

# Class diagram

## Controllers

GeneratorController		
f	generatorService	GeneratorService
f	userService	UserService
m	getGeneratorsForUser()	List<GeneratorVDTO>
m	createNewGenerator(GeneratorCDTO)	GeneratorVDTO
m	getAllGenerators()	List<GeneratorVDTO>
m	buyGenerator(Long)	void
m	getUsername()	String

SuccessLoginController		
f	userService	UserService
f	log	Logger
m	showProfile()	UserVDTO
m	confirmAccount(UUID)	RedirectView

IntegerController		
f	randomService	RandomServiceImpl
m	test(int, int, int, boolean)	String

RegistrationController		
f	userService	UserService
m	save(UserCDTO)	UserVDTO

# DTO

UserVDTO	
username	String
email	String
role	Role
isConfirmed	Boolean
fromUser(User)	UserVDTO
getUsername()	String
getEmail()	String
getRole()	Role
getIsConfirmed()	Boolean
setUsername(String)	void
setEmail(String)	void
setRole(Role)	void
setIsConfirmed(Boolean)	void
equals(Object)	boolean
canEqual(Object)	boolean
hashCode()	int
toString()	String
builder()	UserVDTOBuilder

UserCDTO	
username	String
email	String
password	String
toUser()	User
getUsername()	String
getEmail()	String
getPassword()	String
setUsername(String)	void
setEmail(String)	void
setPassword(String)	void
equals(Object)	boolean
canEqual(Object)	boolean
hashCode()	int
toString()	String
builder()	UserCDTOBuilder

GeneratorVDTO	
id	Long
nameOfGenerator	String
fromGenerator(Generator)	GeneratorVDTO
getId()	Long
getNameOfGenerator()	String
setId(Long)	void
setNameOfGenerator(String)	void
equals(Object)	boolean
canEqual(Object)	boolean
hashCode()	int
toString()	String
builder()	GeneratorVDTOBuilder

GeneratorCDTO	
nameOfGenerator	String
toGenerator()	Generator
getNameOfGenerator()	String
setNameOfGenerator(String)	void
equals(Object)	boolean
canEqual(Object)	boolean
hashCode()	int
toString()	String
builder()	GeneratorCDTOBuilder

