

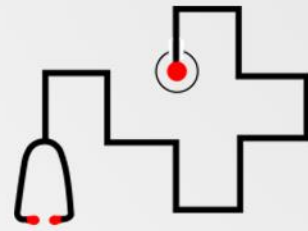
졸업 프로젝트2 T7

Software Design Specification (SDS)

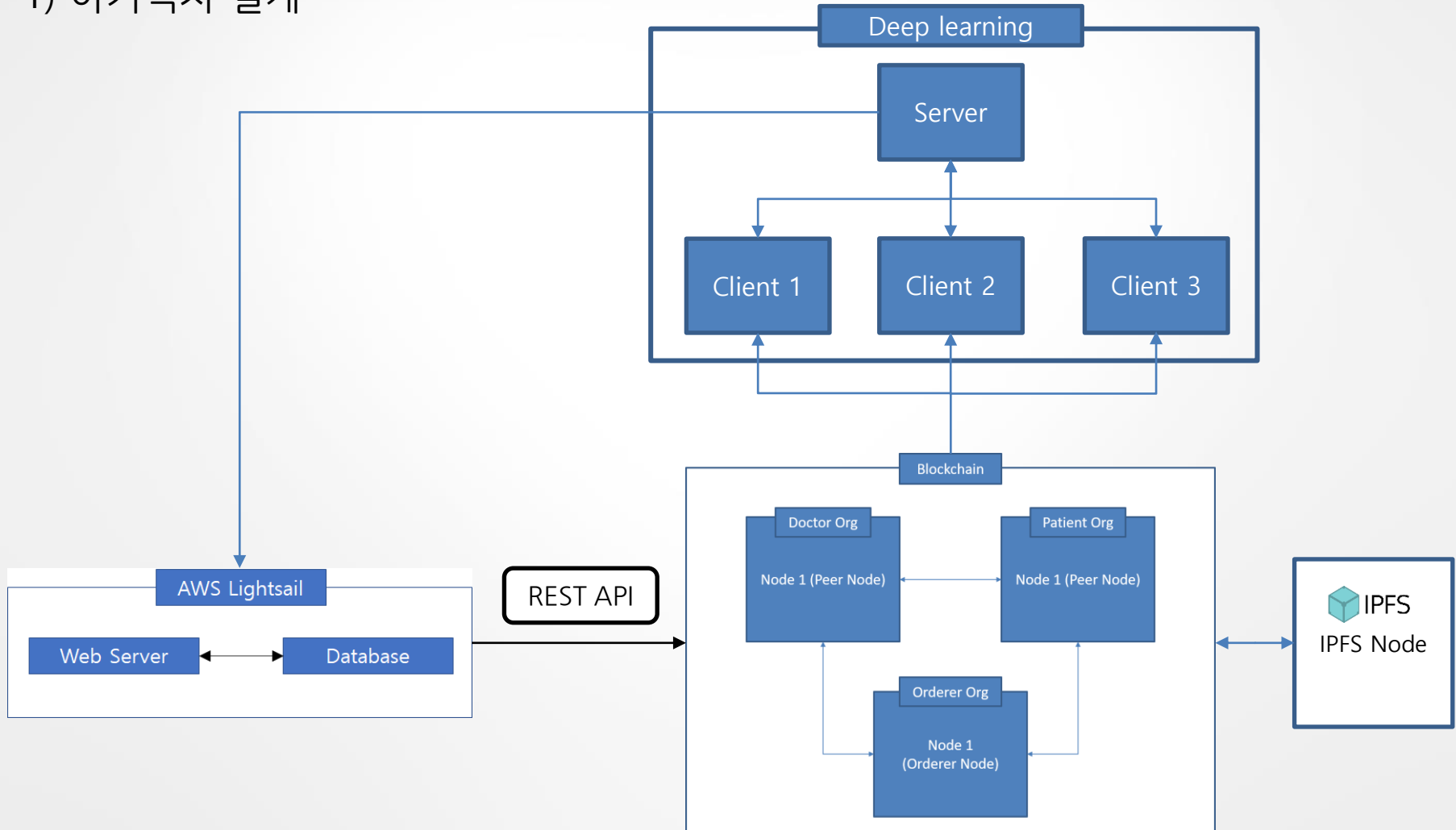
컴퓨터공학과

201511272 양재민, 201411295 이상훈, 201511295 조범석

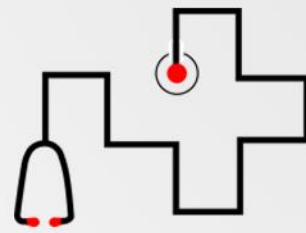
1. 상위 디자인



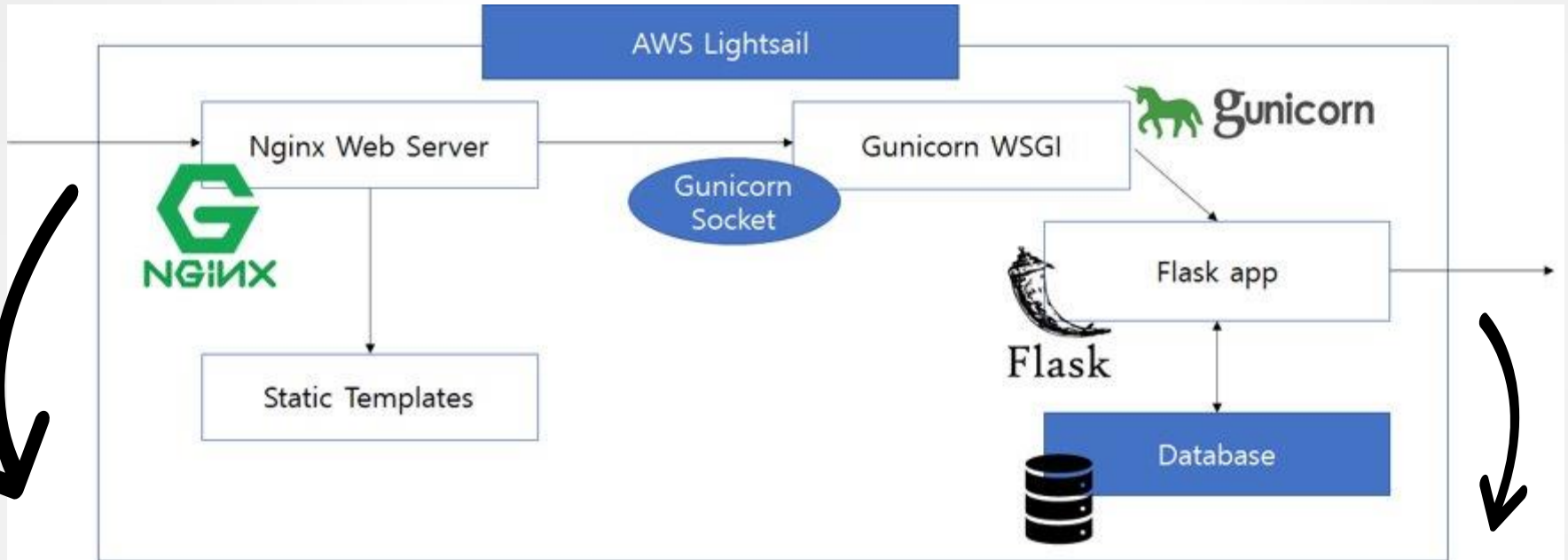
1) 아키텍처 설계



1. 상위 디자인



2) 인터페이스 설계 - Web System



1. Request to Web

Sign In

Sign out

Sign Up

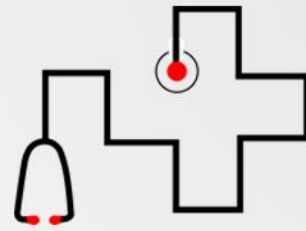
REST API (Blockchain)

