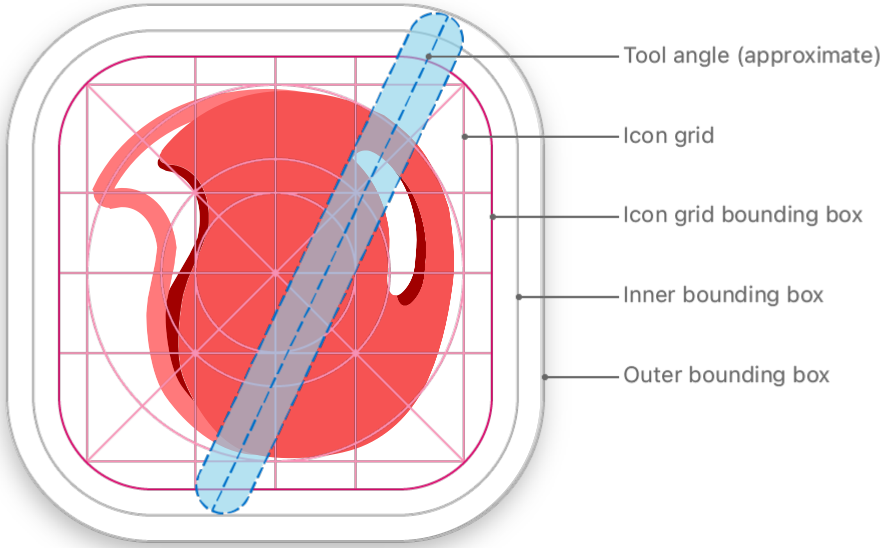
Double D

Designated Donation

New connection
through the donation.

Branding

Make brand identity to set the concept of the service.



