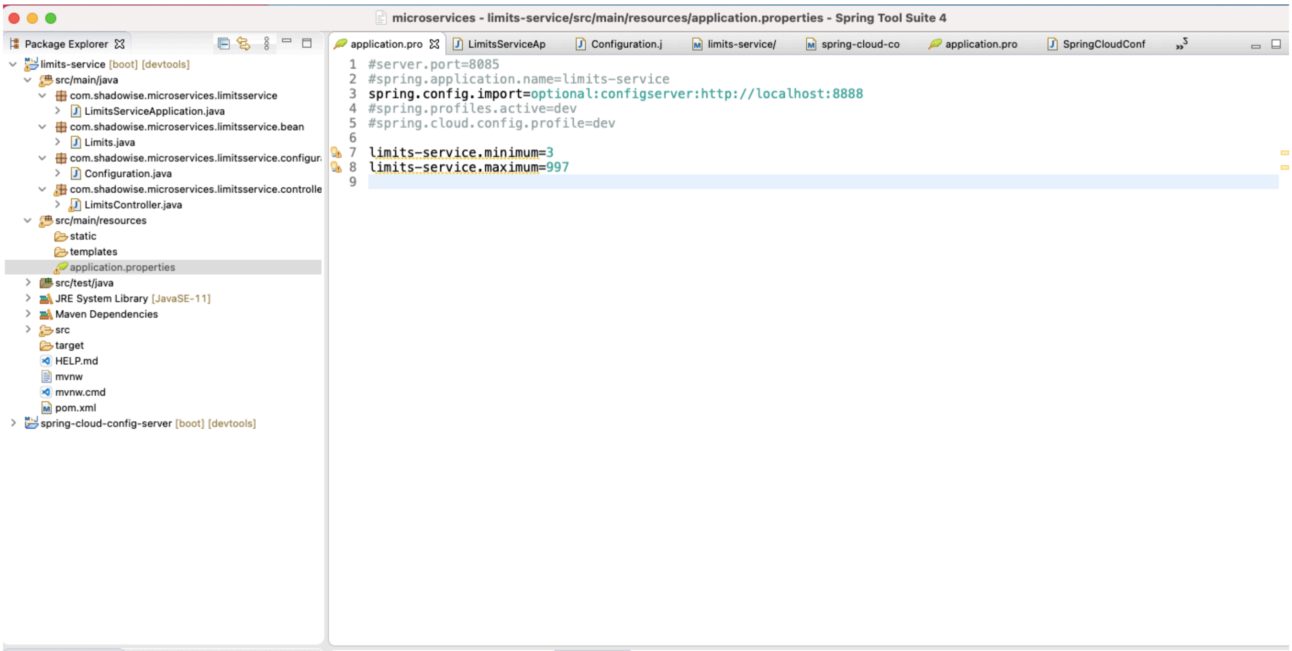
