

# Proje Raporu: Web Servis Geliřtirmesi

## 1. Giriř

Bu rapor, Maven kullanarak Spring Boot kullanılarak geliřtirilen bir web servis projesinin detaylarını içermektedir. Projenin amacı, ürün stoęunu artırmak, azaltmak ve listelemek için RESTful servislerin oluşturulmasıdır. Ayrıca, proje kapsamında birim testler yazılmış, GitHub Actions ile sürekli entegrasyon sağlanmış ve Postman ile JMeter kullanılarak testler yapılmıştır.

## 2. Proje Detayları

### 2.1 Teknolojiler

Spring Boot

Maven

JUnit

Postman

JMeter

GitHub Actions

### 2.2 REST Servisleri

Proje, aşağıdaki REST servislerini içermektedir:

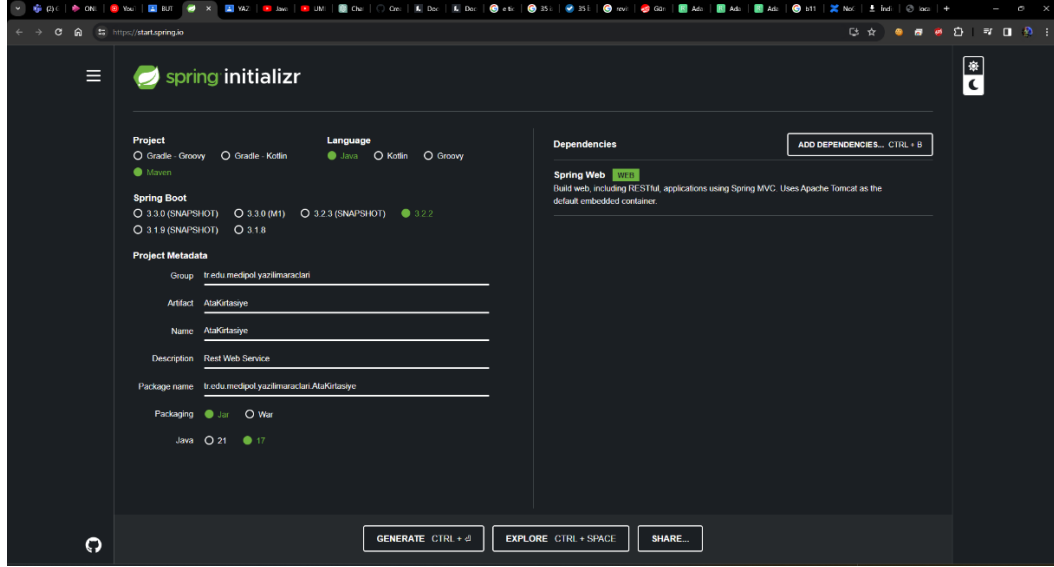
UrunEkle()

UrunSil()

UrunListele()

## 2.3 Maven Projesi

Proje, Maven projesi olarak oluşturulmuştur. Springboot kullanarak gayet basit bir şekilde maven projemizi oluşturduk:



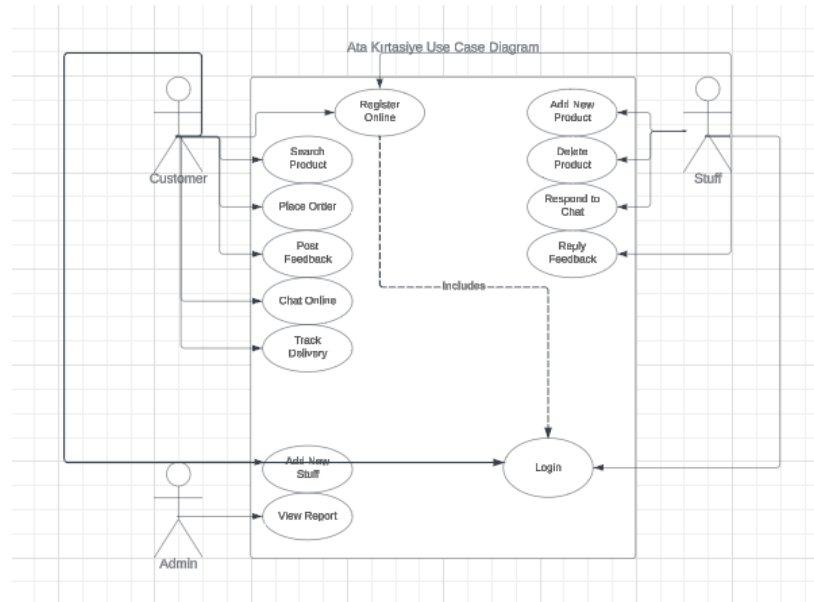
The screenshot shows the Spring Initializr web application interface. The page is titled "spring initializr" and has a dark theme. The main content area is divided into several sections:

- Project:** Includes radio buttons for "Gradle - Groovy", "Gradle - Kotlin", and "Maven" (selected).
- Language:** Includes radio buttons for "Java" (selected), "Kotlin", and "Groovy".
- Spring Boot:** Includes radio buttons for "3.0.0 (SNAPSHOT)", "3.0.0 (M1)", "3.2.3 (SNAPSHOT)", and "3.2.2" (selected).
- Project Metadata:** Includes input fields for "Group" (filled with "tr.edu.medipol.yazilimcilarci"), "Artifact" (filled with "AtaKirtasiye"), "Name" (filled with "AtaKirtasiye"), "Description" (filled with "Rest Web Service"), and "Package name" (filled with "tr.edu.medipol.yazilimcilarci.AtaKirtasiye").
- Packaging:** Includes radio buttons for "Jar" (selected) and "War".
- Java:** Includes radio buttons for "21" and "17" (selected).
- Dependencies:** Includes a section for "Spring Web" with a "WEB" tag and a description: "Build web, including RESTful, applications using Spring MVC. Uses Apache Tomcat as the default embedded container." There is also a button "ADD DEPENDENCIES... CTRL + S".

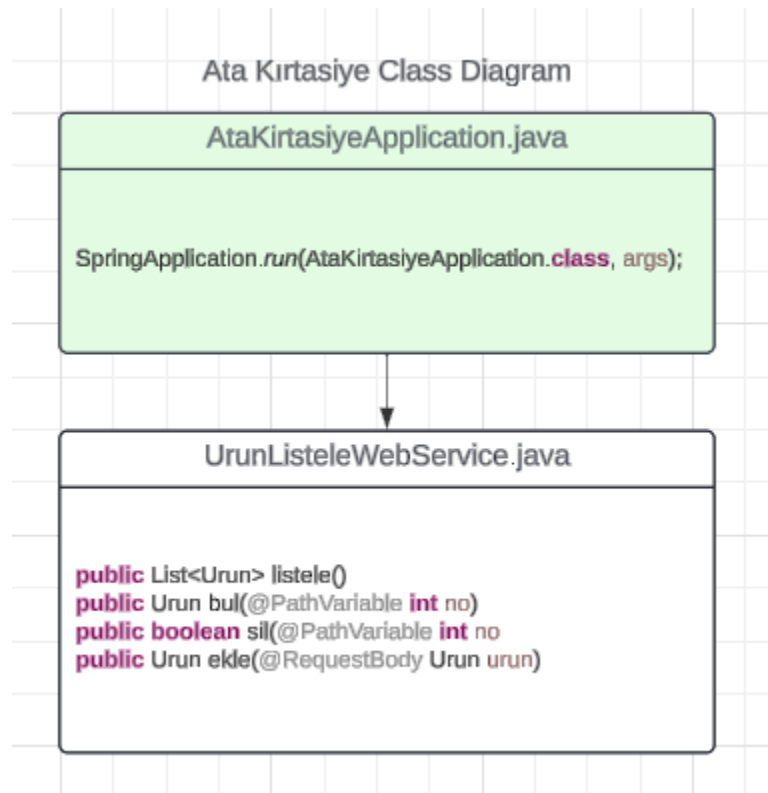
At the bottom of the page, there are three buttons: "GENERATE CTRL + G", "EXPLORE CTRL + SPACE", and "SHARE...".

## 2.4 UML Diagramları

Projemizin Use Case Diyagramı:



Projemizin Class Diyagramı:



## Junit Testi:

The screenshot shows an IDE with the following components:

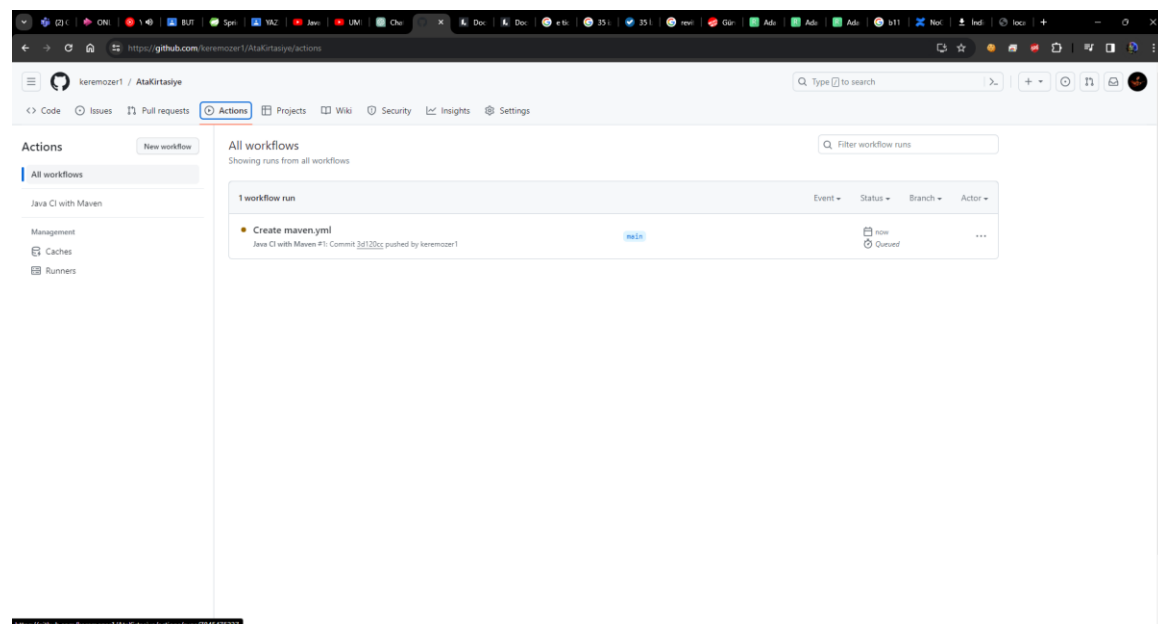
- Top Bar:** File, Edit, Source, Refactor, Window, Help.
- Left Panel:** Package Explorer showing a project structure with a test class.
- Editor:** A Java test class named `AtaKirtasiyeWebServiceTest` with the following code:
 

```

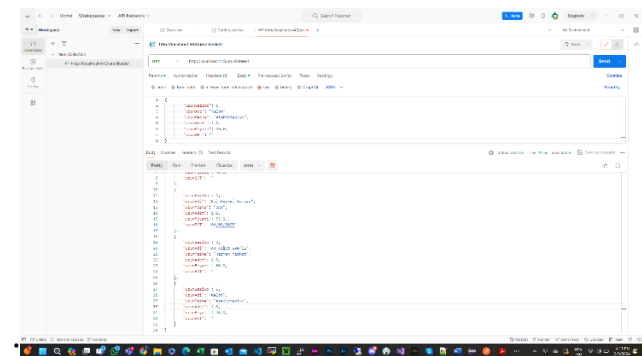
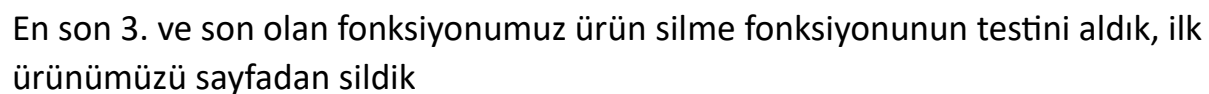
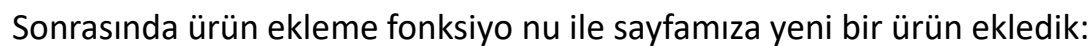
1 package tr.edu.medipol.yasillimacacilari.AtaKirtasiye;
2
3 import org.junit.jupiter.api.BeforeEach;
4 import org.junit.jupiter.api.Test;
5 import org.springframework.boot.test.context.SpringBootTest;
6 import static org.junit.jupiter.api.Assertions.*;
7
8 @SpringBootTest
9 class UrunListeleWebServiceTest {
10
11     private UrunListeleWebService urunListeleWebService;
12
13     @BeforeEach
14     void setUp() {
15         urunListeleWebService = new UrunListeleWebService();
16     }
17
18     @Test
19     void testListele() {
20         assertEquals(urunListeleWebService.listele(),
21             assertEquals(2, urunListeleWebService.listele().size()));
22     }
23
24     @Test
25     void testBul() {
26         assertEquals(urunListeleWebService.bul(0001),
27             assertEquals(urunListeleWebService.bul(9999)));
28     }
29
30     @Test
31     void testSil() {
32         assertTrue(urunListeleWebService.sil(0001));
33         assertFalse(urunListeleWebService.sil(9999));
34     }
35
36     @Test
37     void testEkle() {
38         UrunListeleWebService.urunYeniUrun = new UrunListeleWebService.Urun(0004, "Test Urunu", "Test Markesi", 1, 50, "01/01/2025");
39     }
40
41 }

```
- Bottom Panel:**
  - Run:** Shows the test execution progress with a green bar indicating success.
  - Failure Trace:** Shows the test results for the `testListele` method, indicating it passed.
  - Problems:** Shows a warning about a deprecated method `assertEquals` being used.
  - Console:** Shows the output of the test execution, including the PID and the test results.