Double D

Designated Donation

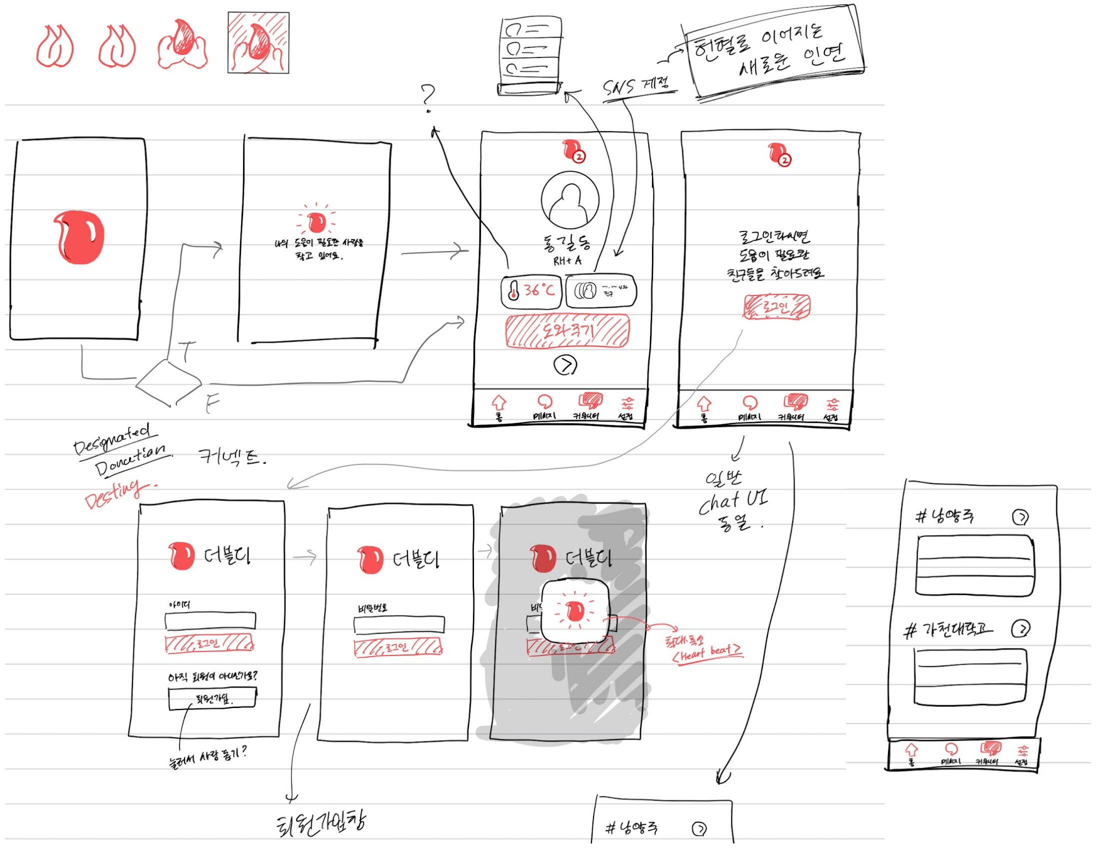
더블디

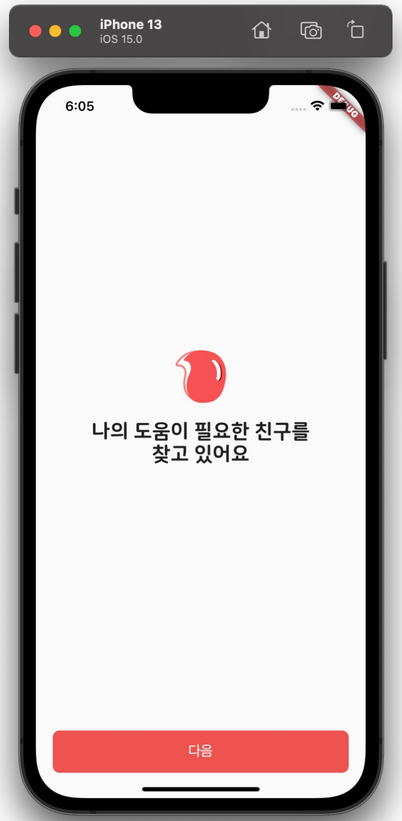
New connection through the donation.

⬜ #FFFFFF 🟥 #F65353 🟥 #A10000

User Interface

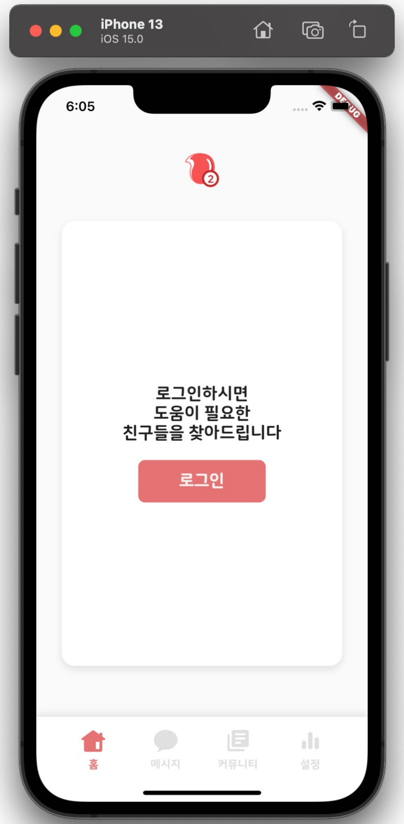
Sketch and design for user interaction and visual elements.