GET /doctor/get-patient-image

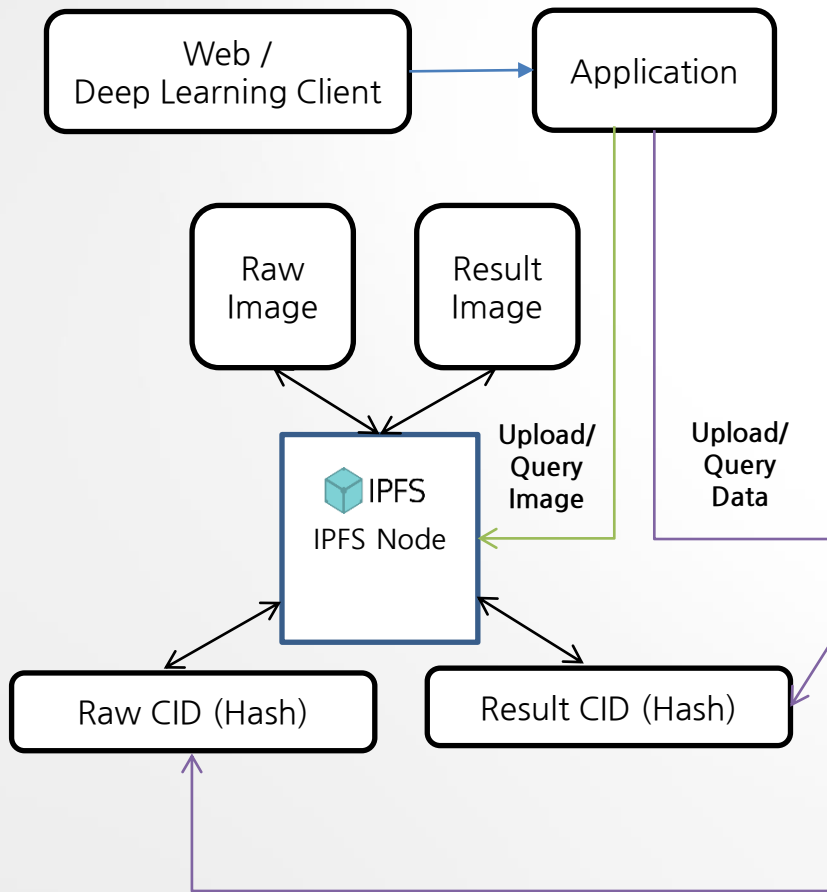
GET /patient/get-my-img

POST /doctor/upload-patient-img

1. 상위 디자인

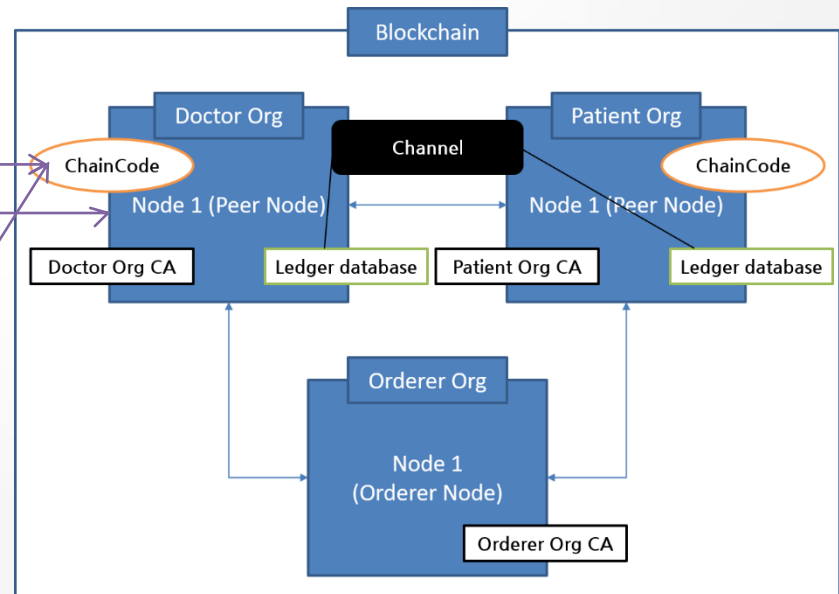


2) 인터페이스 설계 – Blockchain & IPFS

