676ecfa0d4ea670423504e7eef0de9f53','2023-04-06 18:00:38.068262',12,9),(124,0.8,4,_binary '\0',
  bac746bef0c5d7fa7aba654a','2023-04-06 18:00:38.068262',12,9),(126,0.8,6,_binary '\0',0,'0x406a3f1a68705ec2bb645e63874af8439e0a0 c46','2023-04-06 18:00:38.068262',12,9),(127,11,1,_binary '',0,'0x33C7B5b592763B69DdA4beEbe9EB19a0abe13298','2023-04-06 18:08:3
  7.807688',13,11),(128,5,2,_binary '',0,'0xfBAB76B894E61da5c733bBC782e92bf02170AA9A','2023-04-06 18:26:59.218657',13,12),(129,8,
  3,_binary '\0',0, '0x996d078ace6850603722a42b25b8ed421c4d780d','2023-04-06 18:01:48.036602',13,9),(130,8,4,_binary '\0',0,'0x5ac
  bdf05221293da64dd176ebe0b9260c61c08e4','2023-04-06 18:01:48.036602',13,9),(131,8,5,_binary '\0',0,'0xf250a0d3f8f236be006cad9427
  1 f da 27 b 2 b 7 12 c b', '2023 - 04 - 06 \ 18 : 01 : 48 . 036602', 13, 9), (132, 8, 6, \_binary '\0', 0, '0x 0b 75 3 ecca 33 e8 8 a 2 d 6 a 8 ef 5 a 1 a e 3 9 17 4 a 2 b 2 4 c a c', '2023 - 04 a 2 b 2 b 2 a c', '2023 - 04 a 2 b 2 b 2 a c', '2023 - 04 a 2 b 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a 2 b 2 a c', '2023 - 04 a c', '2023 - 0
  4-06\ 18:01:48.036602',13,9), (133,8,7,\_binary\ '\0',0,'0x76a5f2a36fe898f4d0a275c32229c8fd1bd2dd81','2023-04-06\ 18:01:48.036602',13,9), (133,8,7,\_binary\ '\0',0,'0x76a5f2a36fe898f4d0a275c32229c8fd1bd2dd81','2023-04-06\ 18:01:48.036602',13,9), (133,8,7,\_binary\ '\0',0,'0x76a5f2a36fe898f4d0a275c32229c8fd1bd2dd81','2023-04-06\ 18:01:48.036602',13,9), (133,8,7,\_binary\ '\0',0,'0x76a5f2a36fe898f4d0a275c32229c8fd1bd2dd81','2023-04-06\ 18:01:48.036602',13,9), (133,8,7,\_binary\ '\0',0,'0x76a5f2a36f898f4d0a275c32229c8fd1bd2dd81','2023-04-06\ 18:01:48.036602',13,9), (133,8,7,\_binary\ '\0',0,'0x76a5f2a36f898f4d0a275c3229c8fd1bd2dd81','2023-04-06\ 18:01:48.036602',13,8,9), (133,8,7,\_binary\ '\0',0,'0x76a5f2a36f898f4d0a275c329',13,9), (133,8,7,\_binary\ '\0',0,'0x76a5f8967602',13,9), (133,8,7,\_binary\ '\0',0,'0x76a5f8967602',13,9), (133,8,7,\_binary\ '\0',0,'0x76a5f8967602',13,9), (133,8,7,
  3,9), (134,8,8,\_binary \ '\ '\ ',0,'0xf97952761393ad580c7962f8a481d6940083f7e1', '2023-04-06 \ 18:01:48.036602', 13,9), (135,8,9,\_binary \ '\ '\ ',0,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,8,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,135,9,1
     '\0',0,'0x8dd7f65f2345a14c1a7354d1e82eac9ad4c8bd46','2023-04-06 18:01:48.036602',13,9),(136,8,10,_binary '\0',0,'0xa13b8b93752
  d7dc3d8ee23092f599b0df2e73ee3','2023-04-06 18:01:48.036602',13,9),(137,8,11,_binary '\0',0,'0x15318bc2912c40f70194377f6366901c6
  d91bc64','2023-04-06 18:01:48.036602',13,9),(138,8,12,_binary '\0',0,'0xc5a413c1b462b9935a60f256497d638cea39d257','2023-04-06 1
  0,'0x490794d2a29117a8b292c8fd656c4a28b8fd577a','2023-04-07 00:03:08.253722',15,12),(145,0.5,4,_binary '',0,'0x816AB9137256e6BFA
  51B59086DddBB94aaF0f94c','2023-04-07 00:22:53.456793',15,13),(146,1,5,_binary '\0',0,'0x5711dca5de8d6a92c388f18e1c6fa83ef74b6bc
  5.160725',15,9),(148,1,7,_binary '\0',0,'0x7285156c00fb100095c0fc19fc4ec3edd16c3255','2023-04-06 23:46:35.160725',15,9),(149,1,
  8,_binary '\0',0,'0x82ab724c464f520cc8eae6c326cc02c8d828083f','2023-04-06 23:46:35.160725',15,9),(150,1,9,_binary '\0',0,'0x23c
  17,9),(156,1,1,_binary '\0',0,'0xcf18492bb2d4ca0d6ce174d68feca352f2bc212c','2023-04-07 01:04:45.776328',18,9),(157,1,2,_binary
     '\0',0,'0x297cb8a8cacd50ccaff92d0d49eb7d08880cba20','2023-04-07 01:04:45.776328',18,9),(158,1,3,_binary '\0',0,'0x462b36caffa6
  2b5d0cf8745f629b78851c705278','2023-04-07 01:04:45.776328',18,9),(159,1,4,_binary '\0',0,'0x59303de9f72b2989a317f149178f3d206d8
  be6c1','2023-04-07 01:04:45.776328',18,9),(160,1,1,_binary '\0',0,'0xf7dce4f7c3d660fe80a066ddae8e16798c60b5dc','2023-04-07 01:0
  5',20,9),(167,5,5,_binary '\0',0, '0xc0b0c9dde637829a7e841813da8281140956f5af','2023-04-07 01:39:00.521455',20,9),(168,5,6,_bina
  ff101916dfe634953283a0de1f8d43','2023-04-07 01:39:00.521455',20,9),(170,5,8,_binary '\0',0,'0x070416caa7fbd0969eef3a0ce97dd8249
  8432775','2023-04-07\ 01:39:00.521455',20,9),(171,5,9,\_binary\ '\0',0,'0x28fb37a86ac2d9bddbaf624031c521697fdb96d7','2023-04-07\ 01:39:00.521455',20,9),(171,5,9,\_binary\ '\0',0,'0x28fb37a86ac2d9bdbaf624031c521697fdb96d7','2023-04-07\ 01:39:00.521455',20,00.521455',20,00.52145',20,00.52145',20,00.52145',20,00.52145',20,00.52145',20,00.52145',20,00.52145',20,00.52145',20,00.52145',20,00.52145',20,00.52145',20,00.52145',20,00.52145',20,00.52145',20,00.52
  1:39:00.521455',20,9),(172,5,10,_binary '\0',0,'0xd1ae039565aa0803ac8f1b598af9741766050114','2023-04-07 01:39:00.521455',20,9),
  (173,5,1,_binary '\0',0,'0x76099c4973ce199c03ea5f0d9d2fd1582e3711b5','2023-04-07 01:39:23.051945',21,9),(174,5,2,_binary '\0'
  0,'0x8412005ffe25cf3d41091574d8db75ba75317d1b','2023-04-07 01:39:23.051945',21,9),(175,5,3,_binary '\0',0,'0xae3671a586656a2611
  30 ba 2 ed 57 a 072 a b 640 80 f 0', '2023-04-07 01:39:23.051945', 21, 9), (176, 5, 4, \_binary '\ 0', 0, '0x 9 f 6c 4 a d b 8e 41b 7e 43713508 c f ebad 4e 450 859 f a constant of the const
  f','2023-04-07 01:39:23.051945',21,9),(177,5,5,_binary '\0',0,'0xb03c4e33ed2f9892df46907d6d782780a9908339','2023-04-07 01:39:2
  7,_binary '\0',0,'0x909fcb1f3cab9cfe7c9d0caeb98657b0c803afb3','2023-04-07 01:39:23.051945',21,9),(180,5,8,_binary '\0',0,'0x5f9 05b564c2b27700ddf6e4e2ec6666303c99a41','2023-04-07 01:39:23.051945',21,9),(181,5,9,_binary '\0',0,'0xe7343e7e2c7552albd518fb90f
  aa4450742d5a9a','2023-04-07\ 01:39:23.051945',21,9), (182,5,10,\_binary\ '\0',0,'0x4926e14abd154f6ffeabdc745d94203af49c2886','2023-04-07\ 01:39:23.051945',21,9), (182,5,10,\_binary\ '\0',0,'0x4926abd154ffeabdc745d94203af49c2886','2023-04-07\ 01:39:23.051945',21,9), (182,5,10,\_binary\ '\0',0,'0x4926abd154ffeabdc745d94203af49c2886','2023-04-07\ 01:39:23.051945','2023-04-07\ 01:39:23.051945','2023-04-07\ 01:39:23.051945','2023-04-07\ 01:39:23.051945','2023-04-07\ 01:39:23.051945','2023-04-07\ 01:39:23.051945','2023-04-07\ 01:39:23.051945','2023-04-07\ 01:39:23.051945','2023-04-07\ 01:39:23.051945','2023-04-07\ 01:39:23.051945','2023-04-0
  04-07 01:39:23.051945',21,9),(183,500,1,_binary '\0',0',0x86e5f130f2b214c65843459fbd69185d57a2e692','2023-04-07 02:04:25.08548
  1',22,9),(184,500,2,_binary '\0',0,'0x4e53b71af48e235139b9e967ee21581f38baed27','2023-04-07 02:04:25.085481',22,9),(185,500,3,
  binary '\0',0,'0x7cc6e9f032d5a9b731df71cd89ba79ae8e7f42fa','2023-04-07 02:04:25.085481',22,9),(186,500,4,_binary '\0',0,'0x354
  308be3dd9d796dc','2023-04-07 02:04:25.085481',22,9);
  /*!40000 ALTER TABLE `NFT` ENABLE KEYS */;
  UNLOCK TABLES:
  -- Table structure for table `NFTLike
 DROP TABLE IF EXISTS `NFTLike`;
  /*!40101 SET @saved cs client
                                                                                    = @@character_set_client */;
  /*!50503 SET character_set_client = utf8mb4 */;
  CREATE TABLE `NFTLike` (
         nft_like_id` bigint NOT NULL AUTO_INCREMENT,
         nft_id` bigint DEFAULT NULL,
        `nft_like_user_id` bigint DEFAULT NULL,
      PRIMARY KEY (`nft like id`),
      KEY `FK5jby2sfr8tqk4tmd4rxqteyl1` (`nft_id`),
      KEY `FKkth1iisirhbsr1slrxvba3fc9` (`nft_like_user_id`),
      {\tt CONSTRAINT `FK5jby2sfr8tgk4tmd4rxgteyl1` FOREIGN KEY (`nft\_id`) REFERENCES `NFT` (`nft\_id`),}
      CONSTRAINT `FKkth1iisirhbsr1slrxvba3fc9` FOREIGN KEY (`nft_like_user_id`) REFERENCES `users` (`user_id`)
  ) ENGINE=InnoDB AUTO_INCREMENT=3 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
  /*!40101 SET character_set_client = @saved_cs_client */;
  -- Dumping data for table `NFTLike
  LOCK TABLES `NFTLike` WRITE;
  /*!40000 ALTER TABLE `NFTLike` DISABLE KEYS */;
  INSERT INTO `NFTLike` VALUES (1,72,9);
  /*!40000 ALTER TABLE `NFTLike` ENABLE KEYS */:
```