나의 도움이 필요한 친구를 찾고 있어요

다음



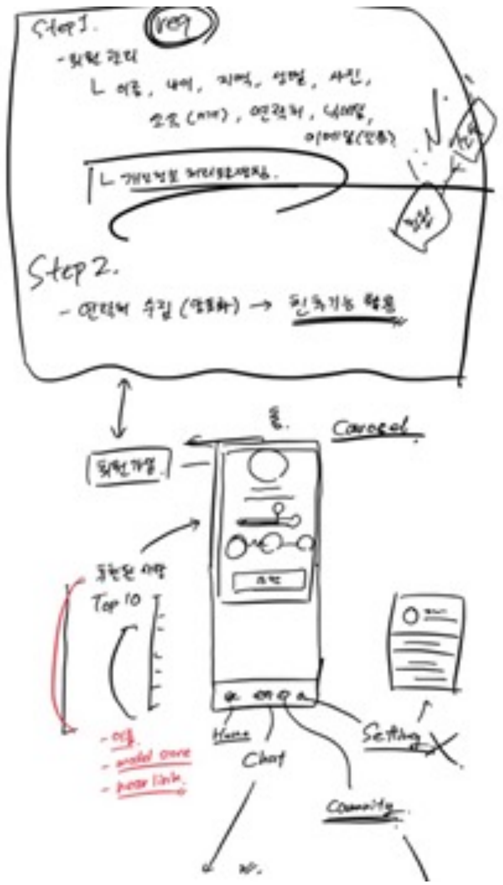
로그인하시면
도움이 필요한
친구들을 찾아드립니다

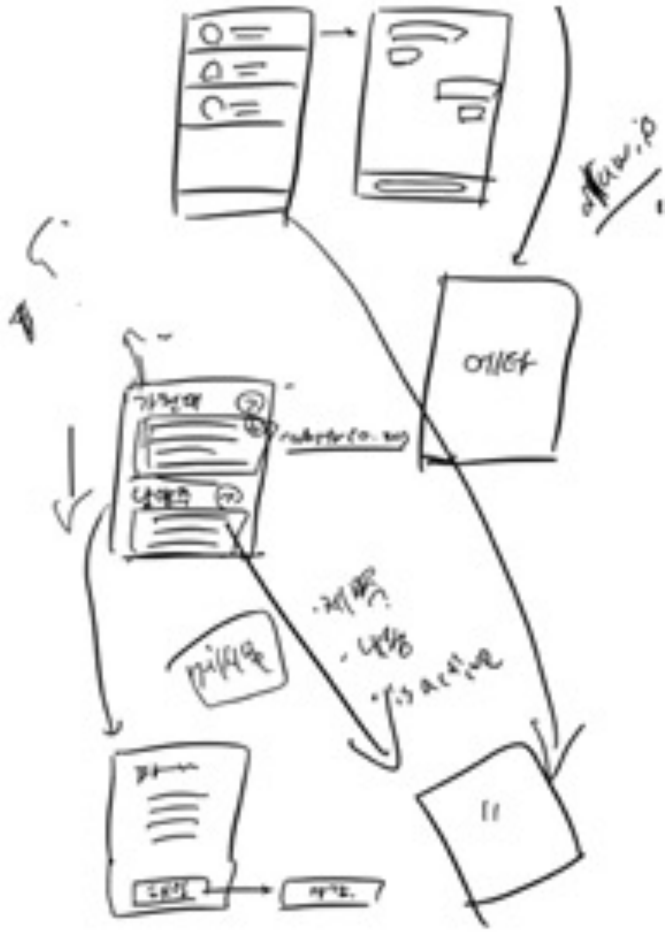
로그인

홈 메시지 커뮤니티 설정

Backend

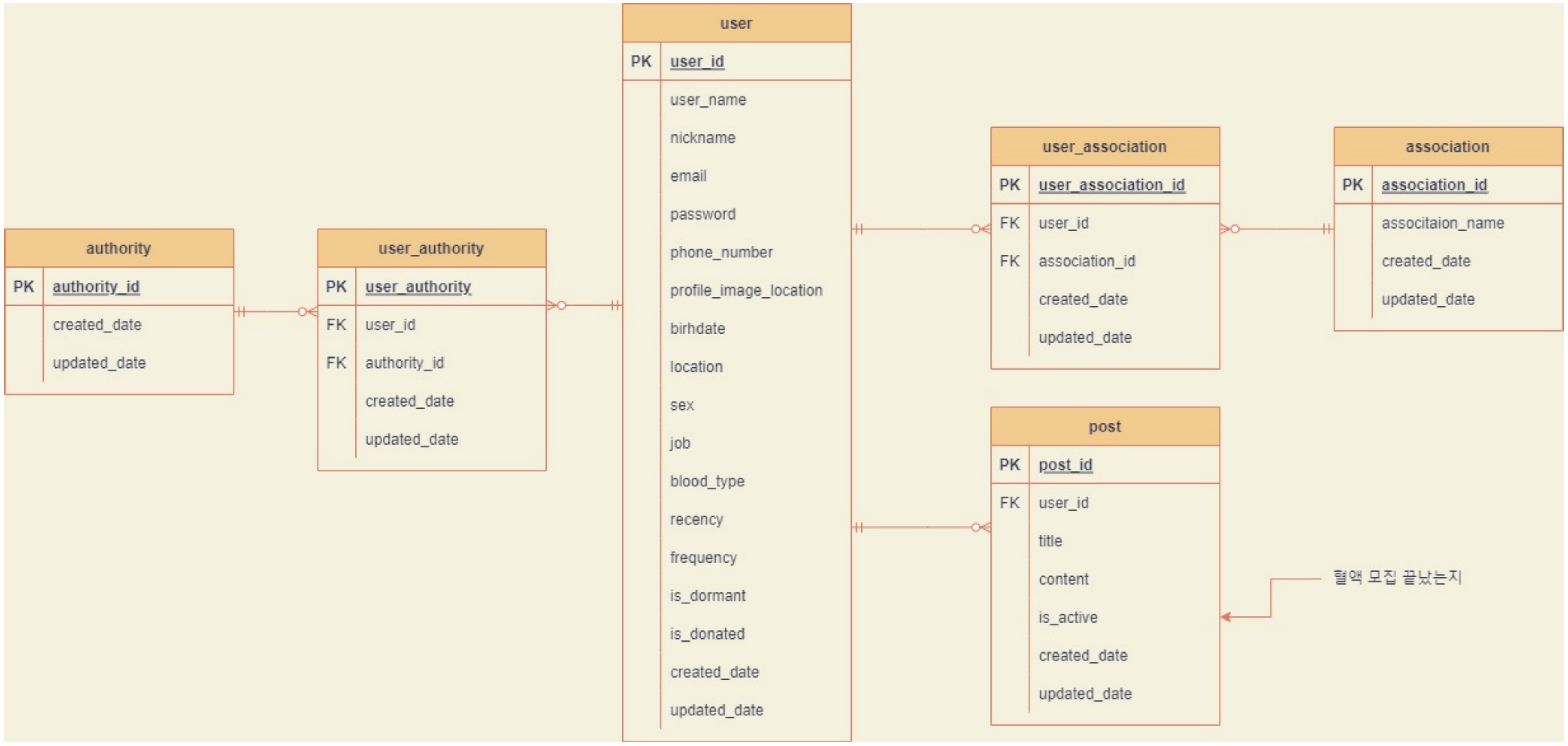
Elicit requirements of system and database design.