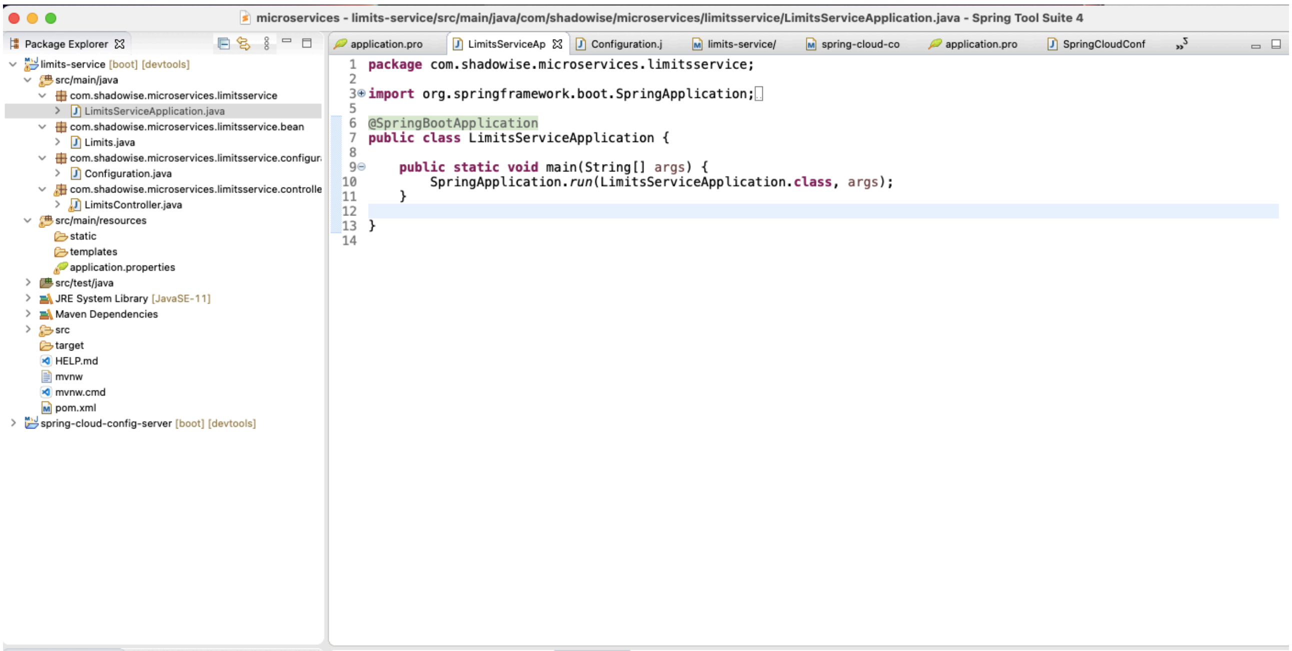
1. Limit Service