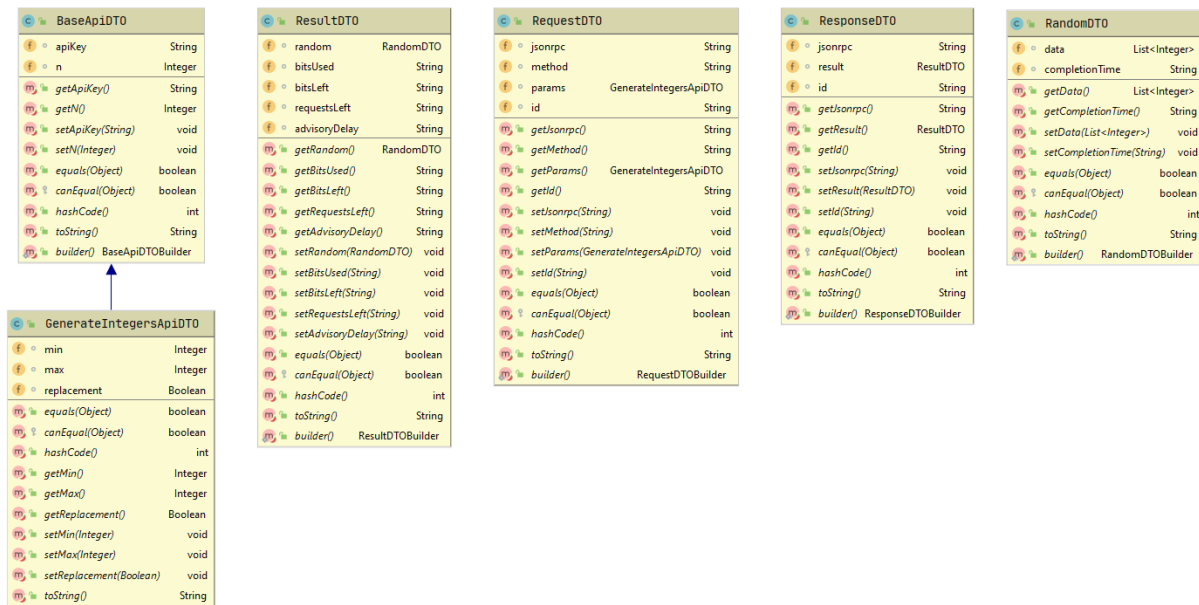
# Entity

User		
f	id	Long
f	email	String
f	username	String
f	hashPassword	String
f	role	Role
f	isConfirmed	Boolean
f	technicalInfo	TechnicalInfo
f	generators	Set<Generator>
m	equals(Object)	boolean
m	hashCode()	int
m	setId(Long)	void
m	setEmail(String)	void
m	setUsername(String)	void
m	setHashPassword(String)	void
m	setRole(Role)	void
m	setIsConfirmed(Boolean)	void
m	setTechnicalInfo(TechnicalInfo)	void
m	setGenerators(Set<Generator>)	void
m	toString()	String
m	getId()	Long
m	getEmail()	String
m	getUsername()	String
m	getHashPassword()	String
m	getRole()	Role
m	getIsConfirmed()	Boolean
m	getTechnicalInfo()	TechnicalInfo
m	getGenerators()	Set<Generator>
m	builder()	UserBuilder<?, ?>

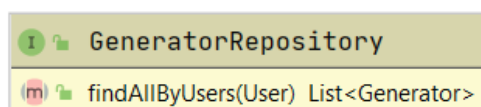
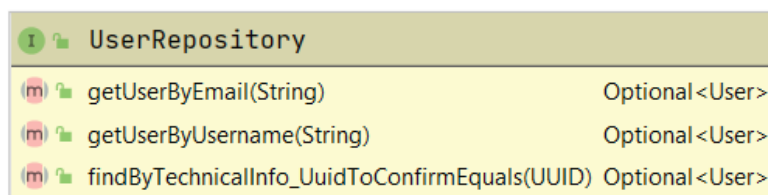
Generator		
f	id	Long
f	nameOfGenerator	String
f	users	List<User>
m	equals(Object)	boolean
m	hashCode()	int
m	setId(Long)	void
m	setNameOfGenerator(String)	void
m	setUsers(List<User>)	void
m	toString()	String
m	getId()	Long
m	getNameOfGenerator()	String
m	getUsers()	List<User>
m	builder()	GeneratorBuilder<?, ?>

TechnicalInfo		
f	id	Long
f	user	User
f	uuidToConfirm	UUID
m	setId(Long)	void
m	setUser(User)	void
m	setUuidToConfirm(UUID)	void
m	builder()	TechnicalInfoBuilder
m	getId()	Long
m	getUser()	User
m	getUuidToConfirm()	UUID

# DTO for Random.org API



## Repository & Services



UserService	
m	saveUser(UserCDTO) UserVDTO
m	sendConfirmEmail(User) void
m	confirmEmail(UUID) void
m	findByUsername(String) User
m	updateUser(User) Boolean

GeneratorService	
m	getGeneratorsByUser(User) List<GeneratorVDTO>
m	saveGenerator(GeneratorCDTO) GeneratorVDTO
m	getAllGenerators() List<Generator>
m	getGeneratorById(Long) Generator

UserServiceImpl	
f	userRepository UserRepository
f	passwordEncoder PasswordEncoder
f	mailsGenerator MailsGenerator
f	emailUtil EmailUtil
f	serverUrl String
f	from String
f	log Logger
m	saveUser(UserCDTO) UserVDTO
m	sendConfirmEmail(User) void
m	confirmEmail(UUID) void
m	findByUsername(String) User
m	updateUser(User) Boolean

GeneratorServiceImpl	
f	generatorRepository GeneratorRepository
m	getGeneratorsByUser(User) List<GeneratorVDTO>
m	saveGenerator(GeneratorCDTO) GeneratorVDTO
m	getAllGenerators() List<Generator>
m	getGeneratorById(Long) Generator

Feign	
m	getRandomInteger(RequestDTO) ResponseDTO

RandomService	
m	getInteger(int, int, int, boolean) List<Integer>

RandomServiceImpl	
f	apiKey String
f	feign Feign
m	getInteger(int, int, int, boolean) List<Integer>
m	setUpGenerateIntegersApiDto(GenerateIntegersApiDTO, int, int, int, boolean) GenerateIntegersApiDTO

# Security

UserDetailsImpl		
f	user	User
f	log	Logger
m	getAuthorities()	Collection<? extends GrantedAuthority>
m	getPassword()	String
m	getUsername()	String
m	isAccountNonExpired()	boolean
m	isAccountNonLocked()	boolean
m	isCredentialsNonExpired()	boolean
m	isEnabled()	boolean
m	toString()	String

SecurityConfig		
f	authenticationEntryPoint	MyBasicAuthenticationEntryPoint
f	userService	UserDetailsService
f	passwordEncoder	PasswordEncoder
m	configure(AuthenticationManagerBuilder)	void
m	configure(HttpSecurity)	void

UserDetailsServiceImpl		
f	userRepository	UserRepository
f	log	Logger
m	loadUserByUsername(String)	UserDetails

MyBasicAuthenticationEntryPoint		
m	commence(HttpServletRequest, HttpServletResponse, AuthenticationException)	void
m	afterPropertiesSet()	void