```
UNLOCK TABLES;
 -- Table structure for table `NFTSource`
DROP TABLE IF EXISTS 'NFTSource'; = @@character_set_client */;
 /*!50503 SET character_set_client = utf8mb4 */;
 CREATE TABLE `NFTSource` (
     `nft source id` bigint NOT NULL AUTO INCREMENT.
     `content` varchar(255) NOT NULL.
      end_date` datetime(6) NOT NULL,
      file_CID` varchar(255) NOT NULL,
     `file_type` varchar(255) NOT NULL,
     `like_num` bigint NOT NULL,
     `meta_CID` varchar(255) NOT NULL,
     `origin price` double NOT NULL.
     `reg_date` datetime(6) NOT NULL,
     `remain_num` bigint NOT NULL,
     `title` varchar(255) NOT NULL,
    `total_num` bigint NOT NULL,
     `reg_artist` bigint NOT NULL,
    PRIMARY KEY (`nft_source_id`),
    KEY `FKalf5lju5044wdciqo7no12iwu` (`reg_artist`),
    CONSTRAINT `FKalf5lju5044wdciqo7no12iwu` FOREIGN KEY (`reg_artist`) REFERENCES `users` (`user_id`)
 ) ENGINE=InnoDB AUTO_INCREMENT=23 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
 /*!40101 SET character_set_client = @saved_cs_client */;
 -- Dumping data for table `NFTSource'
 LOCK TABLES `NFTSource` WRITE;
 /*!40000 ALTER TABLE `NFTSource` DISABLE KEYS */;
 INSERT INTO `NFTSource` VALUES (2,'날닮은','2023-04-12 00:00:00.0000000','https://ipfs.io/ipfs/QmU9g9J8DKabzPVXcAZMmPjsvteaV6uMFn
 0,'쿠로미',3,10),(3,'10주년 콘서트 하이라이트 장면','2023-04-21 00:00:00:000000','https://ipfs.io/ipfs/QmdoMQAcvMyFuKFsTYebQbpAhSZMt7c
 sxirrFy9MD02Yhf','image',0,'https://ipfs.io/ipfs/0mX6wBgwro76pFydfgEngB78LwNURj52E8bj6gMd7KaCys',1.5,'2023-04-06 17:44:21.29857
 9',3,'히어로 10주년 콘서트',3,10),(5,'정규 2집 앨범 발매 기념 NFT','2023-04-26 00:00:00:00000','https://ipfs.io/ipfs/QmastPAgtmwaEcyrM
 5 \forall \texttt{iiiRJbCnep8wvgVpwbVnyHidoMM','image',0,'https://ipfs.io/ipfs/QmUFzWofu615Fp19L2d184AnKZsy5FL4cEFXFuij657Uy2',0.5,'2023-04-06} \\
  17:48:55.163347',9,'2집 앨범 커버',10,10),(6,'해외 촬영을 위한 국제 공항 출국길','2023-04-10 00:00:00.0000000','https://ipfs.io/ipfs/QmP
 3, '2023-04-06 17:49:19.291791',5,'국제공항 출국길',5,6),(7,'세상에서 가장 어깨 넓게 나온 소중한 짤입니다^^','2023-04-29 00:00:00.000000','ht
 tps://ipfs.io/ipfs/QmQPyxsjEkKGoTeSX4q66cWoZDzYjJrRxjGVCSMTz4atjJ','image',0,'https://ipfs.io/ipfs/QmVwmufjPzsBt3ywDebhmqiuKjsWq7vVjBsYMSRjPanMYF',2,'2023-04-06 17:50:39.484864',4,'어깨 깡패짤',5,10),(8,'기상캐스터 배역 연기 NFT','2023-04-18 00:00:00:0000000','h
 ttps://ipfs.io/ipfs/QmUXmU57k7gQoyYpNrLS2i5iKR4DW8bj22bZYXU4EF9q1S','image',0,'https://ipfs.io/ipfs/QmWGXZwqn6R1sa9mDpnCCf426mV
 B8sJbGDHivjXFVT84DK',0.7,'2023-04-06 17:51:57.245307',2,'기상캐스터 연기 역할 NFT',2,6),(10,'우주 슈퍼 멋쟁이\n제곧내의 표본','2023-04-28
  00:00:00.0000000', \texttt{'https://ipfs.io/ipfs/QmcJbQpWws9wLYy3kNVbX4Zjuvoo1s861yPq6Q9BCZSg5g', \texttt{'image',0,'https://ipfs.io/ipfs/QmTnXRZ'} \\
 CQdxezZUTUDjc2Ha85Qssdgb3WXZjeA3V13HH6A',5,'2023-04-06 17:54:20.396363',1,'우주 슈퍼 멋쟁이',1,3),(11,'사랑이 넘치는 NFT','2023-04-29
 00:00:00:00.000000', 'https://ipfs.io/ipfs/QmYxrh3NRKV5ijhzyWkhLmMTEWRXSB2y2UV64StpejA2kH', 'image', 0, 'https://ipfs.io/ipfs/QmX6YeVzh2NRKV5ijhzyWkhLmMTEWRXSB2y2UV64StpejA2kH', 'image', 0, 'https://ipfs.io/ipfs/QmX6YeVzh2NRXYSB2y2UV64StpejA2kH', 'image', 0, 'https://ipfs.io/ipfs.io/ipfs.io/ipfs/QmX6YeVzh2NRXYSB2y2UV64StpejA2kH', 'image', 0, 'https://ipfs.io/ipfs/QmX6YeVzh2NRXYSB2y2UV64StpejA2kH', 0, 'https://ipfs.io/ipfs/QmX6YeVzh2NRXYSB2y2UV64StpejA2kH', 0, 'https://ipfs.io/ipfs/QmX6YeVzh2NRXYSB2y2UV64StpejA2kH', 0, 'https://ipfs.io/ipfs/QmX6YeVzh2NRXYSB2y2UV64StpejA2kH', 0, 'https://image', 0, 'https
 yV9Qt6coMzEAWawkmCVbpUNZJqkkGqNKu61FVP',50,'2023-04-06 17:58:09.915620',10,'사랑이 넘치는 NFT',10,3),(12,'촬영장 가는 길에 찍은 유명 연
 예인 NFT 사진','2023-04-19 00:00:00:00:00:00000','https://ipfs.io/ipfs/QmeWjZFagJsbPQJvaHSnHrBpR7VGVAUB1YkKwNDUV4GJCx','image',0,'http
 s://ipfs.io/ipfs/QmSv3yh62Nbjt5Gt5ae5muH8jwqfozN2cihKD9ekaZCAes',0.8,'2023-04-06 18:00:38.068262',6,'혈영 가는 길 NFT',6,6),(1
 3, '노래하는 가수 NFT','2023-04-24 00:00:00:00:00:000000','https://ipfs.io/ipfs/QmvrRKBbyCFU8Con2MyuzBgWJCGYE1R5TARAKVjQFihVcU','image',
 0,'https://ipfs.io/ipfs/QmaVbBBRCqMXKLNGccxMqWCr9XgmzFcLiSfEKMniTSrVtt',8,'2023-04-06 18:01:48.036602',10,'노래하는 가수 NFT',12,
 3),(15,'치타는 뛰고 있다.','2023-04-08 00:00:00:00:000000','https://ipfs.io/ipfs/QmdrixTKKFTnucerBaS5FcbrPT33RzzYHBFc4weNZ5WyCz','ima
 ge',0,'https://ipfs.io/ipfs/QmXeVY8XBSS6V6bt8yEWY0GfNJGCzrsg5iho84qDJ3Dq8r',1,'2023-04-06 23:46:35.160725',6,'시간이 없다',10,5),
(17, '나무는 모두에게 친절합니다.','2023-05-04 00:00:00:00:000000','https://ipfs.io/ipfs/qmfRZgM5YfJrjghFhe5Z5w32CwK8ipkTos5UMMPgJSxff
S','image',0,'https://ipfs.io/ipfs/qmRn3aRhKYXDeD6Fhkz5SNt9HBwYpDzQ3X9kStksp9Dggo',1,'2023-04-07 00:50:06.368327',2,'나무는 좋은
  거',2,3),(18,'아낌없이 주는 나무','2023-04-28 00:00:00.000000','https://ipfs.io/ipfs/QmfRZgM5YfJrjghFhe5Z5w32CwK8ipkTos5UMMPgJSxff
 S','image',0,'https://ipfs.io/ipfs/QmaxZcG7YskFPT9KtabCVncTRW1F5pdUHCaWZ9MMp44FWQ',1,'2023-04-07 01:04:45.776328',4,'나무는 사랑스
 러워',4,3),(19,'공연 당시의 뜨거운 열기를 담은 사진입니다.','2023-04-08 00:00:00.000000','https://ipfs.io/ipfs/QmbpHVmjXqUJ58sTwu9fxtwKX3
 6 uVXqn8nxRfcUW1qCWmN', 'image', 0, 'https://ipfs.io/ipfs/QmcD7RxVKCwxVw77QnRcKhD98CbQEf2UKbuN5XNi9HDbSM', 1, '2023-04-07 01:09:03.39 (a.g., a.g., a
 5241',3,'공연 촬영 사진',3,4),(20,'냉용','2023-04-08 00:00:00.000000','https://ipfs.io/ipfs/QmdrixTKKFTnucerBaS5FcbrPT33RzzYHBFc4we
NZ5WyCz','image',0,'https://ipfs.io/ipfs/qmXqTA1YpciijBFp3hEQPPVP6zmExYntVkBcC4Xi2pdFLp',5,'2023-04-07 01:39:00.521455',10,'제목',10,5),(21,'냉용','2023-04-08 00:00:00.000000','https://ipfs.io/ipfs/QmdrixTKKFTnucerBaS5FcbrPT33RzzYHBFc4weNZ5WyCz','image',
 0, https://ipfs.io/ipfs/QmXM28fktzt43XqUUCj9fnfo9FEA5dbjndSyKtNYsceCH4',5,'2023-04-07 01:39:23.051945',10,'제목',10,5),(22,'나무
 가 너무 크다', '2023-04-30 00:00:00:00:00:000000', 'https://ipfs.io/ipfs/QmfRZgM5YfJrjghFhe5Z5w32CwK8ipkTos5UMMPgJSxffS', 'image',0, 'http
 s://ipfs.io/ipfs/QmeB8US5nUawsKLpYGErupJjuCr4GVGqWhdpJ6P6M1PMCa',500,'2023-04-07 02:04:25.085481',5,'큰 나무',5,3);
 /*!40000 ALTER TABLE `NFTSource` ENABLE KEYS */;
LINLOCK TABLES:
 -- Table structure for table `NFTSourceLike
 DROP TABLE IF EXISTS `NFTSourceLike`;
 /*!40101 SET @saved_cs_client = @@character_set_client */;
 /*!50503 SET character_set_client = utf8mb4 */;
 CREATE TABLE `NFTSourceLike` (
      nft_source_like_id` bigint NOT NULL AUTO_INCREMENT,
      nft_source_id` bigint DEFAULT NULL,
      user_id` bigint DEFAULT NULL,
    PRIMARY KEY (`nft_source_like_id`),
    KEY `FKe0pjnuhp96w1dlhslen9r99mo` (`nft_source_id`),
KEY `FK6tyyukmp3vi5q14rcsdc5otin` (`user_id`),
```