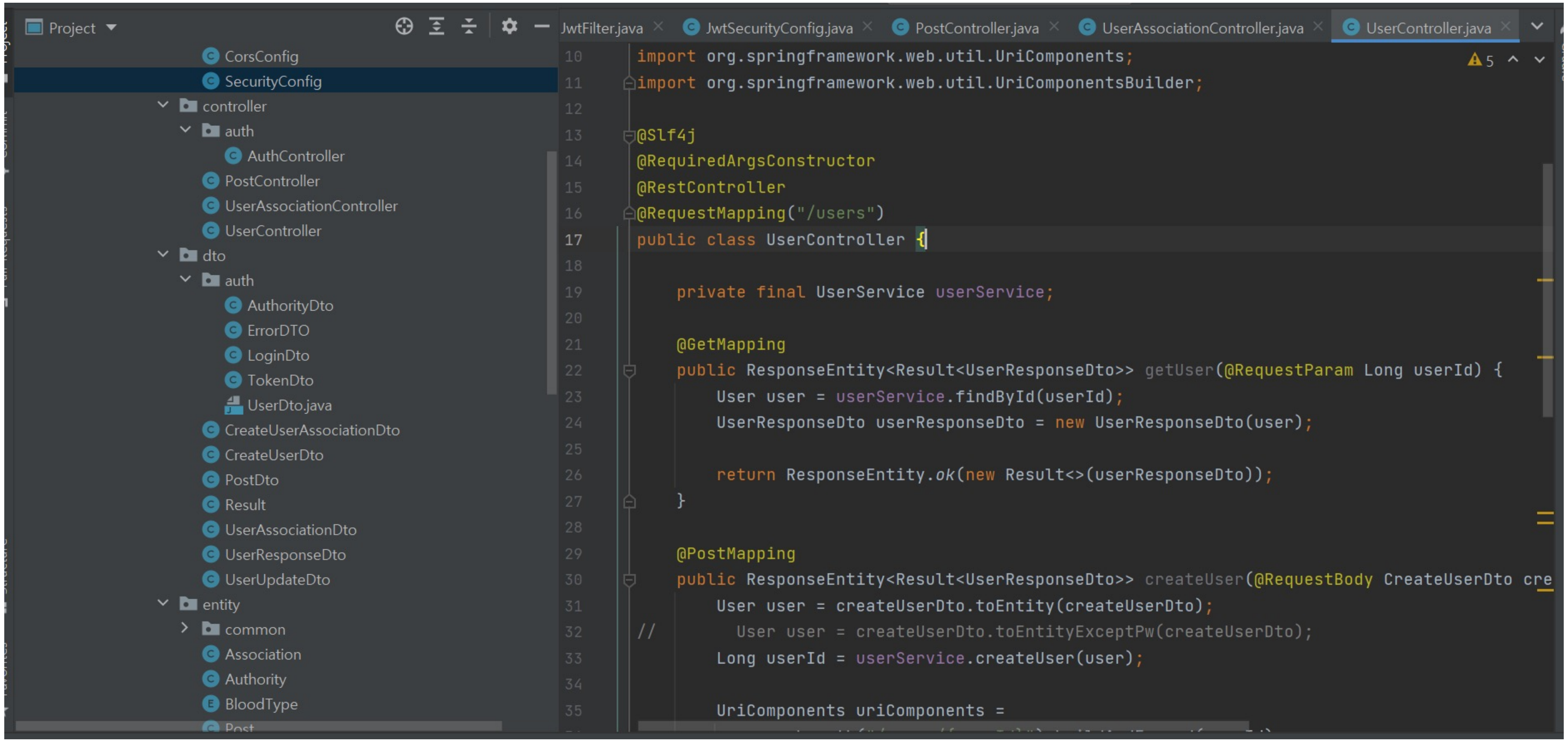
Backend

Design ER diagram based on requirements.



Backend

Develop the basic API:
User, Post CRUD, Sign In Manage, etc..