Github Actions sekmesinden Maven konfigürasyonu yapıldı:



İlk olarak ürün listele fonksiyonunun testini alarak ürünlerin en baştaki halinin çıktısını aldık:



## View Results in Table:

Sample	Run Time	Run Time (s)	Unit	Sample Size	Status	Ratio	Success	Latency	Current Result
1	1:00:00.000	RunTime (s) = 0.00	s	10	OK	0.00	0.00	0.00	0.00
2	1:00:00.000	RunTime (s) = 0.00	s	20	OK	0.00	0.00	0.00	0.00
3	1:00:00.000	RunTime (s) = 0.00	s	30	OK	0.00	0.00	0.00	0.00
4	1:00:00.000	RunTime (s) = 0.00	s	40	OK	0.00	0.00	0.00	0.00
5	1:00:00.000	RunTime (s) = 0.00	s	50	OK	0.00	0.00	0.00	0.00
6	1:00:00.000	RunTime (s) = 0.00	s	60	OK	0.00	0.00	0.00	0.00
7	1:00:00.000	RunTime (s) = 0.00	s	70	OK	0.00	0.00	0.00	0.00
8	1:00:00.000	RunTime (s) = 0.00	s	80	OK	0.00	0.00	0.00	0.00
9	1:00:00.000	RunTime (s) = 0.00	s	90	OK	0.00	0.00	0.00	0.00
10	1:00:00.000	RunTime (s) = 0.00	s	100	OK	0.00	0.00	0.00	0.00
11	1:00:00.000	RunTime (s) = 0.00	s	110	OK	0.00	0.00	0.00	0.00
12	1:00:00.000	RunTime (s) = 0.00	s	120	OK	0.00	0.00	0.00	0.00
13	1:00:00.000	RunTime (s) = 0.00	s	130	OK	0.00	0.00	0.00	0.00
14	1:00:00.000	RunTime (s) = 0.00	s	140	OK	0.00	0.00	0.00	0.00
15	1:00:00.000	RunTime (s) = 0.00	s	150	OK	0.00	0.00	0.00	0.00
16	1:00:00.000	RunTime (s) = 0.00	s	160	OK	0.00	0.00	0.00	0.00
17	1:00:00.000	RunTime (s) = 0.00	s	170	OK	0.00	0.00	0.00	0.00
18	1:00:00.000	RunTime (s) = 0.00	s	180	OK	0.00	0.00	0.00	0.00
19	1:00:00.000	RunTime (s) = 0.00	s	190	OK	0.00	0.00	0.00	0.00
20	1:00:00.000	RunTime (s) = 0.00	s	200	OK	0.00	0.00	0.00	0.00
21	1:00:00.000	RunTime (s) = 0.00	s	210	OK	0.00	0.00	0.00	0.00
22	1:00:00.000	RunTime (s) = 0.00	s	220	OK	0.00	0.00	0.00	0.00
23	1:00:00.000	RunTime (s) = 0.00	s	230	OK	0.00	0.00	0.00	0.00
24	1:00:00.000	RunTime (s) = 0.00	s	240	OK	0.00	0.00	0.00	0.00
25	1:00:00.000	RunTime (s) = 0.00	s	250	OK	0.00	0.00	0.00	0.00
26	1:00:00.000	RunTime (s) = 0.00	s	260	OK	0.00	0.00	0.00	0.00
27	1:00:00.000	RunTime (s) = 0.00	s	270	OK	0.00	0.00	0.00	0.00
28	1:00:00.000	RunTime (s) = 0.00	s	280	OK	0.00	0.00	0.00	0.00
29	1:00:00.000	RunTime (s) = 0.00	s	290	OK	0.00	0.00	0.00	0.00
30	1:00:00.000	RunTime (s) = 0.00	s	300	OK	0.00	0.00	0.00	0.00

## Summary Report:

Summary Report

Field	# Targets	Average	Min	Max	Std Dev	Min Val	Throughput	Max Val	Avg Rate
Base Freq	100	10	0	100	0.10	100.00	100.00	100.00	10.00
100 Hz	100	10	0	100	0.10	100.00	100.00	100.00	10.00

### Results Tree:

The screenshot shows the AWS IAM console interface. On the left, the navigation pane is open, showing the 'Users' section under 'IAM'. The 'Users' list is expanded, showing a list of users with their status and last sign-in time. The 'Users' list is filtered by 'All Users' and 'All Roles'. The 'Users' list is sorted by 'Name' and 'Last Sign-In Time'.