microservices - limits-service/src/main/resources/application.properties - Spring Tool Suite 4
Package Explorer
limits-service [boot] [devtools]
src/main/java
com.shadowise.microservices.limitsservice
LimitsServiceApplication.java
com.shadowise.microservices.limitsservice.bean
Limits.java
com.shadowise.microservices.limitsservice.configur
Configuration.java
com.shadowise.microservices.limitsservice.controlle
LimitsController.java
src/main/resources
static
templates
application.properties
src/test/java
JRE System Library [JavaSE-11]
Maven Dependencies
src
target
HELP.md
mvnw
mvnw.cmd
pom.xml
spring-cloud-config-server [boot] [devtools]
application.pro
LimitsServiceAp
Configuration.j
limits-service/
spring-cloud-co
application.pro
SpringCloudConf

```
#server.port=8085
#spring.application.name=limits-service
spring.config.import=optional:configserver:http://localhost:8888
#spring.profiles.active=dev
#spring.cloud.config.profile=dev

limits-service.minimum=3
limits-service.maximum=997

```


microservices - limits-service/src/main/java/com/shadowise/microservices/limitsservice/LimitsServiceApplication.java - Spring Tool Suite 4
Package Explorer
limits-service [boot] [devtools]
src/main/java
com.shadowise.microservices.limitsservice
LimitsServiceApplication.java
com.shadowise.microservices.limitsservice.bean
Limits.java
com.shadowise.microservices.limitsservice.configur
Configuration.java
com.shadowise.microservices.limitsservice.controlle
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src/main/resources
static
templates
application.properties
src/test/java
JRE System Library [JavaSE-11]
Maven Dependencies
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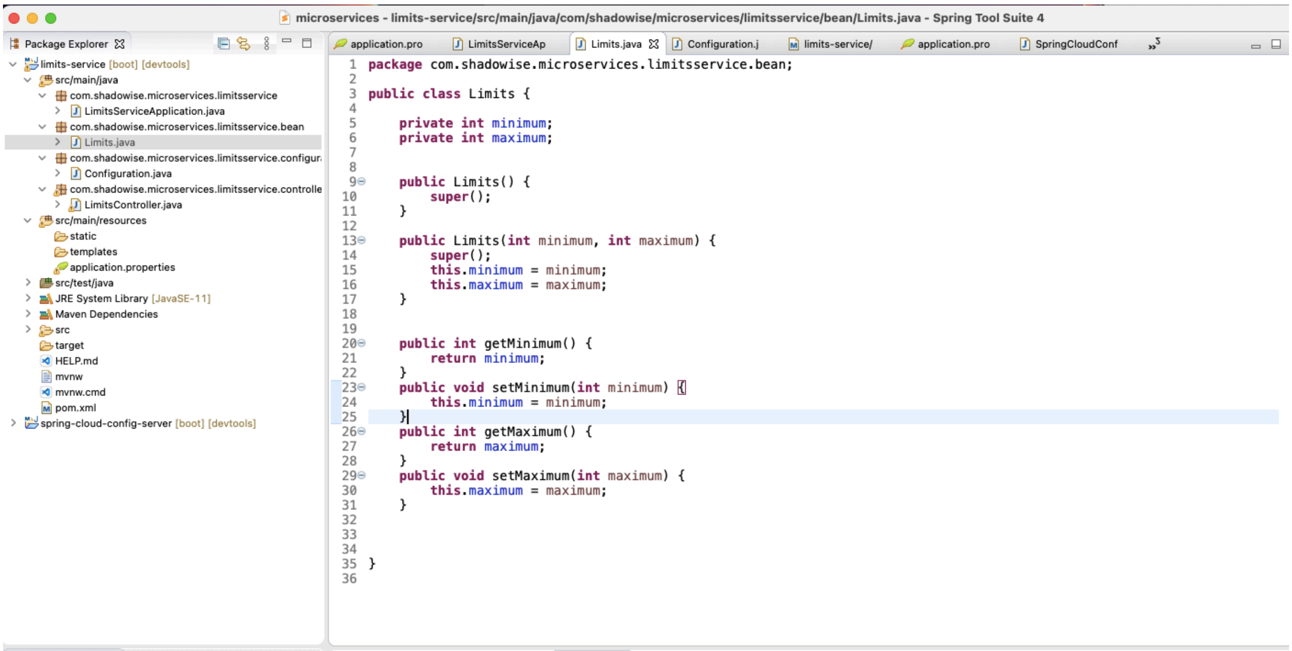
target
HELP.md
mvnw
mvnw.cmd
pom.xml
spring-cloud-config-server [boot] [devtools]
application.pro
LimitsServiceAp
Configuration.j
limits-service/
spring-cloud-co
application.pro
SpringCloudConf