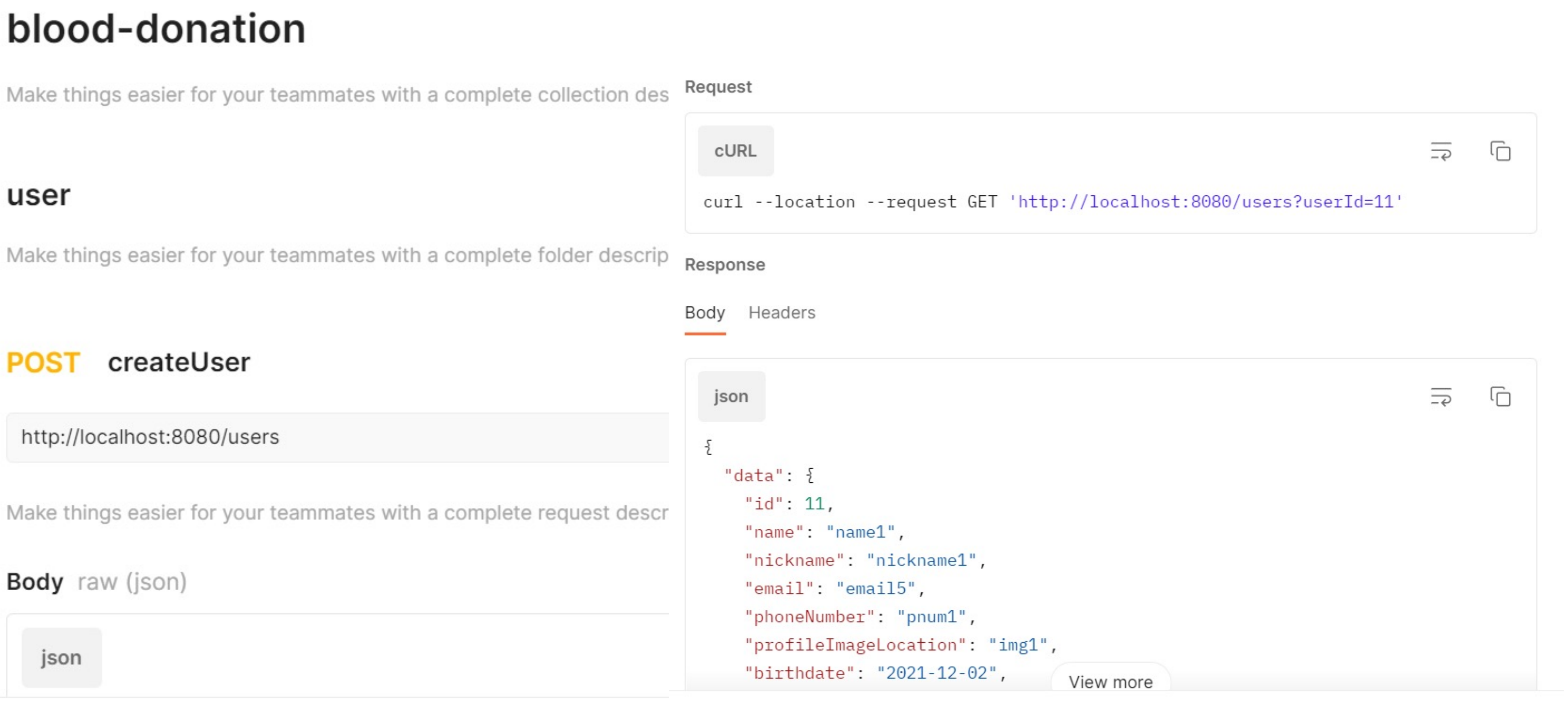


```
    CorsConfig
    SecurityConfig
  controller
    auth
      AuthController
    PostController
    UserAssociationController
    UserController
  dto
    auth
      AuthorityDto
      ErrorDTO
      LoginDto
      TokenDto
      UserDto.java
    CreateUserAssociationDto
    CreateUserDto
    PostDto
    Result
    UserAssociationDto
    UserResponseDto
    UserUpdateDto
  entity
    common
    Association
    Authority
    BloodType
```

```java
import org.springframework.web.util.UriComponents;
import org.springframework.web.util.UriComponentsBuilder;

@Slf4j
@RequiredArgsConstructor
@RestController
@RequestMapping("/users")
public class UserController {

    private final UserService userService;

    @GetMapping
    public ResponseEntity<Result<UserResponseDto>> getUser(@RequestParam Long userId) {
        User user = userService.findById(userId);
        UserResponseDto userResponseDto = new UserResponseDto(user);

        return ResponseEntity.ok(new Result<>(userResponseDto));
    }

    @PostMapping
    public ResponseEntity<Result<UserResponseDto>> createUser(@RequestBody CreateUserDto cre
        User user = createUserDto.toEntity(createUserDto);
//        User user = createUserDto.toEntityExceptPw(createUserDto);
        Long userId = userService.createUser(user);

        UriComponents uriComponents =
```

Backend

API Documentation



blood-donation

Make things easier for your teammates with a complete collection des

user

Make things easier for your teammates with a complete folder descrip

POST createUser

```
http://localhost:8080/users
```

Make things easier for your teammates with a complete request descr

Body raw (json)

json

Request

cURL

```
curl --location --request GET 'http://localhost:8080/users?userId=11'
```