```
CONSTRAINT `FK6tyyukmp3vi5q14rcsdc5otin` FOREIGN KEY (`user_id`) REFERENCES `users` (`user_id`),
    {\tt CONSTRAINT `FKe0pjnuhp96w1dlhslen9r99mo` FOREIGN KEY (`nft\_source\_id`) REFERENCES `NFTSource` (`nft\_source\_id`)} \\
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;
-- Dumping data for table `NFTSourceLike
LOCK TABLES `NFTSourceLike` WRITE;
/*!40000 ALTER TABLE `NFTSourceLike` DISABLE KEYS */;
/*!40000 ALTER TABLE `NFTSourceLike` ENABLE KEYS */;
UNLOCK TABLES;
-- Table structure for table `comments`
DROP TABLE IF EXISTS `comments`;
/*!40101 SET @saved_cs_client
                                                                     = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `comments` (
      `comment_id` bigint NOT NULL AUTO_INCREMENT,
     `comment_content` varchar(255) DEFAULT NULL,
`comment_reg_date` datetime(6) DEFAULT NULL,
     `board_id` bigint DEFAULT NULL,
      `comment_write_user_id` bigint DEFAULT NULL,
    PRIMARY KEY (`comment_id`),
    KEY `FKht7s0lkjxvkmpsgnoorj9o2wo` (`board_id`),
    KEY `FKoqu6j35nr9ci124b7g9csax9r` (`comment_write_user_id`),
    CONSTRAINT `FKht7s0lkjxvkmpsgnoorj9o2wo` FOREIGN KEY (`board_id`) REFERENCES `Board` (`board_id`),
CONSTRAINT `FKoqu6j35nr9ci124b7g9csax9r` FOREIGN KEY (`comment_write_user_id`) REFERENCES `users` (`user_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;
-- Dumping data for table `comments`
LOCK TABLES `comments` WRITE;
/*!40000 ALTER TABLE `comments` DISABLE KEYS */;
/*!40000 ALTER TABLE `comments` ENABLE KEYS */;
UNLOCK TABLES;
-- Table structure for table `users`
DROP TABLE IF EXISTS `users`;
/*!40101 SET @saved_cs_client
                                                                 = @@character_set_client */;
 /*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `users` (
     `user id` bigint NOT NULL AUTO INCREMENT.
      `address` varchar(255) DEFAULT NULL,
      `company` varchar(255) DEFAULT NULL,
      `email` varchar(255) DEFAULT NULL,
      `name` varchar(255) DEFAULT NULL,
      `nickname` varchar(255) DEFAULT NULL,
      `phone` varchar(255) DEFAULT NULL,
      `profile_img` varchar(255) DEFAULT NULL,
      refresh_token` varchar(255) DEFAULT NULL,
      `role` varchar(255) DEFAULT NULL,
      `total_price` int DEFAULT NULL,
     `total_sales` int DEFAULT NULL,
     `user_key` varchar(255) DEFAULT NULL,
    PRIMARY KEY (`user_id`)
) ENGINE=InnoDB AUTO_INCREMENT=14 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;
-- Dumping data for table `users`
LOCK TABLES `users` WRITE;
/*!40000 ALTER TABLE `users` DISABLE KEYS */;
INSERT INTO `users` VALUES (1,'0x14714ba238da9f5fe7c439107c7c21b88afe7923','FANFTASY','qwer1234@a.com','장근우','그누그누s','01012
일','로그인','닉네임','전화번호','https://fanftasy.s3.ap-northeast-2.amazonaws.com/profileImg/fec9ac5e-70b6-40bf-8e39-e4c539011e4e.p
ng',NULL,'artist',0,0,NULL),(5,'0x208c18be9018944a171fbd4b764d3dcdc0e744fb','민수엔터','whalstn@naver.com',' 조민수','minsu','0103
3856659', 'https://fanftasy.s3.ap-northeast-2.amazonaws.com/profileImg/8c64c983-1b80-40fb-bcc1-366f3322cbb2.png', NULL, 'artist', artist', artist
4,4,NULL),(6,'0x3f00362ef7b4df5ac7a2a0d7e6efe85217b968b7','SSAFY','qwas15788@gmail.com','최현제','FANFTASY 소속','01087921153','h
ttps://fanftasy.s3.ap-northeast-2.amazonaws.com/profileImg/00c13605-a8d3-42ee-ac09-c7cd2c8706c6.jpg', NULL, 'artist', 0, 0, NULL), 'artist', 0, 0, NULL), 'artist', 0, 0, NULL', 0, N
(8,'0xcf0a82523381cabc67879d1d3c104ececc915027','하아아이브','admin@gmail.com','관리자','관리자','01038063795','https://fanftasy.s3.
```

