# SIMPLE NEWS AGGREGATOR



MENTOR:

Source code:

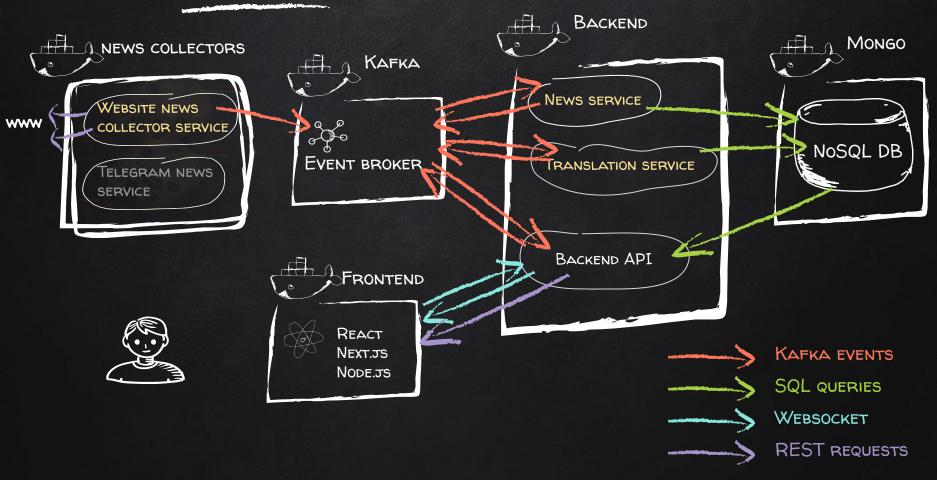
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HTTPS://GITHUB.COM/KABISHEV/NEWS-TRACKER

• THE GOAL OF THE PROJECT IS TO CREATE A DISTRIBUTED EVENT—DRIVEN MICROSERVICE ARCHITECTURE USING SCALA'S FUNCTIONAL PROGRAMMING APPROACH.

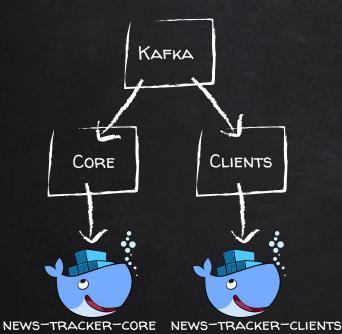


# THE HIGH-LEVEL OVERVIEW

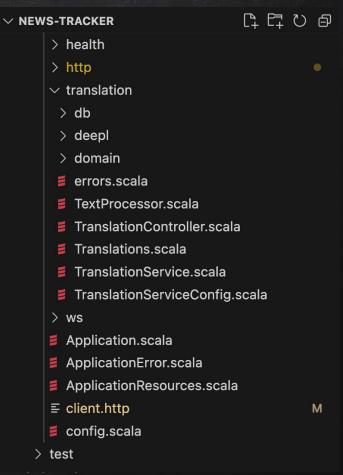


# THE PROJECT STRUCTURE

# MULTI-PROJECT BUILD



# PACKAGE BY FEATURE



### CODE IMPLEMENTATION: BACKEND MAIN

```
translation
                                      object Application extends IOApp.Simple {
                                        implicit val logger = Slf4jLogger.getLogger[I0]
 > db
                                        override def run: IO[Unit] = for {
 > deepl
                                          config <- ApplicationConfig.load[I0]</pre>
 > domain
                                                 <- logger.info(Console.GREEN + config + Console.RESET)</pre>
 errors.scala
                                          <- ApplicationResources.make[I0](config).use { resources =>
                                            for {
■ TextProcessor.scala
                                              health <- Health.make[I0]
■ TranslationController.scala
                                              ws ---- <- Ws.make[I0](resources)
■ Translations.scala
                                              articles <- Articles.make[I0](resources)
■ TranslationService.scala
                                              translations <- Translations.make[I0](config.deepl, resources)
■ TranslationServiceConfig.s...
                                              http://dealth.net.org/http.make[I0](health, ws, articles, translations)
                                              server = HttpServer[I0].ember(config.httpServer, http).use(_ => I0.never)
V WS
                                              _ <- Stream
■ Ws.scala
                                                 .eval(server)
■ WsController.scala
                                                .concurrently(articles.stream)
■ WsEvent.scala
                                                .concurrently(translations.stream)
 Application.scala
                                                .compile
                                                 .drain
ApplicationError.scala
                                             } vield ()
ApplicationResources.scala

    ≡ client.http

                                        } vield ()
config.scala
```