# Utils

EmailUtil		
m	sendEmail(String, String, String, String)	void



























EmailUtilImpl		
f	mailSender	JavaMailSender
f	executorService	ExecutorService
f	log	Logger
m	sendEmail(String, String, String, String)	void
m	setMailSender(JavaMailSender)	void
m	getMailSender()	JavaMailSender

MailsGenerator		
m	getEmailforConfirm(String, UUID)	String

FreemarkerMailsGeneratorImpl		
f	configuration	Configuration
f	log	Logger
m	getEmailforConfirm(String, UUID)	String

EmailIsAlreadyExistException		
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## Package diagram

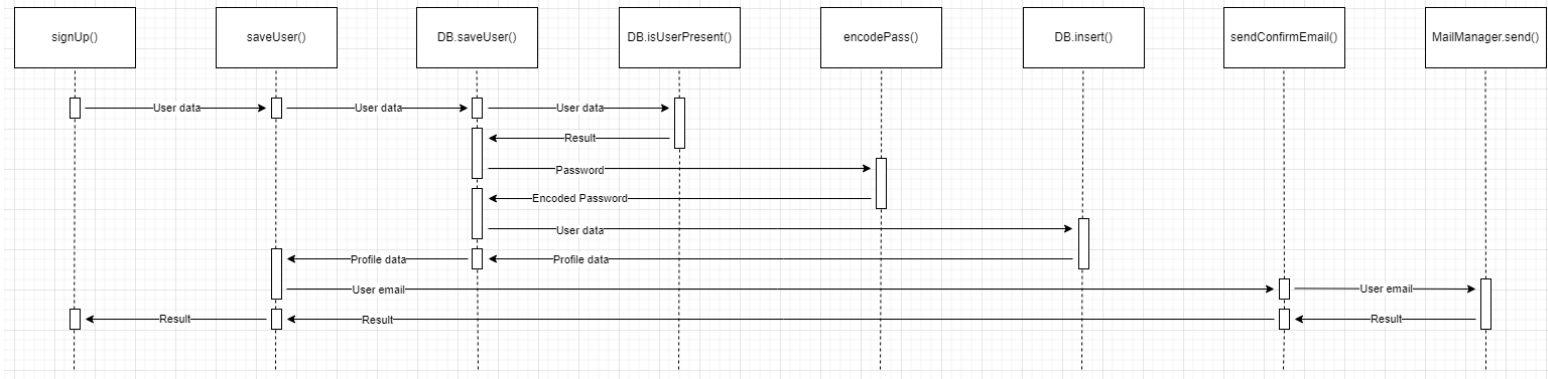
Конфигурация проекта	 config  AppConfig
Контроллеры	 controller  GeneratorController  IntegerController  RegistrationController  SuccessLoginController
DTO	 dto  GeneratorCDTO  GeneratorVDTO  UserCDTO  UserVDTO
Сущности	 entity  Generator  TechnicalInfo  User
DTO для Random.org API	 random_org_api  base  BaseApiDTO  request  GenerateIntegersApiDTO  RequestDTO  response  RandomDTO  ResponseDTO  ResultDTO

Security	<ul style="list-style-type: none"> <li>security           <ul style="list-style-type: none"> <li>config               <ul style="list-style-type: none"> <li>SecurityConfig</li> </ul> </li> <li>details               <ul style="list-style-type: none"> <li>UserDetailsImpl</li> <li>UserDetailsServiceImpl</li> </ul> </li> <li>entrypoint               <ul style="list-style-type: none"> <li>MyBasicAuthenticationEntryPoint</li> </ul> </li> </ul> </li> </ul>
Репозитории и Сервисы	<ul style="list-style-type: none"> <li>repository           <ul style="list-style-type: none"> <li>GeneratorRepository</li> <li>UserRepository</li> </ul> </li> <li>service           <ul style="list-style-type: none"> <li>Feign</li> <li>GeneratorService</li> <li>GeneratorServiceImpl</li> <li>RandomService</li> <li>RandomServiceImpl</li> <li>UserService</li> <li>UserServiceImpl</li> </ul> </li> </ul>
Utils	<ul style="list-style-type: none"> <li>util           <ul style="list-style-type: none"> <li>exception               <ul style="list-style-type: none"> <li>EmailsAlreadyExistException</li> </ul> </li> <li>smtp               <ul style="list-style-type: none"> <li>EmailUtil</li> <li>EmailUtilImpl</li> <li>FreemarkerMailsGeneratorImpl</li> <li>MailsGenerator</li> </ul> </li> </ul> </li> </ul>