Response

Body Headers

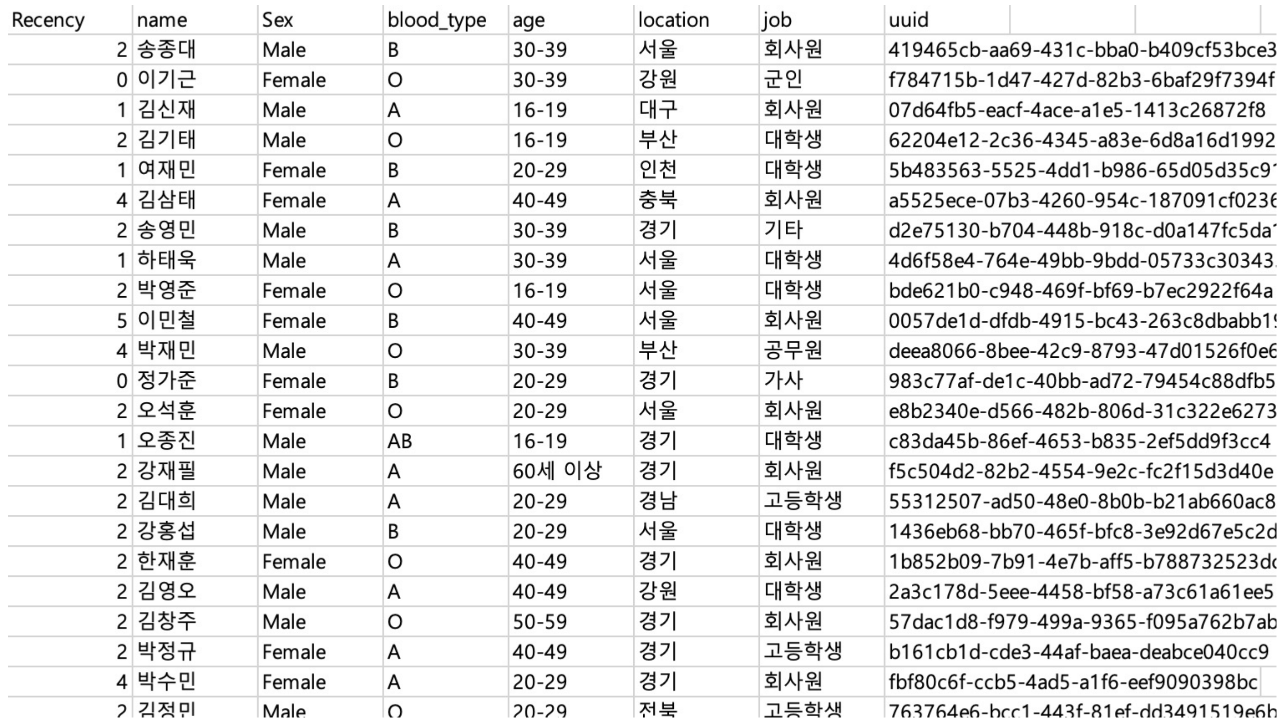
json

```
{
  "data": {
    "id": 11,
    "name": "name1",
    "nickname": "nickname1",
    "email": "email5",
    "phoneNumber": "pnum1",
    "profileImageLocation": "img1",
    "birthdate": "2021-12-02",
```

View more

Data Inspection

Data creation based on real blood donation data combined by KOSTAT.