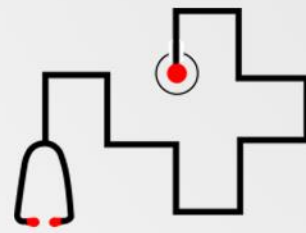


REST API (Web)
GET /doctor/get-patient-img
GET /patient/get-my-img
POST /doctor/upload-patient-img

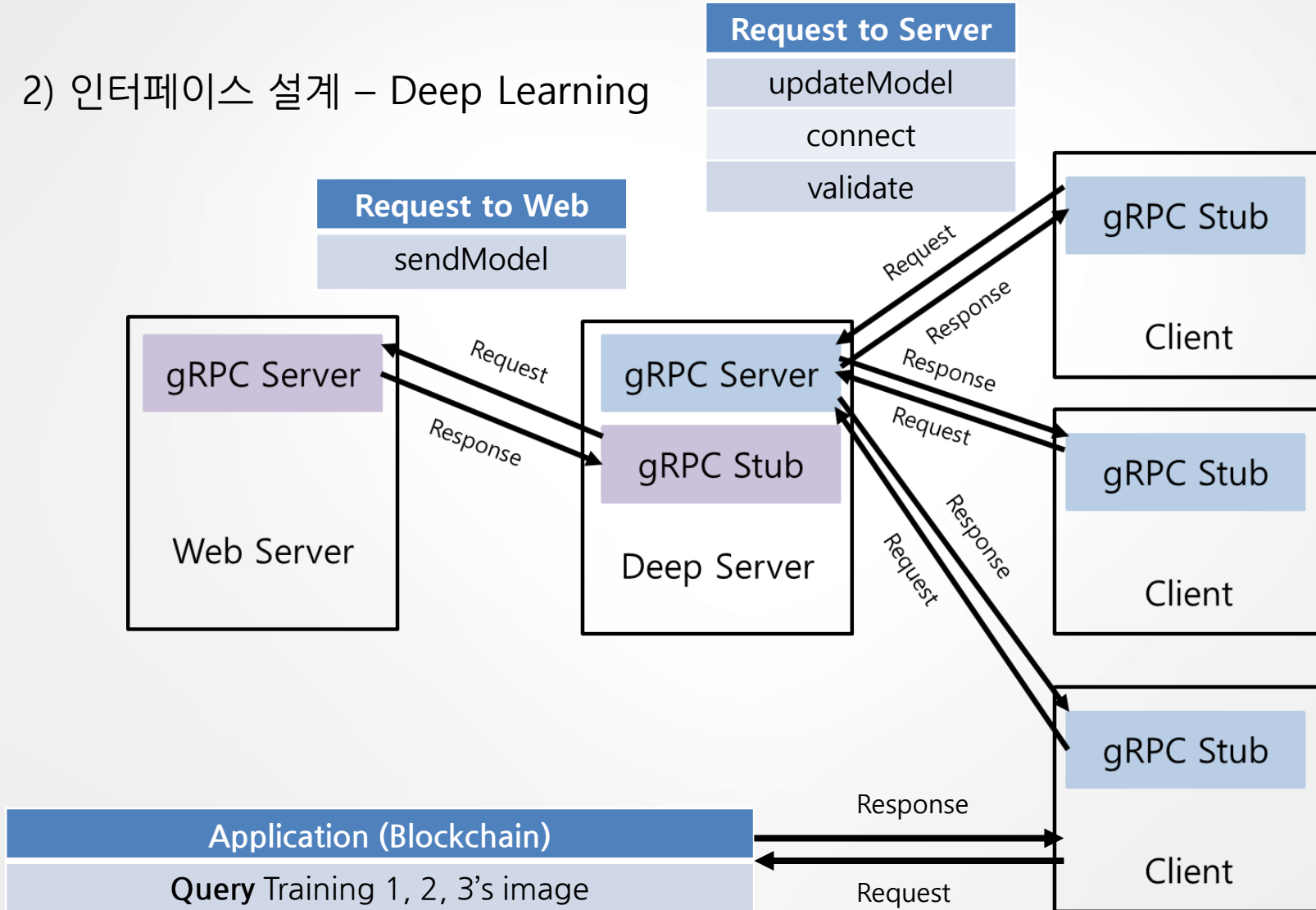
Application (Deep Learning)
Query Traing 1, 2, 3's image