```
ap-northeast-2.amazonaws.com/profileImg/8c64c983-1b80-40fb-bcc1-366f3322cbb2.png', NULL, 'wait', 0, 0, NULL), '(9, '0xdb2d8bae9f4170328-1b80-40fb-bcc1-366f3322cbb2.png', NULL, 'wait', 0, 0, NULL), '(9, '0xdb2d8bae9f4170328-1b80-40fb-bcc1-366f3322cbb2.png'), '(9, '0xdb2d8bae9f4170328-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f332-1b80-40fb-bcc1-366f35-1b80-40fb-bcc1-366f35-1b80-40fb-bcc1-3
5d99ab76d655a5e1c2646ab','하이브','admin@gmail.com','관리자','관리자','01038063795','https://fanftasy.s3.ap-northeast-2.amazonaws.c
8','하입보이','fann3795@naver.com','아티스트','아티스트','01135463245','https://fanftasy.s3.ap-northeast-2.amazonaws.com/profileImg/8
c64c983-1b80-40fb-bcc1-366f3322cbb2.png',NULL,'artist',5,5,NULL),(11,'0xb8ad2cf28e9aa717398fb2b08f8328e916305d98','once','fann@
naver.com','김성환','우리형응원해','이1038063954','https://fanftasy.s3.ap-northeast-2.amazonaws.com/profileImg/8c64c983-1b80-40fb-bc
c1-366f3322cbb2.png',NULL,'fan',0,0,NULL),(12,'0x4a88bb923784ec3fb78abefdd8a8d21c261b3dae','once','bank@gmail.com','은행임','ban
L,'fan',0,0,NULL),(13,'0x15184e70fba8cfc958403c0692c3a064d0771105','once','weedsim@gmail.com','심호연','시모시모','01052162272','h
ttps://fanftasy.s3.ap-northeast-2.amazonaws.com/profileImg/8c64c983-1b80-40fb-bcc1-366f3322cbb2.png',NULL,'fan',0,0,NULL);
/*!40000 ALTER TABLE `users` ENABLE KEYS */;
UNLOCK TABLES:
/*!40103 SET TIME_ZONE=@OLD_TIME_ZONE */;
/*!40101 SET SQL_MODE=@OLD_SQL_MODE */;
/*!40014 SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS */;
/*!40014 SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS */;
/*!40101 SET CHARACTER SET CLIENT=@OLD CHARACTER SET CLIENT */:
/*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;
/*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */;
/*!40111 SET SQL_NOTES=@OLD_SQL_NOTES */;
-- Dump completed on 2023-04-07 11:39:08
```

3. 설정 파일 내역

▼ Frontend

▼ Jenkins 설정

▼ nginx.conf