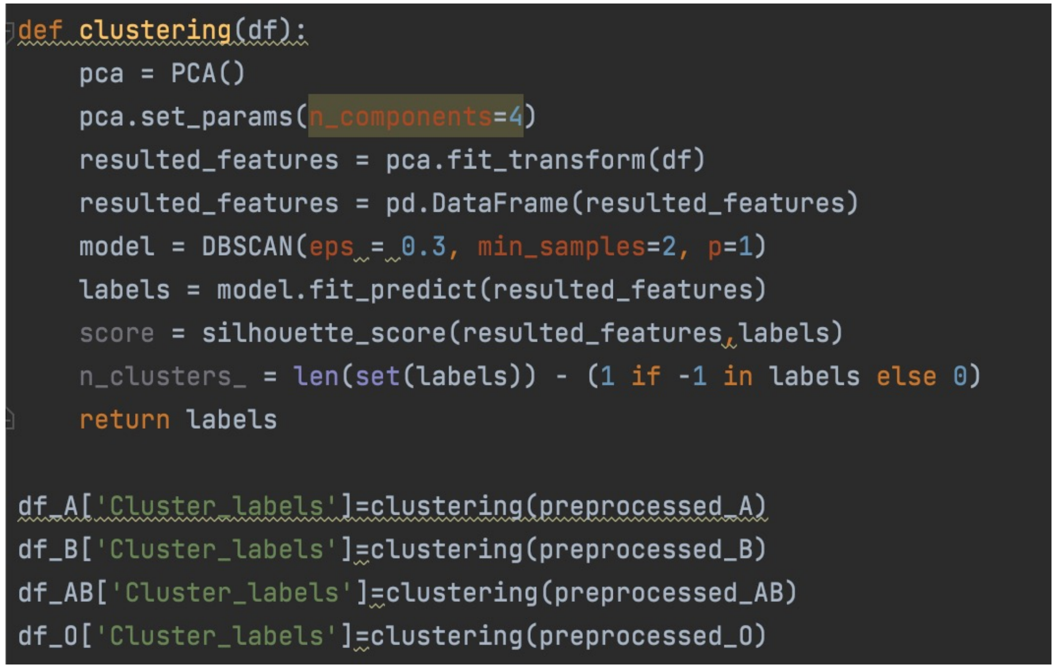
Recency	name	Sex	blood_type	age	location	job	uuid
2	송종대	Male	B	30-39	서울	회사원	419465cb-aa69-431c-bba0-b409cf53bce
0	이기근	Female	O	30-39	강원	군인	f784715b-1d47-427d-82b3-6baf29f7394f
1	김신재	Male	A	16-19	대구	회사원	07d64fb5-eacf-4ace-a1e5-1413c26872f8
2	김기태	Male	O	16-19	부산	대학생	62204e12-2c36-4345-a83e-6d8a16d1992
1	여재민	Female	B	20-29	인천	대학생	5b483563-5525-4dd1-b986-65d05d35c9
4	김삼태	Female	A	40-49	충북	회사원	a5525ece-07b3-4260-954c-187091cf023
2	송영민	Male	B	30-39	경기	기타	d2e75130-b704-448b-918c-d0a147fc5da
1	하태욱	Male	A	30-39	서울	대학생	4d6f58e4-764e-49bb-9bdd-05733c30343
2	박영준	Female	O	16-19	서울	대학생	bde621b0-c948-469f-bf69-b7ec2922f64a
5	이민철	Female	B	40-49	서울	회사원	0057de1d-dfdb-4915-bc43-263c8dbabb1
4	박재민	Male	O	30-39	부산	공무원	deea8066-8bee-42c9-8793-47d01526f0e
0	정가준	Female	B	20-29	경기	가사	983c77af-de1c-40bb-ad72-79454c88dfb5
2	오석훈	Female	O	20-29	서울	회사원	e8b2340e-d566-482b-806d-31c322e6273
1	오종진	Male	AB	16-19	경기	대학생	c83da45b-86ef-4653-b835-2ef5dd9f3cc4
2	강재필	Male	A	60세 이상	경기	회사원	f5c504d2-82b2-4554-9e2c-fc2f15d3d40e
2	김대희	Male	A	20-29	경남	고등학생	55312507-ad50-48e0-8b0b-b21ab660ac8
2	강홍섭	Male	B	20-29	서울	대학생	1436eb68-bb70-465f-bfc8-3e92d67e5c2d
2	한재훈	Female	O	40-49	경기	회사원	1b852b09-7b91-4e7b-aff5-b788732523d
2	김영오	Male	A	40-49	강원	대학생	2a3c178d-5eee-4458-bf58-a73c61a61ee5
2	김창주	Male	O	50-59	경기	회사원	57dac1d8-f979-499a-9365-f095a762b7ab
2	박정규	Female	A	40-49	경기	고등학생	b161cb1d-cde3-44af-baea-deabce040cc9
4	박수민	Female	A	20-29	경기	회사원	fbf80c6f-ccb5-4ad5-a1f6-eef9090398bc
2	김정민	Male	O	20-29	전북	고등학생	763764e6-bcc1-443f-81ef-dd3491519e6b

Recency: The number of blood donation.
name: Generated name.
Sex: Generated gender.
blood_type: A, B, O, AB, RH+, RH-
age, location, job, uuid: Generated data.

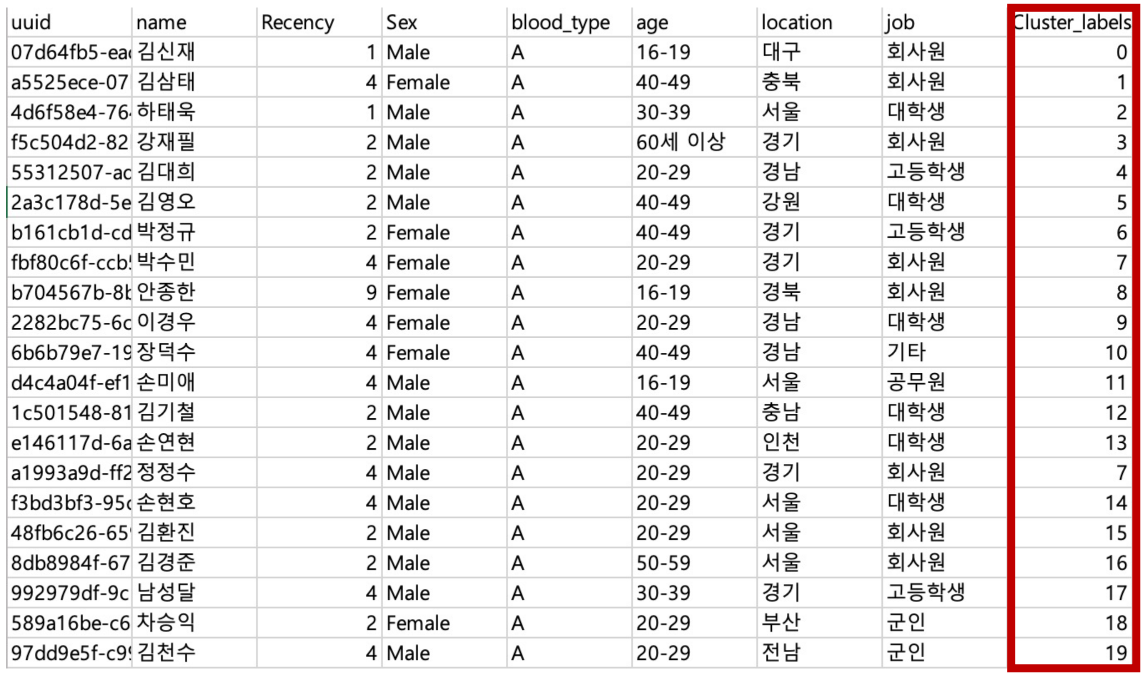
75549 x 7 data was created.