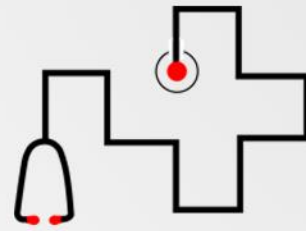
1. 상위 디자인



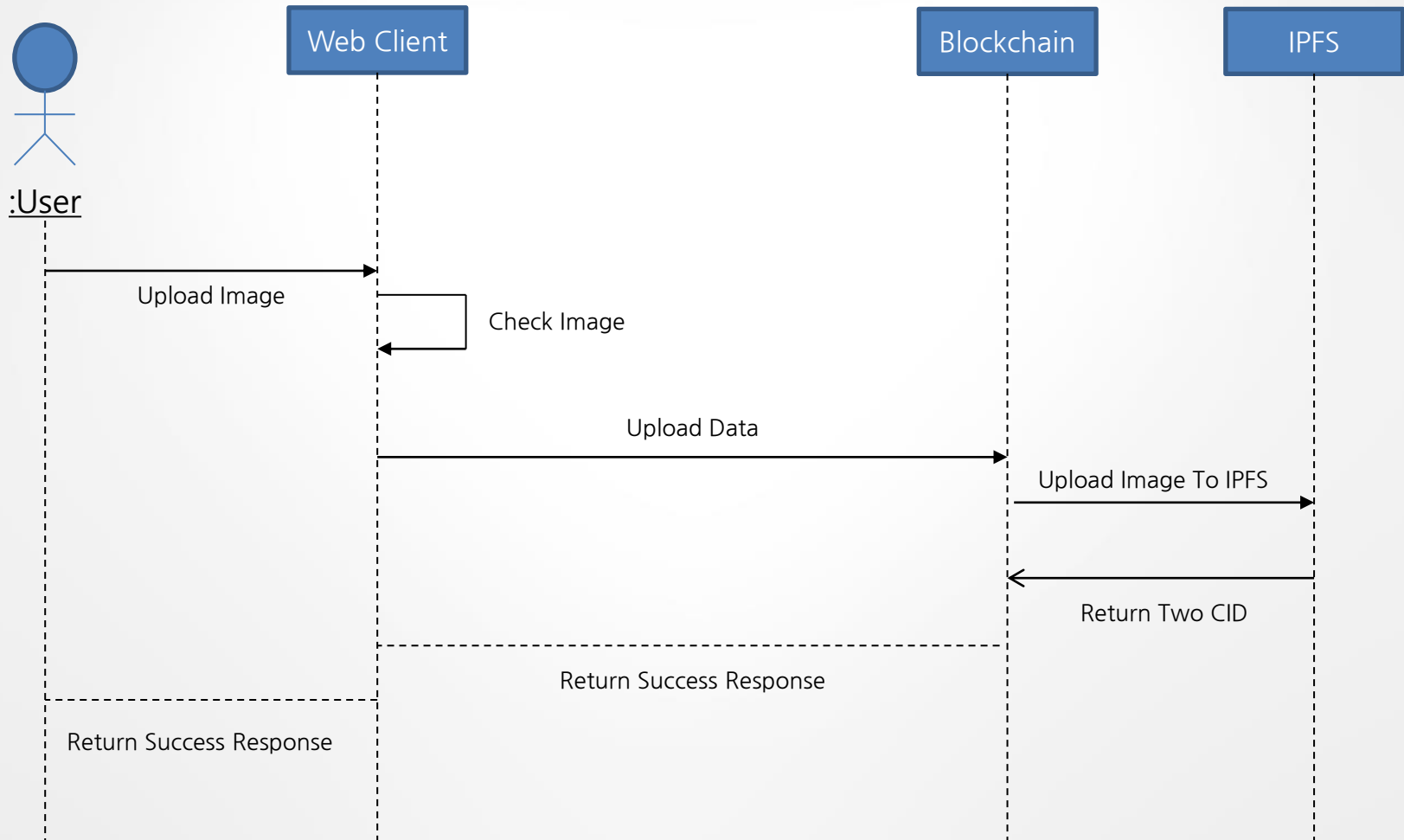
2) 인터페이스 설계 - Deep Learning



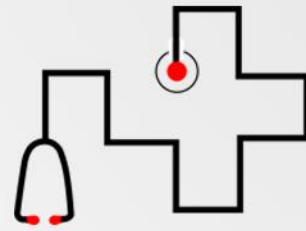
1. 상위 디자인



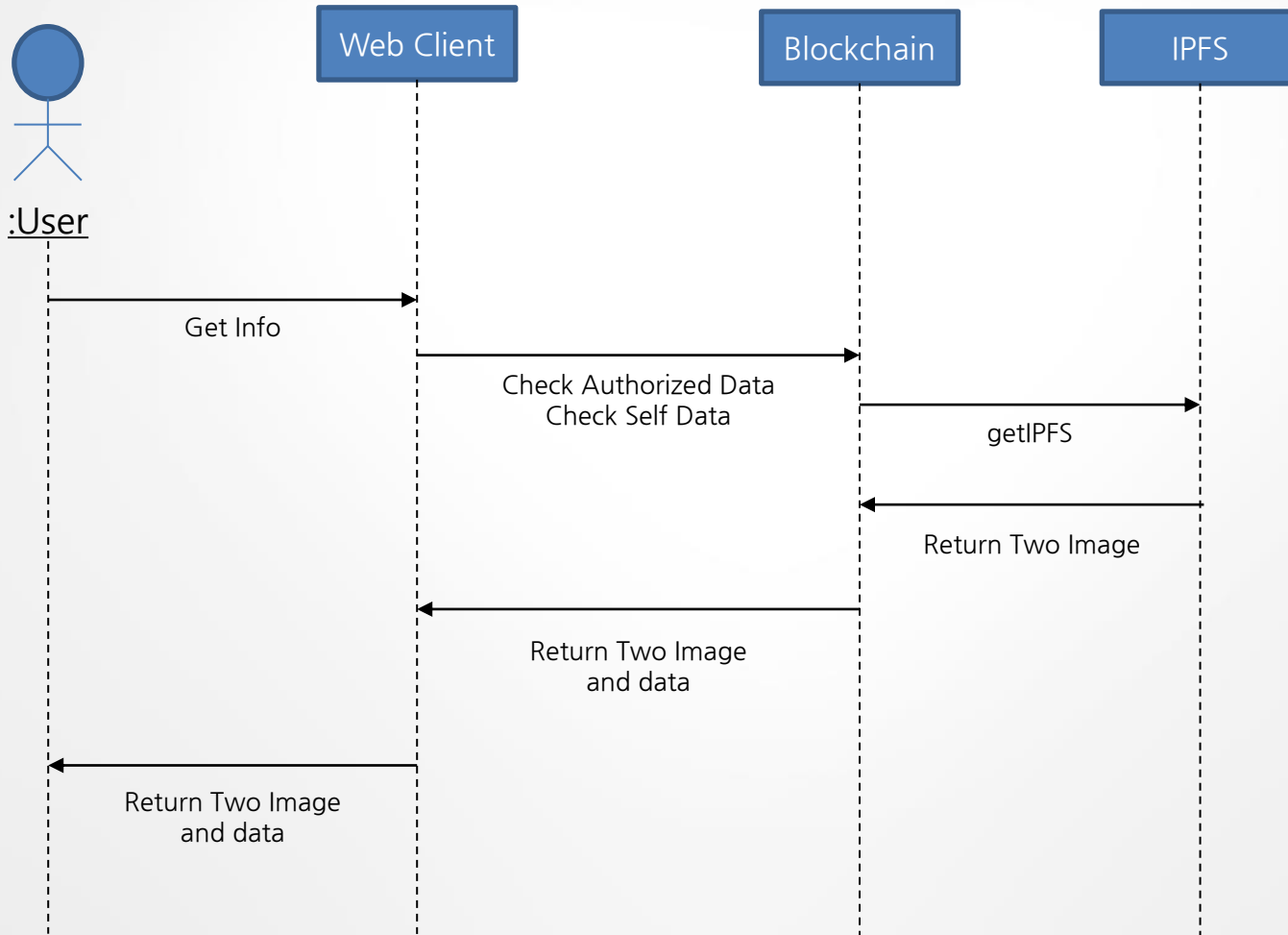
3) 시스템 시나리오 1 – Medical data upload



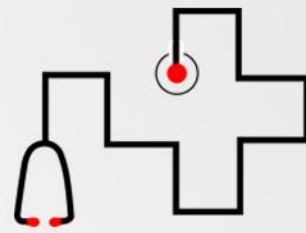
1. 상위 디자인



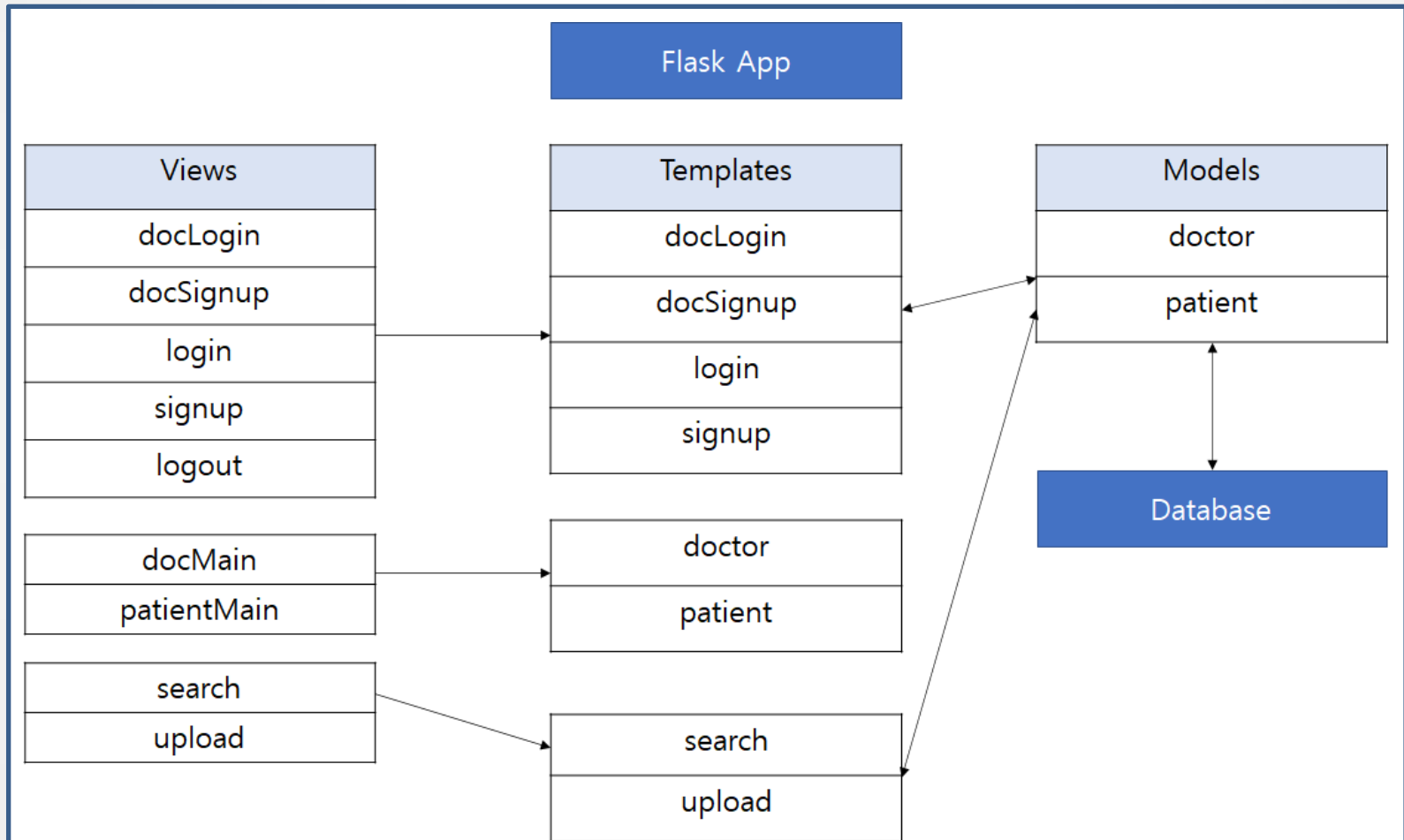