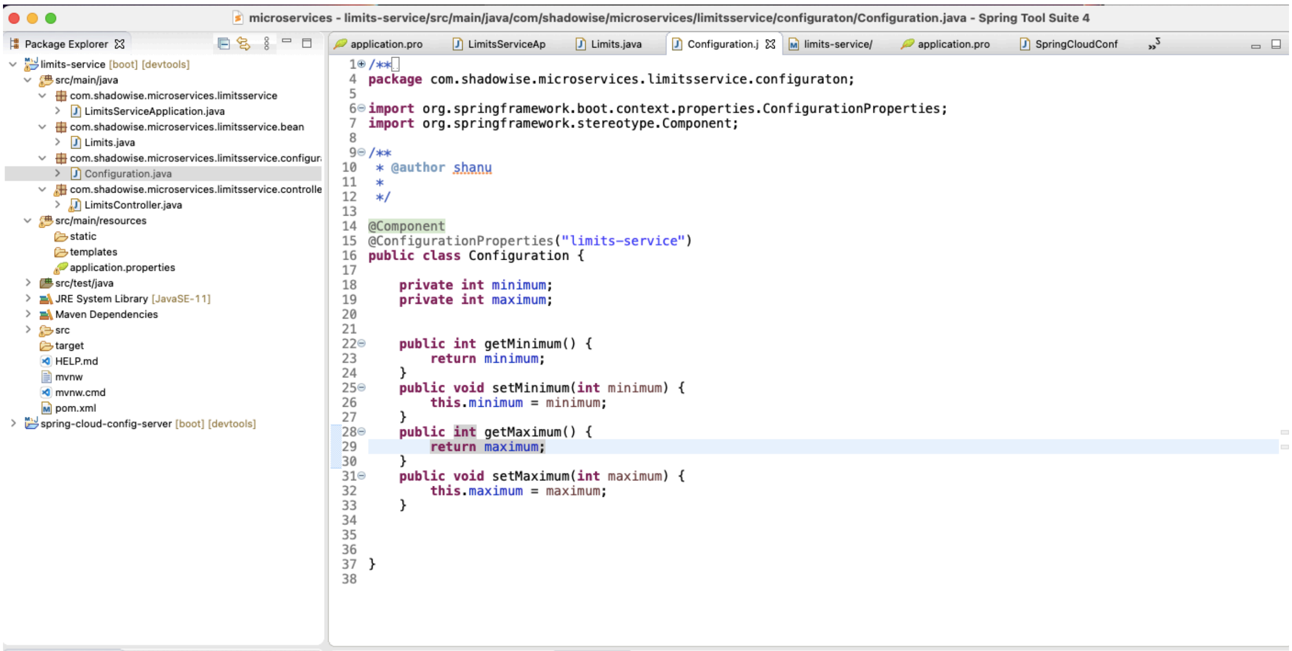
```java
package com.shadowise.microservices.limitsservice;

import org.springframework.boot.SpringApplication;

@SpringBootApplication
public class LimitsServiceApplication {

    public static void main(String[] args) {
        SpringApplication.run(LimitsServiceApplication.class, args);
    }

}

```



microservices - limits-service/src/main/java/com/shadowise/microservices/limitsservice/bean/Limits.java - Spring Tool Suite 4
Package Explorer
application.pro
LimitsServiceAp
Limits.java
Configuration.j
limits-service/
application.pro
SpringCloudConf
limits-service [boot] [devtools]
src/main/java
com.shadowise.microservices.limitsservice
LimitsServiceApplication.java
com.shadowise.microservices.limitsservice.bean
Limits.java
com.shadowise.microservices.limitsservice.configur
Configuration.java
com.shadowise.microservices.limitsservice.controlle
LimitsController.java
src/main/resources
static
templates
application.properties
src/test/java
JRE System Library [JavaSE-11]
Maven Dependencies
src
target
HELP.md
mvnw
mvnw.cmd
pom.xml
spring-cloud-config-server [boot] [devtools]