```
user www-data;
worker_processes auto;
pid /run/nginx.pid;
include /etc/nginx/modules-enabled/*.conf;
 worker_connections 768;
  # multi_accept on;
}
http {
  # Basic Settings
  client_max_body_size 100M;
  sendfile on;
  tcp_nopush on;
  tcp_nodelay on;
  keepalive_timeout 65;
  types_hash_max_size 2048;
  # server_tokens off;
  # server_names_hash_bucket_size 64;
  # server_name_in_redirect off;
  include /etc/nginx/mime.types;
```

```
default_type application/octet-stream;
  # SSL Settings
  ssl_protocols TLSv1 TLSv1.1 TLSv1.2 TLSv1.3; # Dropping SSLv3, ref: POODLE
  ssl_prefer_server_ciphers on;
  # Logging Settings
  ##
  access_log /var/log/nginx/access.log;
  error_log /var/log/nginx/error.log debug;
  # Gzip Settings
  gzip on;
  # gzip_vary on;
  # gzip_proxied any;
  # gzip_comp_level 6;
  # gzip buffers 16 8k;
  # gzip_http_version 1.1;
  # gzip_types text/plain text/css application/json application/javascript text/xml application/xml application/xml+rss tex
t/javascript;
  # Virtual Host Configs
  include /etc/nginx/conf.d/*.conf;
  include /etc/nginx/sites-enabled/*;
#mail {
# # See sample authentication script at:
# # http://wiki.nginx.org/ImapAuthenticateWithApachePhpScript
# # auth_http localhost/auth.php;
# # pop3_capabilities "TOP" "USER";
# # imap_capabilities "IMAP4rev1" "UIDPLUS";
# server {
# listen
               localhost:110;
# protocol
               pop3;
# proxy
# }
               on;
# server {
# listen
               localhost:143;
  protocol imap;
# proxy
               on;
# }
#}
```

▼ default.conf