3) 시스템 시나리오 2 – Medical data query



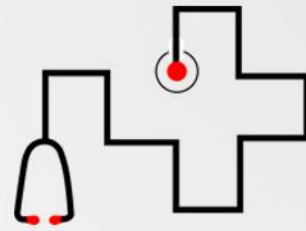
2. 상세 디자인



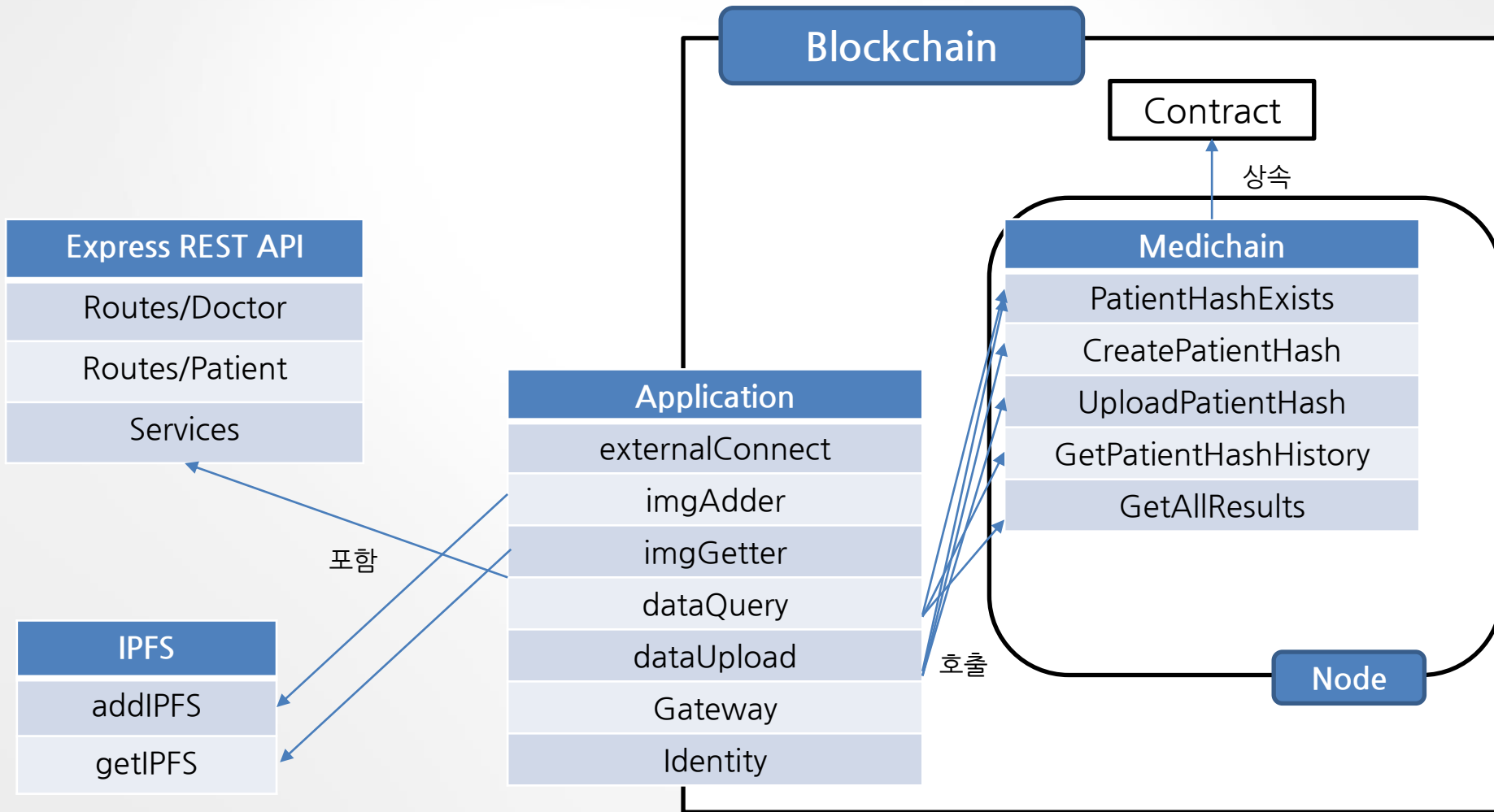
1) Module – Web System



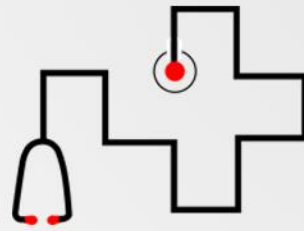
2. 상세 디자인



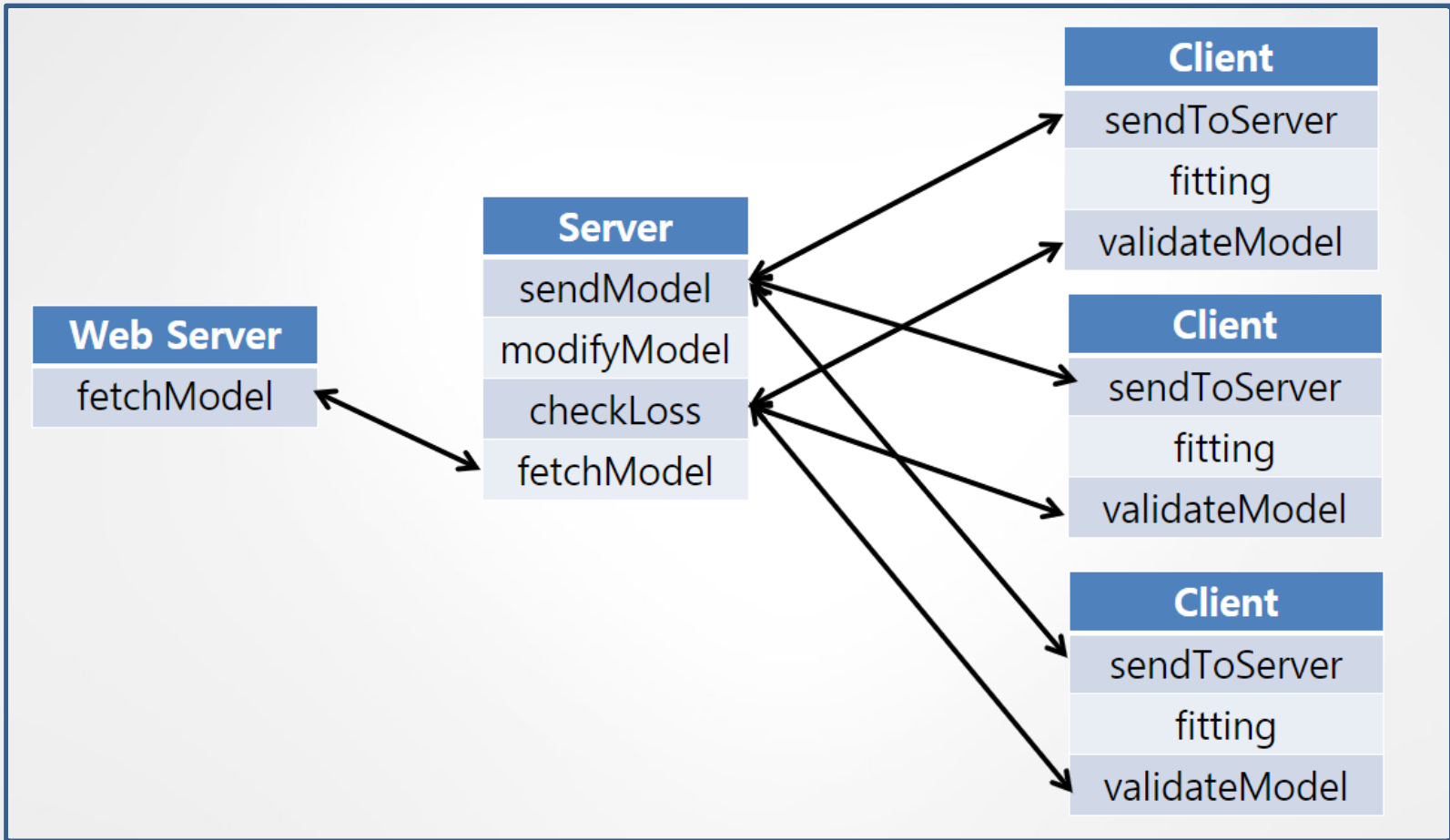
1) Module - Blockchain & IPFS



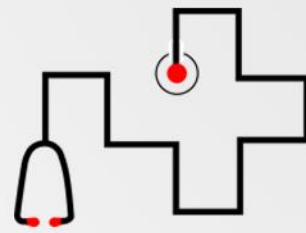