## 2.8 GitHub Repository

Git Bash kullanarak süreci tamamladık, aşağıda bu süreçte kullanılan kod dizileri verilmiştir:

```
kerem@DESKTOP-PN1MONB MINGW64 ~/downloads/AtaKirtasiyeRepo (master)
$ git remote add origin https://github.com/keremozer1/AtaKirtasiye.git

kerem@DESKTOP-PN1MONB MINGW64 ~/downloads/AtaKirtasiyeRepo (master)
$ git add .
warning: in the working copy of 'AtaKirtasiye/.gitignore', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'AtaKirtasiye/.mvn/wrapper/maven-wrapper.properties', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'AtaKirtasiye/mvnw', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'AtaKirtasiye/mvnw.cmd', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'AtaKirtasiye/pom.xml', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'AtaKirtasiye/src/main/java/tr/edu/medipol/yazilimaraclari/AtaKirtasiye/AtaKirtasiyeApplication.java', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'AtaKirtasiye/src/main/resources/application.properties', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'AtaKirtasiye/src/test/java/tr/edu/medipol/yazilimaraclari/AtaKirtasiye/AtaKirtasiyeApplicationTests.java', LF will be replaced by CRLF the next time Git touches it

kerem@DESKTOP-PN1MONB MINGW64 ~/downloads/AtaKirtasiyeRepo (master)
$ git commit -m "first commit"
[master (root-commit) efd22d3] first commit
10 files changed, 666 insertions(+)
create mode 100644 AtaKirtasiye/.gitignore
create mode 100644 AtaKirtasiye/.mvn/wrapper/maven-wrapper.jar
create mode 100644 AtaKirtasiye/.mvn/wrapper/maven-wrapper.properties
create mode 100644 AtaKirtasiye/mvnw
create mode 100644 AtaKirtasiye/mvnw.cmd
create mode 100644 AtaKirtasiye/pom.xml
create mode 100644 AtaKirtasiye/src/main/java/tr/edu/medipol/yazilimaraclari/AtaKirtasiye/AtaKirtasiyeApplication.java
create mode 100644 AtaKirtasiye/src/main/java/tr/edu/medipol/yazilimaraclari/AtaKirtasiye/UrunListeleWebService.java
create mode 100644 AtaKirtasiye/src/main/resources/application.properties
create mode 100644 AtaKirtasiye/src/test/java/tr/edu/medipol/yazilimaraclari/AtaKirtasiye/AtaKirtasiyeApplicationTests.java

kerem@DESKTOP-PN1MONB MINGW64 ~/downloads/AtaKirtasiyeRepo (master)
$ git push origin master
Enumerating objects: 31, done.
Counting objects: 100% (31/31), done.
Delta compression using up to 8 threads
Compressing objects: 100% (17/17), done.
Writing objects: 100% (31/31), 63.79 KiB | 3.19 MiB/s, done.
Total 31 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote:   https://github.com/keremozer1/AtaKirtasiye/pull/new/master
remote:
To https://github.com/keremozer1/AtaKirtasiye.git
 * [new branch]      master -> master

kerem@DESKTOP-PN1MONB MINGW64 ~/downloads/AtaKirtasiyeRepo (master)
$ |
```

```
kerem@DESKTOP-PN1MONB MINGW64 ~/downloads (main)
$ cd AtaKirtasiyeRepo/

kerem@DESKTOP-PN1MONB MINGW64 ~/downloads/AtaKirtasiyeRepo (main)
$ git init
Initialized empty Git repository in C:/Users/kerem/Downloads/AtaKirtasiyeRepo/.git/
```

Proje, GitHub'da özel bir repository içinde saklanmaktadır. Repository'nin bağlantısı:

[<https://github.com/keremozer1/AtaKirtasiye.git>]

### 3. Sonuç:

Bu proje kapsamında, Maven ve Spring Boot kullanılarak bir web servisi geliştirilmiş, birim testleri yazılmış, sürekli entegrasyon sağlanmış ve testler yapılmıştır. Proje başarıyla tamamlanmıştır.

İlginize Teşekkürler

Bilgisayar Programcılığı 2. Sınıf (İ.Ö)

Kerem Özer HR220044