```
##

# You should look at the following URL's in order to grasp a solid understanding

# of Nginx configuration files in order to fully unleash the power of Nginx.

# https://www.nginx.com/resources/wiki/start/

# https://www.nginx.com/resources/wiki/start/topics/tutorials/config_pitfalls/

# https://wiki.debian.org/Nginx/DirectoryStructure

#

# In most cases, administrators will remove this file from sites-enabled/ and

# leave it as reference inside of sites-available where it will continue to be

# updated by the nginx packaging team.

#

# This file will automatically load configuration files provided by other

# applications, such as Drupal or Wordpress. These applications will be made

# available underneath a path with that package name, such as /drupal8.

#

# Please see /usr/share/doc/nginx-doc/examples/ for more detailed examples.

##

# Default server configuration

# server {

# listen 80 default_server;
```

```
# listen [::]:80 default_server;
  listen 80:
  listen [::]:80;
  # SSL configuration
  # listen 443 ssl default_server;
  # listen [::]:443 ssl default_server;
  # Note: You should disable gzip for SSL traffic.
  # See: https://bugs.debian.org/773332
  \# Read up on ssl_ciphers to ensure a secure configuration.
  # See: https://bugs.debian.org/765782
  # Self signed certs generated by the ssl-cert package
  # Don't use them in a production server!
  # include snippets/snakeoil.conf;
# root /var/www/html;
  # Add index.php to the list if you are using PHP
# index index.html index.htm index.nginx-debian.html;
  server_name 13.125.99.142 j8a306.p.ssafy.io fanftasy.kro.kr;
  return 301 https://fanftasy.kro.kr;
# location / {
   # First attempt to serve request as file, then
# as directory, then fall back to displaying a 404.
# try_files $uri /index.nginx-debian.html $uri/ =404;
# }
  # pass PHP scripts to FastCGI server
  #location \sim \.php$ {
  # include snippets/fastcgi-php.conf;
  # # With php-fpm (or other unix sockets):
  # fastcgi_pass unix:/var/run/php/php7.4-fpm.sock;
  # # With php-cgi (or other tcp sockets):
  # fastcgi_pass 127.0.0.1:9000;
  \ensuremath{\text{\#}} deny access to .htaccess files, if Apache's document root
  # concurs with nginx's one
  #location ~ /\.ht {
  # deny all;
  #}
}
# Virtual Host configuration for example.com
# You can move that to a different file under sites-available/ and symlink that
# to sites-enabled/ to enable it.
#server {
# listen 80:
# listen [::]:80;
# server_name example.com;
# root /var/www/example.com;
# index index.html;
# location / {
# try_files $uri $uri/ =404;
```

▼ fanftasy.kro.kr.conf

```
upstream network {
    server localhost:8545;
    server localhost:7545;
}
```

```
server {
       if ( $host = j8a306.p.ssafy.io ) {
               return 301 https://fanftasy.kro.kr;
        }
        location / {
                try_files $uri /index.html;
                root /home/jenkins/workspace/Dev-Front/frontend/dist;
                index index.html;
                proxy_set_header Host $host;
                proxy_set_header X-Forwarded-Host $server_name;
                proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
                proxy_set_header X-Forwarded-Proto $scheme;
                proxy_set_header Upgrade $http_upgrade;
                proxy_set_header Connection "upgrade";
        }
        location /api {
               proxy_pass http://localhost:8080;
                proxy_set_header Host $host;
        }
        location /network {
    proxy_pass http://localhost:7545;
                proxy_set_header Host $host;
        location /home {
                root /home/jenkins/workspace/Dev-Front/frontend/dist;
                index index.html;
        location :7545 {
               proxy_pass
                               http://0.0.0.0:7545;
                proxy_set_header Host $host;
                proxy_set_header X-Real-IP $remote_addr;
                proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
#
                proxy_ssl_verify off;
    listen [::]:443 ssl ipv6only=on; # managed by Certbot
   listen 443 ssl; # managed by Certbot
   server_name fanftasy.kro.kr;
   ssl_certificate /etc/letsencrypt/live/fanftasy.kro.kr/fullchain.pem; # managed by Certbot
    ssl_certificate_key /etc/letsencrypt/live/fanftasy.kro.kr/privkey.pem; # managed by Certbot
    ssl_certificate /etc/nginx/ssl/fullchain.pem;
    ssl_certificate_key /etc/nginx/ssl/privkey.pem;
    include /etc/letsencrypt/options-ssl-nginx.conf; \# managed by Certbot
    {\tt ssl\_dhparam\ /etc/letsencrypt/ssl-dhparams.pem;\ \#\ managed\ by\ Certbot}
   if ($host = fanftasy.kro.kr) {
       return 301 https://$host$request_uri;
   } # managed by Certbot
        listen 80;
        listen [::]:80;
        server_name fanftasy.kro.kr 13.125.99.142;
   return 404; # managed by Certbot
}
```

▼ 파일구조

```
├─path
| ├─contracts
| └─to
| ─public
| ─src
| ─assets
| └─fonts
| ─components
| ├─headers
```

lacktriangle Backend

▼ docker-compose.yml

```
version: '3' # docker compose 버전
services:
local-db:
image: library/mysql:5.7
container_name: subway_local # 컨테이너 이름
restart: always
ports:
- 13306:3306 # 로컬의 13306 포트를 컨테이너의 3306포트로 연결
environment:
MYSQL_USER: air
MYSQL_PASSWORD: air
MYSQL_PASSWORD: root
TZ: Asia/Seoul
volumes:
- ./db/mysql/data:/var/lib/mysql
- ./db/mysql/init:/docker-entrypoint-initdb.d
```

▼ docker file

```
FROM openjdk:11-jdk
#ARG JAR_FILE=build/libs/*.jar
#COPY ${JAR_FILE} ./app.jar
COPY build/libs/FANFTASY-0.0.1-SNAPSHOT.jar ./app.jar
#EXPOSE 8099
ENTRYPOINT ["java", "-jar", "app.jar"]
```

▼ jenkins file

```
pipeline {
 agent any
  stages {
    stage('Gradle Build') {
        steps {
    dir('backend'){
            dir('FANFTASY') {
    sh 'chmod +x gradlew'
               sh './gradlew clean build -x test'
         }
   }
stage('Docker Build') {
        steps {
        dir('backend') {
            sh 'docker build -t fanftasy-back:latest .'
}
            dir('FANFTASY') {
        }
     }
    stage('Deploy') {
          sh 'docker rm -f back'
          sh 'docker run -d --name back -p 8099:8099 -u root fanftasy-back:latest'
```

```
}
}
stage('Finish') {
    steps{
        sh 'docker images -qf dangling=true | xargs -I{} docker rmi {}'
     }
}
```

▼ application.yml