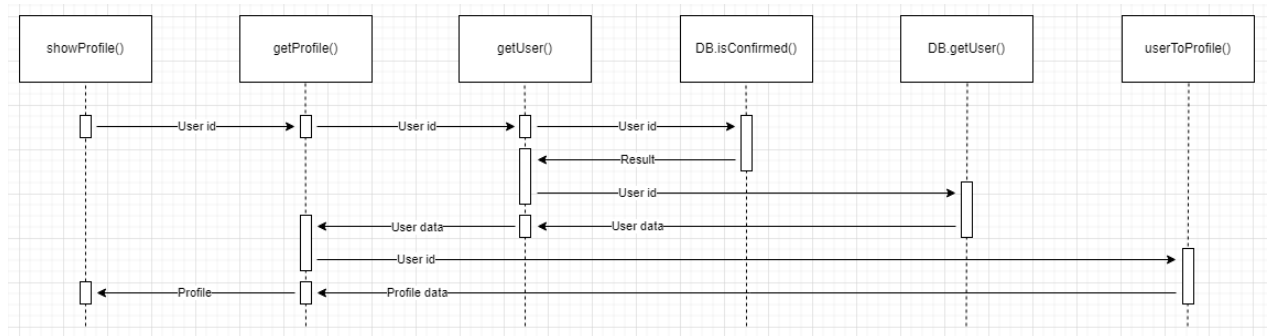


# Sequence diagram

## Sign Up

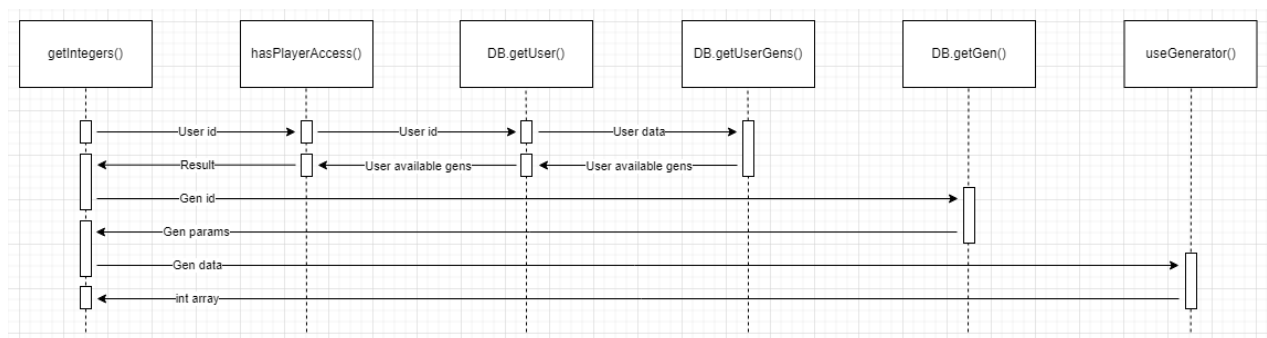


## Show Profile



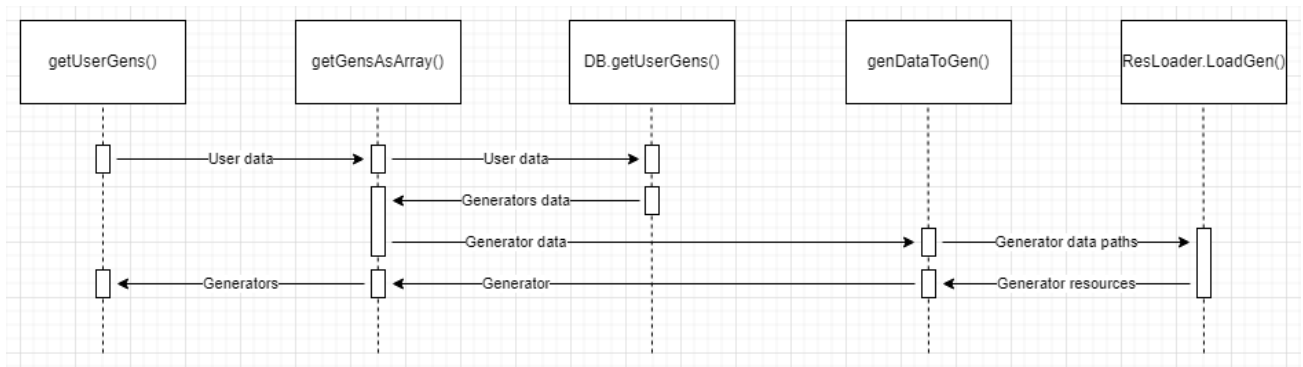
## Get Integers

Сокращение "Gen" = "Generator"



## Get User Generators

Сокращение "Gen" = "Generator"



## Get Random Generator

Сокращение “Gen” = “Generator”

getIntegers() - диаграмма метода приведена выше