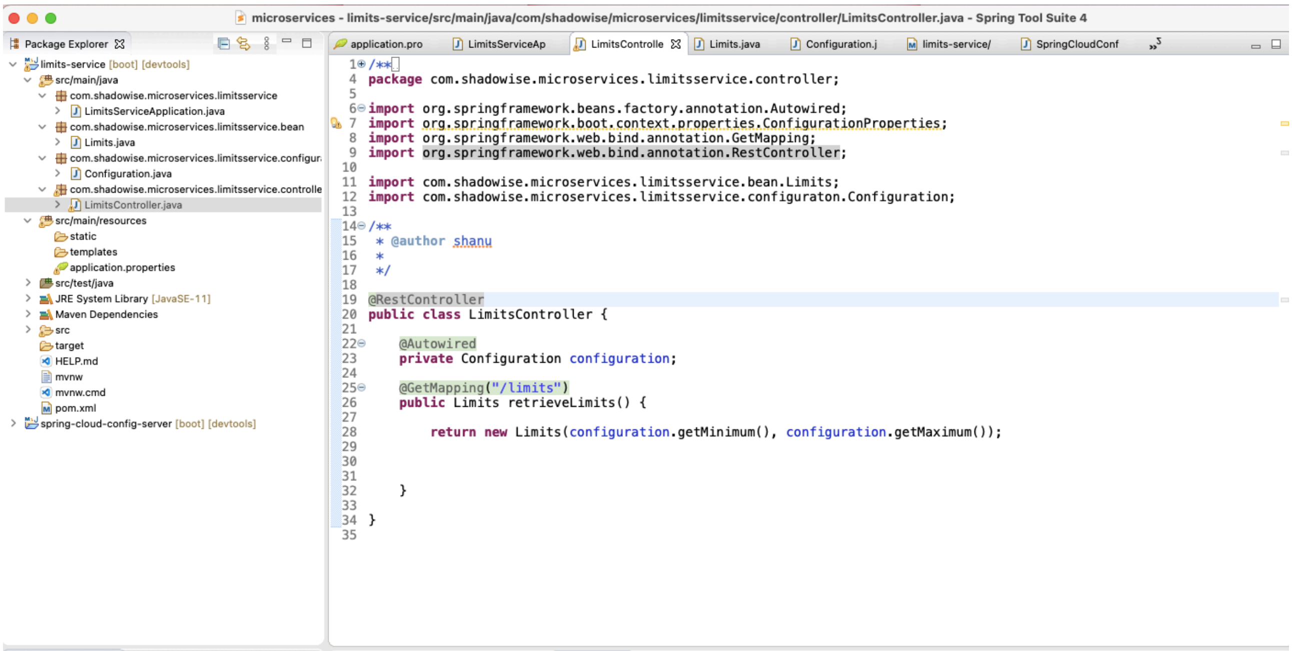
```java
package com.shadowise.microservices.limitsservice.bean;

public class Limits {

    private int minimum;
    private int maximum;


    public Limits() {
        super();
    }

    public Limits(int minimum, int maximum) {
        super();
        this.minimum = minimum;
        this.maximum = maximum;
    }


    public int getMinimum() {
        return minimum;
    }
    public void setMinimum(int minimum) {
        this.minimum = minimum;
    }
    public int getMaximum() {
        return maximum;
    }
    public void setMaximum(int maximum) {
        this.maximum = maximum;
    }



}
```

Pick properties from Application.properties file



microservices - limits-service/src/main/java/com/shadowise/microservices/limitsservice/configuraton/Configuration.java - Spring Tool Suite 4
Package Explorer
application.pro
LimitsServiceAp
Limits.java
Configuration.j
limits-service/
application.pro
SpringCloudConf
limits-service [boot] [devtools]
src/main/java
com.shadowise.microservices.limitsservice
LimitsServiceApplication.java
com.shadowise.microservices.limitsservice.bean
Limits.java
com.shadowise.microservices.limitsservice.configur
Configuration.java
com.shadowise.microservices.limitsservice.controlle
LimitsController.java
src/main/resources
static
templates
application.properties
src/test/java
JRE System Library [JavaSE-11]
Maven Dependencies
src
target
HELP.md
mvnw
mvnw.cmd
pom.xml
spring-cloud-config-server [boot] [devtools]

```java
/**
package com.shadowise.microservices.limitsservice.configuraton;

import org.springframework.boot.context.properties.ConfigurationProperties;
import org.springframework.stereotype.Component;

/**
 * @author shanu
 *
 */

@Component
@ConfigurationProperties("limits-service")
public class Configuration {

    private int minimum;
    private int maximum;


    public int getMinimum() {
        return minimum;
    }
    public void setMinimum(int minimum) {
        this.minimum = minimum;
    }
    public int getMaximum() {
        return maximum;
    }
    public void setMaximum(int maximum) {
        this.maximum = maximum;
    }



}
```