### CODE IMPLEMENTATION: TRANSLATIONS FEATURE

```
translation
                                       final class Translations[F[]] private (
 \vee db
                                         val controller: Controller[F],
                                         val stream: fs2.Stream[F, Unit]
 ■ Localization.scala
  TranslationEntity.scala
 TranslationRepository.scala
                                       You, 4 days ago | 1 author (You)
 > deepl
                                       object Translations {
                                         def make[F[_]: Async: Logger](config: DeeplConfig, resources: ApplicationResources[F]): F[Tr

√ domain

                                           for {
  CreateTranslation.scala
                                             repo <- TranslationRepository.make[F](resources.mongo)</pre>
  domain.scala
                                             deepl <- DeeplClient.make[F](config, resources)</pre>
 Localization.scala
                                             svc <- TranslationService.make[F](</pre>
  Translation scala
                                               repo,
                                               deepl,
 errors.scala
                                               TextProcessor.makeJsoupProcessor[F],
 ■ TextProcessor.scala
                                               resources.createdArticleEventConsumer,
 TranslationController.scala
                                               resources.translatedEventProducer.
   Translations.scala
                                               resources.translateCommandProducer,
                                               resources.translateCommandConsumer,
 ■ TranslationService.scala
                                               resources.serviceEventProducer
 TranslationServiceConfig.s...
 WS
                                             ctrl <- TranslationController.make[F](svc)
 Application.scala
                                           } yield new Translations[F](ctrl, svc.stream)
 ApplicationError.scala
```

### CODE IMPLEMENTATION: TRANSLATE FUNCTION

```
√ translation

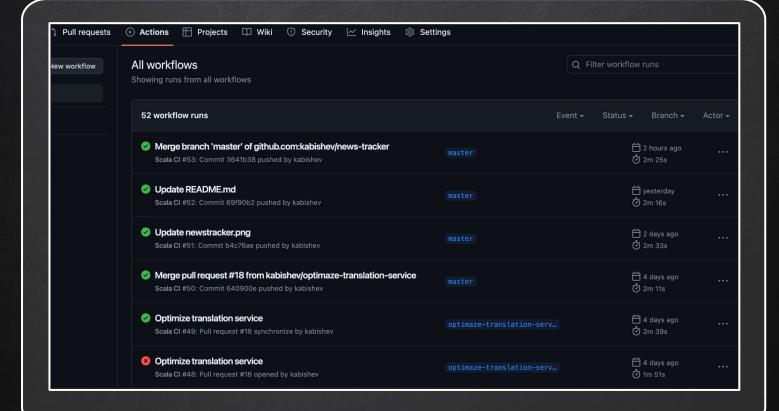
                          private def translate(cmd: TranslateCommand)(translation: Translation): F[Unit] = {
 ∨ db
                            val translationId = TranslationId(cmd.id)
 Localization....
                            val targetLanguage = LocalizationLanguage(cmd.language)
                            val startTime = System.currentTimeMillis()
 ■ TranslationF...
                            translation.localizations.find( .language == targetLanguage) match {
 TranslationR...
                              case None =>
 > deepl
                                val original = translation.localizations.head

√ domain

                                val content = original.content.value
 CreateTransl...
                                for {
 domain.scala
                                  preprocessed <- textProcessor.preprocessing(content)</pre>
 E Localization....
                                  translated --- <- deeplClient.translate(preprocessed, original.language.value, targetLanguage.value)
 ■ Translation....
                                               <- Logger[F].info(s"translation received: id = ${translationId.value}, language = ${targetLanguage.va</pre>
 errors scala
                                  postprocessed <- textProcessor.postprocessing(content, translated)</pre>
                                  newTranslation = Translation(
 TextProcesso...
                                    translationId,
 TranslationCo...
                                    translation.localizations :+ Localization(targetLanguage, LocalizationContent(postprocessed))
 Translations.s...
  TranslationSe...
                                  updatedTranslation <- repository.update(newTranslation)</pre>
                                  ______<- Logger[F].info(s"translation updated: id = ${translationId.value}, language = ${targetLanguage}
 TranslationSe...
                                     WS
                                  event = ServiceEvent.makeTaskCompletedEvent(
  Application.sc...
                                    config.name.
 ApplicationErr...
                                    s"Translation (${targetLanguage.value}) completed: duration = ${System.currentTimeMillis() - startTime} ms"
 ApplicationRes...
                                  _ <- serviceEventProducer.produceOne(event)</pre>

≡ client.http M

                                } vield ()
config.scala
                              case Some(_) => ().pure[F]
```





# Any questions?

You can find me at kabishev@gmail.com