Data

Clustering with DBSCAN algorithm separated by blood type.



```python
def clustering(df):
    pca = PCA()
    pca.set_params(n_components=4)
    resulted_features = pca.fit_transform(df)
    resulted_features = pd.DataFrame(resulted_features)
    model = DBSCAN(eps = 0.3, min_samples=2, p=1)
    labels = model.fit_predict(resulted_features)
    score = silhouette_score(resulted_features,labels)
    n_clusters_ = len(set(labels)) - (1 if -1 in labels else 0)
    return labels

df_A['Cluster_labels']=clustering(preprocessed_A)
df_B['Cluster_labels']=clustering(preprocessed_B)
df_AB['Cluster_labels']=clustering(preprocessed_AB)
df_O['Cluster_labels']=clustering(preprocessed_O)
```

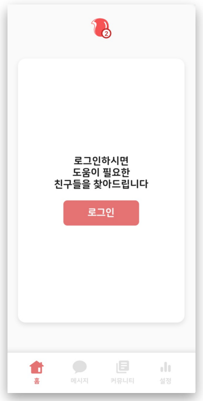


uuid	name	Recency	Sex	blood_type	age	location	job	Cluster_labels
07d64fb5-ea	김신재	1	Male	A	16-19	대구	회사원	0
a5525ece-07	김삼태	4	Female	A	40-49	충북	회사원	1
4d6f58e4-76	하태욱	1	Male	A	30-39	서울	대학생	2
f5c504d2-82	강재필	2	Male	A	60세 이상	경기	회사원	3
55312507-ac	김대희	2	Male	A	20-29	경남	고등학생	4
2a3c178d-5e	김영오	2	Male	A	40-49	강원	대학생	5
b161cb1d-cd	박정규	2	Female	A	40-49	경기	고등학생	6
fbf80c6f-ccb	박수민	4	Female	A	20-29	경기	회사원	7
b704567b-8b	안종한	9	Female	A	16-19	경북	회사원	8
2282bc75-6c	이경우	4	Female	A	20-29	경남	대학생	9
6b6b79e7-19	장덕수	4	Female	A	40-49	경남	기타	10
d4c4a04f-ef1	손미애	4	Male	A	16-19	서울	공무원	11
1c501548-81	김기철	2	Male	A	40-49	충남	대학생	12
e146117d-6a	손연현	2	Male	A	20-29	인천	대학생	13
a1993a9d-ff2	정정수	4	Male	A	20-29	경기	회사원	7
f3bd3bf3-95	손현호	4	Male	A	20-29	서울	대학생	14
48fb6c26-65	김환진	2	Male	A	20-29	서울	회사원	15
8db8984f-67	김경준	2	Male	A	50-59	서울	회사원	16
992979df-9c	남성달	4	Male	A	30-39	경기	고등학생	17
589a16be-c6	차승익	2	Female	A	20-29	부산	군인	18
97dd9e5f-c9	김천수	4	Male	A	20-29	전남	군인	19

Plan

Front-End

Finishing UI design using Flutter,
Make business logic combined with API.



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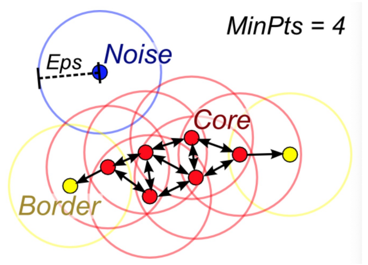
친구들을 찾아드립니다

Back-End

API deploy on AWS, Social log in with
OAUTH2, build additional features.

Suggestion Algorithm

Suggestion by distance from user in same cluster.
Make user-based collaborative filtering algorithm.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Eps
Noise
Core
Border