microservices - limits-service/src/main/java/com/shadowise/microservices/limitsservice/controller/LimitsController.java - Spring Tool Suite 4
Package Explorer
limits-service [boot] [devtools]
src/main/java
com.shadowise.microservices.limitsservice
LimitsServiceApplication.java
com.shadowise.microservices.limitsservice.bean
Limits.java
com.shadowise.microservices.limitsservice.configur
Configuration.java
com.shadowise.microservices.limitsservice.controlle
LimitsController.java
src/main/resources
static
templates
application.properties
src/test/java
JRE System Library [JavaSE-11]
Maven Dependencies
src
target
HELP.md
mvnw
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spring-cloud-config-server [boot] [devtools]
application.pro
LimitsServiceAp
LimitsControlle
Limits.java
Configuration.j
limits-service/
SpringCloudConf
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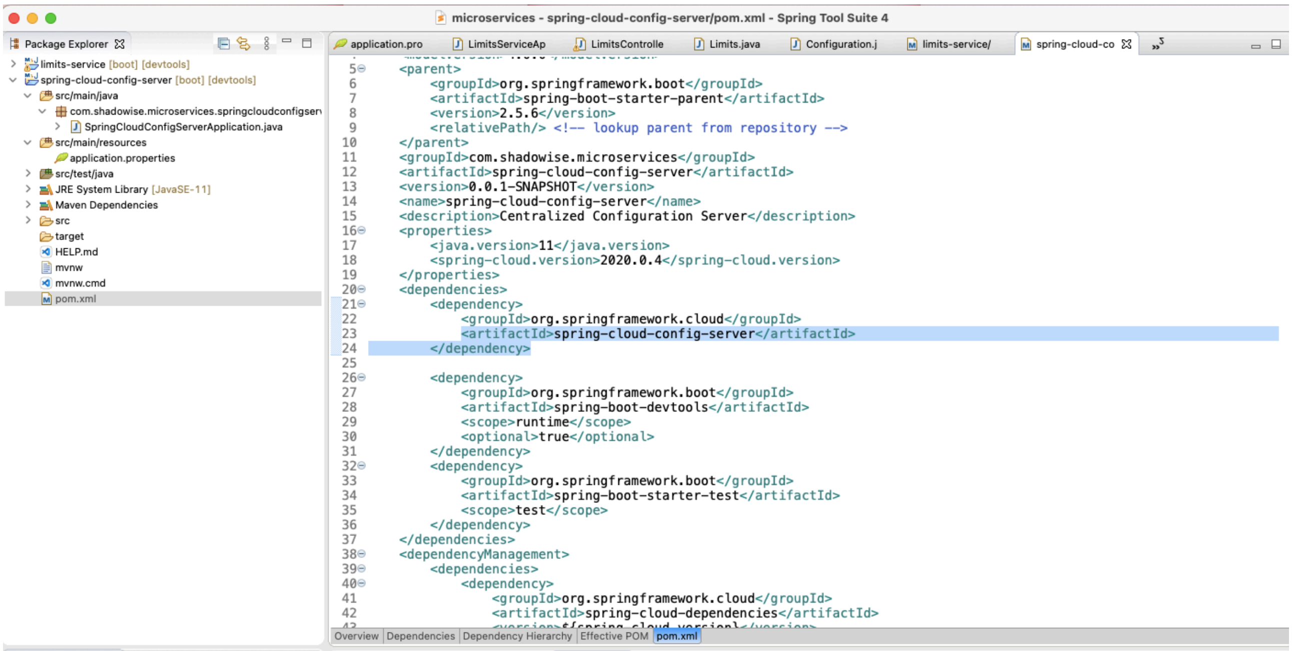
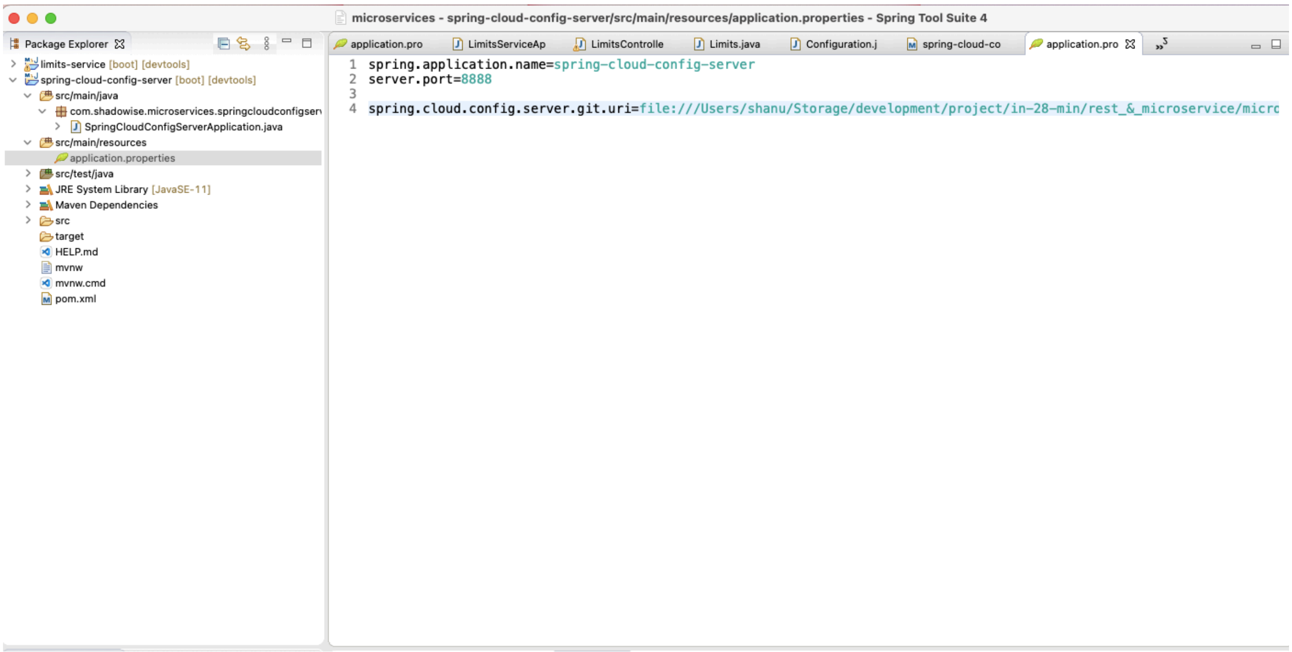
```java
/**
package com.shadowise.microservices.limitsservice.controller;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.boot.context.properties.ConfigurationProperties;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.RestController;

import com.shadowise.microservices.limitsservice.bean.Limits;
import com.shadowise.microservices.limitsservice.configuraton.Configuration;

/**
 * @author shanu
 *
 */

@RestController
public class LimitsController {

    @Autowired
    private Configuration configuration;

    @GetMapping("/limits")
    public Limits retrieveLimits() {

        return new Limits(configuration.getMinimum(), configuration.getMaximum());



    }

}