```
server: port: 8080 servlet: session: timeout: 60m cookie: max-age: 60m context-path: / encoding:
```

▼ application-API-KEY.yml

```
pinata:
 API_Key: 24758d33d2d03de6448c
  API_Secret: 059c98642c4243319121d7658e30ff7e3685951b2f27de88e09046e30eedd18c
  {\tt JWT: eyJhbGci0iJIUzI1NiIsInR5cC161kpXVCJ9.eyJ1c2VySW5mb3JtYXRpb24i0nsiaWQi0iI00TNiMzcyYS0yMTQ0LTQ4MjctYWJlZi0xMTkxNTc3YjU00}}\\
#blockchain:
# NetworkURL: HTTP://127.0.0.1:7545
# AdminPrivateKey: "854cd5e63ccba50b9d9aacb8785b8fa969a7e005d1cc19ef62848419b7e13f46"
# ContractAddress: "0x6d082A87793C6498157b457Bb23f62De82a2692c"
# AdminAddress: "0xB8Ad2Cf28E9aA717398Fb2b08f8328e916305D98"
#blockchain:
# NetworkURL: "https://rpc.ssafy-blockchain.com"
# AdminPrivateKey: "5d5cf483015770a1c5632c8728f958ac40a9967e6fc4ef19b1efffbb320f6b43"
# NFTContractAddress: "0x6643150E6E336a1130a8017ecd5931a9Fc6ff81f"
# FTContractAddress: "0x9B15e6809357DCEaD5EF73A79B4fAc3FAe9cDFBf"
# NetworkID: 31221
# AdminAddress: "0x169996534c419dCcFf461A4a34505dA7E197054A"
##EC2
blockchain:
  NetworkURL: https://fanftasy.kro.kr/network
  AdminPrivateKey: "0x5c328e1656e37e1d40883b7e275d3d560d9a9086faa6967ee5203cbc640f44c8"
  NFTContractAddress: "0xaeb2DC75a63352947Bdbe6d9E6A37c0752481007"
  NetworkID: 1336
  AdminAddress: "0xdb2d8BAE9F41703285d99AB76d655a5E1c2646AB"
```

▼ 파일 구조

```
파일구조
      ∟<sub>com</sub>
∟a306
               └-fanftasy
                    |-config
                       |—board
                          ├controller
                          ⊢dto
                         ⊢entity
                        ⊢repository
⊢service
                       |--boardlike
                          ├controller
                          ├-dto
                          ⊢entity
                         ⊢repository
⊢service
                         ├_controller
                           -entity
                          ⊢repository
└service
                       .
I–nft
                         ├controller
                           |—dto
                          -entity
                          -exception
                       | |-repository
```

▼ Ganache-cli

▼ 실행 시 명령어

nohup ganache-cli -h 0.0.0.0 -p 7545 -a 20 -e 50000000000 --chainld 1336 -g 0 & disown

1. Docker 설치

▼ Install Docker Engine on Ubuntu

```
sudo apt-get update
sudo apt-get install \
ca-certificates \
curl \
gnupg \
lsb-release
sudo mkdir -m 0755 -p /etc/apt/keyrings
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o
/etc/apt/keyrings/docker.gpg
echo \
"deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.gpg]
https://download.docker.com/linux/ubuntu \
\dot{\text{s}} (lsb_release -cs) stable" | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
sudo apt-get update
sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin
docker-compose-plugin
```

2. SSL 인증서 발급

▼ 쉘 스크립트 생성 (init-letsencrypt.sh)

```
#!/bin/bash
if ! [-x "$(command -v docker)" ] || ! [-x "$(command -v compose)" ]; then
echo 'Info: docker compose is not installed.' >&2
exit 1
fi
domains=서비스도메인
rsa_key_size=4096
data_path="/home/ubuntu/certbot"
email="이메일" # Adding a valid address is strongly recommended
staging=0 # Set to 1 if you're testing your setup to avoid hitting request limits
if [-d "$data_path"]; then
read -p "Existing data found for $domains. Continue and replace existing
certificate? (y/N) " decision
if [ "$decision" != "Y" ] && [ "$decision" != "y" ]; then
exit
```

```
if [ ! -e "$data_path/conf/options-ssl-nginx.conf" ] || [ ! -e
"$data_path/conf/ssl-dhparams.pem" ]; then
echo "### Downloading recommended TLS parameters ..."
mkdir -p "$data_path/conf"
\verb|https://raw.githubusercontent.com/certbot/certbot/master/certbot-nginx/certbot\_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_nginx/certbot_ngi
x/_internal/tls_configs/options-ssl-nginx.conf >
\verb| "$data_path/conf/options-ssl-nginx.conf"| \\
https://raw.githubusercontent.com/certbot/certbot/master/certbot/certbot/ssl-dhpara
ms.pem > "$data_path/conf/ssl-dhparams.pem"
echo "### Creating dummy certificate for $domains \dots"
path="/etc/letsencrypt/live/$domains"
mkdir -p "$data_path/conf/live/$domains'
docker compose run --rm --entrypoint "\
openssl req -x509 -nodes -newkey rsa:\rsa_key_size -days 1\
 -keyout '$path/privkey.pem' \
-out '$path/fullchain.pem' \
-subj '/CN=localhost'" certbot
echo
echo "### Starting nginx ..."
docker compose up --force-recreate -d nginx
echo "### Deleting dummy certificate for $domains ..."
docker compose run --rm --entrypoint "\
rm -Rf /etc/letsencrypt/live/$domains && \
rm -Rf /etc/letsencrypt/archive/$domains && \
rm -Rf /etc/letsencrypt/renewal/$domains.conf" certbot
echo
echo "### Requesting Let's Encrypt certificate for $domains ..."
#Join $domains to -d args
domain_args=""
for domain in "${domains[@]}"; do
domain_args="$domain_args -d $domain"
done
# Select appropriate email arg
case "$email" in
"") email_arg="--register-unsafely-without-email" ;;
*) email_arg="--email $email" ;;
esac
# Enable staging mode if needed
if [ $staging != "0" ]; then staging_arg="--staging"; fi
docker compose run --rm --entrypoint "
certbot certonly --webroot -w /var/www/certbot \
$staging_arg \
$email_arg \
$domain_args \
--rsa-key-size $rsa_key_size \
--agree-tos \
--force-renewal" certbot
echo "### Reloading nginx ..."
docker compose exec nginx nginx -s reload
```

▼ 쉘 스크립트 실행