2. 상세 디자인



1) Module - Deep Learning



3. Traceability Matrix



요구사항	System Test Case	상위 디자인	세부 디자인
1.1 Sign In	로그인	Sign In	auth_views
1.2 Sign Out	로그아웃	Sign Out	models
1.3 Sign Up	회원가입	Sign Up	forms
1.4 Upload Image	의료진의 환자 데이터 query	GET /doctor/get-patient-img	
1.5 Detect Strange	환자의 자신 데이터 query	GET /patient/get-my-img	addIPFS
1.6 Get Info	의료진의 환자 데이터 upload	POST /doctor/upload-patient-img	getIPFS
1.7 Authorize	이미지 2개 IPFS 저장	Query Traing 1, 2, 3's image	externalConnect
2.1 Check Authorized Data	IPFS에서 이미지 2개 가져옴	Upload Image	dataQuery
2.2 Check Self Data		Query Image	dataUpload
2.3 Upload Data		Upload Data	
2.4 Upload to IPFS	모델을 전송 받고 다시 전송	Query Data	sendModel
2.5 Get From IPFS	모델 학습	updateModel	modifyModel
3.1 Send Model	학습한 모델을 서버로 전송	Connect	checkLoss
3.2 Learning Model	전송 받은 모델들을 취합	Validate	fetchModel
3.3 Send Model from Node to Server	모델 검증	fetchModel	sendToServer
3.4 Modify Model	검증한 loss 확인		Fitting
3.5 Validate Model	Training 완료 후 웹서버에 모델 전송		validateModel
3.6 Check Loss			
3.7 Fetch Model			