```
./init-letsencrypt.sh
```

3. DB 및 Infra 배포

- ▼ docker 설정
 - ▼ docker-compose.yml 작성
 - : II-3 설정 파일 및 환경 변수 정보의 Docker 항목 참조
- ▼ Nginx 설정
 - ▼ Nginx 설정 : I-3 설정 파일 및 환경 변수 정보의 Nginx 항목을 참조하여 /home/ubuntu/nginx/nginx.conf 파일 생성 및 수정

▼ Jenkins 설정

- 1. http://서비스도메인:8093으로 접속
- 2. 서버 콘솔에서 docker logs jenkins를 입력하여 출력된 패스워드를 입력
- 3. Install suggested plugins를 클릭하고 플러그인들 설치
- 4. Jenkins에서 사용할 계정 생성
- 5. Jenkins 접속 URL 확인 후 Save and Finish 클릭
- 6. Jenkins 페이지 접속시에 생성한 계정으로 로그인
- 7. Jenkins 관리 플러그인 관리 Available plugins에서 gitlab 플러그인 설치
- 8. NodeJS 플러그인도 설치

4. Backend CI/CD

- ▼ application.yml 작성 : I-3 설정 파일 및 환경 변수 정보의 Backend 항목을 참조하여 파일을 작성하고 ec2 머신의 /home/ubuntu 경로에 준비해 놓는다
- ▼ Dockerfile 작성 : I-3 설정 파일 및 환경 변수 정보의 Backend 항목을 참조하여 작성후 프로젝트의 Backend 폴더 최상위에 넣어서 GitLab Repository에 push한다
- ▼ Jenkinsfile 작성 : I-3 설정 파일 및 환경 변수 정보의 Backend 항목 참조하여 작성후 프로젝트의 Backend 폴더 최상위에 넣어서 GitLab Repository에 push한다
- ▼ GitLab 설정
 - 1. Jenkins 관리 Manage Credentials로 이동
 - 2. Stores scoped to Jenkins의 Domains 부분에 (global)에 마우스를 올렸을때 나오는 화살표를 클릭하고 Add credentials 클릭
 - 3. GitLab 프로젝트 Repository에서 Settings Access Tokens로 진입
 - 4. Token name과 만료일을 임의로 설정하고 Select a role은 Maintainer로 설정, scopes는 read_api, read_repository를 체크하고 토큰을 생성한다
 - 5. 위에 생성된 토큰을 복사한다 (미리 백업 해놓지 않으면 다시는 확인 불가)
 - 6. 다시 Jenkins의 New credentials로 돌아와서 다음과 같이 설정 후 Create
 - · Kind: GitLab API token
 - · Scope: Global
 - API token : gitlab에서 복사해온 값 붙여넣기
 - ID : credential들을 구분하는 ID (임의로 설정)
 - Description : 설명 (임의로 설정)
 - 7. Jenkins 관리 시스템 설정으로 진입
 - 8. Gitlab 부분에 추가를 누르고 다음과 같이 작성 후 저장
 - Connection name : 연결설정 이름 (임의로 작성)

- Gitlab host URL : gitlab 서버 도메인 입력 (https://lab.ssafy.com/)
- Credentials : 아까 만든 GitLab API Token Credentials 선택
- 9. Jenkins 관리 Manage Credentials에서 Add credentials를 한번 더 클릭
- 10. . New credentials에서 GitLab 로그인 계정을 다음과 같이 작성
 - Kind : Username with password 선택
 - Scope : Global 선택
 - Username : GitLab 계정 이름
 - Password : GitLab 계정 비밀번호
 - ID : credential들을 구분하는 ID (임의로 설정)
 - Description : 설명 (임의로 설정)

▼ Pipeline item 생성

- 1. Jenkins 메인화면 좌측 사이드바에서 "새로운 아이템" 클릭
- 2. Item 이름을 작성하고 Pipeline을 선택한 후 OK
- 3. General에서 다음과 같이 설정
 - "Do not allow the pipeline to resume if the controller restarts" 체크
 - GitLab Connection을 만들었던 설정으로 선택
- ▼ Webhook 설정 (Pipeline 설정 이어서)
 - 1. Build Trigger에서 GitLab webhook 부분 체크, Push Event만 체크, webhook URL은 복사해 놓는다
 - 2. 밑에 고급 버튼 클릭
 - 3. 밑에 Secret token을 Generate 버튼을 눌러 생성 후 복사해 놓는다
 - 4. Webhook 설정 후에 테스트까지 하기위해 현재까지의 설정을 저장한다
 - 5. GitLab 프로젝트 Repository에서 Settings Webhooks에 진입
 - 6. Webhooks에 다음과 같이 작성 후 밑에 Add webhook 클릭
 - URL : 복사해놨던 URL에서 포트번호만 Jenkins 컨테이너에서 포트포워딩한 포트번호로 바꾼다
 - Secret token : 복사해놨던 Secret token 붙여넣기
 - Trigger : Push events만 체크
 - SSL verification : "Enable SSL verification" 체크
 - 7. 아래 생성된 webhook에서 Test Push events를 눌러서 테스트
 - 8. 위에 HTTP 200이라고 뜬다면 성공
- ▼ Pipeline script from SCM 설정
 - 1. Pipeline Definition을 "Pipeline script form SCM"으로 고르고 다음과 같이 설정한다
 - Repository URL : GitLab 프로젝트 Repository url을 입력
 - Credentials : 만들어둔 GitLab 로그인 계정 선택
 - 2. 아래 부분을 다음과 같이 작성 후 저장
 - Branch Specifier : Backend 코드가 배포용으로 최종 merge 되는 브랜치 선택
 - Script path : 선택한 브랜치내에서 Backend의 Jenkinsfile의 경로 입력
- ▼ 초기 빌드로 git clone 후 application.yml 파일 이동
 - 1. 좌측 사이드바에서 "지금 빌드"를 클릭한다

2. ec2 콘솔에서 /home/jenkins/workspace/Back-End/ 경로로 이동하여 브랜치가 정상적으로 clone이 되었는지 확인

```
cd /home/jenkins/workspace/Back-End
ls
```

3. /home/jenkins/workspace/Back-End/backend/FANFTASY/src/main/ 경로로 이동하여 resources 폴더를 만들고 application.yml 파일을 이동시킨다

```
cd /home/jenkins/workspace/Back-End/backend/FANFTASY/src/main
mkdir resources
# /home/ubuntu 위치에 application.yml이 있다고 하면
mv ~/application.yml ./resources
```

4. 이후 "지금 빌드"를 누르거나 GitLab에 push가 감지되면 자동으로 빌드&배포가 된다

Ⅲ. 외부 서비스 설정

1. Remix

2. Pinata - IPFS