```

2.Spring Cloud config Server



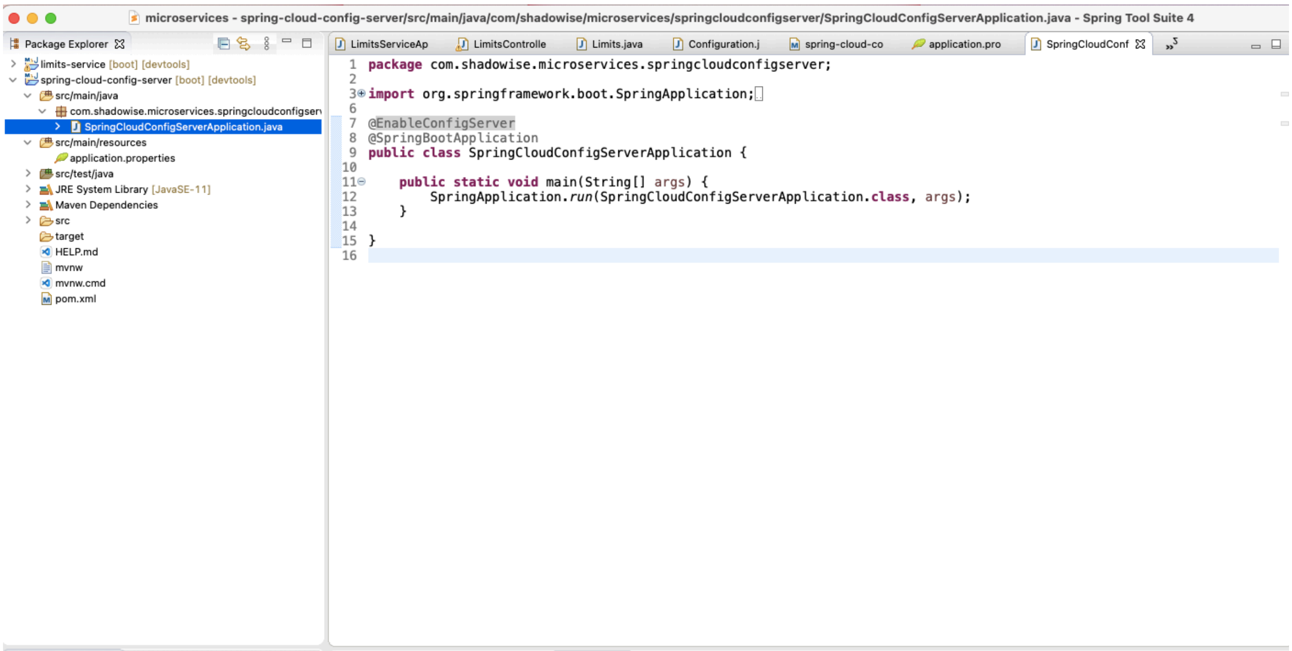
```xml
    <modelVersion>4.0.0</modelVersion>
    <parent>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-parent</artifactId>
        <version>2.5.6</version>
        <relativePath/> <!-- lookup parent from repository -->
    </parent>
    <groupId>com.shadowise.microservices</groupId>
    <artifactId>spring-cloud-config-server</artifactId>
    <version>0.0.1-SNAPSHOT</version>
    <name>spring-cloud-config-server</name>
    <description>Centralized Configuration Server</description>
    <properties>
        <java.version>11</java.version>
        <spring-cloud.version>2020.0.4</spring-cloud.version>
    </properties>
    <dependencies>
        <dependency>
            <groupId>org.springframework.cloud</groupId>
            <artifactId>spring-cloud-config-server</artifactId>
        </dependency>

        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-devtools</artifactId>
            <scope>runtime</scope>
            <optional>true</optional>
        </dependency>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-test</artifactId>
            <scope>test</scope>
        </dependency>
    </dependencies>
    <dependencyManagement>
        <dependencies>
            <dependency>
                <groupId>org.springframework.cloud</groupId>
                <artifactId>spring-cloud-dependencies</artifactId>
                <version>${spring-cloud.version}</version>
```

Read configuration from GIT repo(Local git now)


microservices - spring-cloud-config-server/src/main/resources/application.properties - Spring Tool Suite 4
Package Explorer
limits-service [boot] [devtools]
spring-cloud-config-server [boot] [devtools]
src/main/java
com.shadowise.microservices.springcloudconfigser
SpringCloudConfigServerApplication.java
src/main/resources
application.properties
src/test/java
JRE System Library [JavaSE-11]
Maven Dependencies
src
target
HELP.md
mvnw
mvnw.cmd
pom.xml
application.pro
LimitsServiceAp
LimitsControlle
Limits.java
Configuration.j
spring-cloud-co
application.pro

```properties
spring.application.name=spring-cloud-config-server
server.port=8888

spring.cloud.config.server.git.uri=file:///Users/shanu/Storage/development/project/in-28-min/rest_&_microservice/micro
```

@EnableConfigServer. For get data from Git repo file


microservices - spring-cloud-config-server/src/main/java/com/shadowise/microservices/springcloudconfigserver/SpringCloudConfigServerApplication.java - Spring Tool Suite 4
Package Explorer
limits-service [boot] [devtools]
spring-cloud-config-server [boot] [devtools]
src/main/java
com.shadowise.microservices.springcloudconfigserv
SpringCloudConfigServerApplication.java
src/main/resources
application.properties
src/test/java
JRE System Library [JavaSE-11]
Maven Dependencies
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pom.xml
LimitsServiceAp
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Limits.java
Configuration.j
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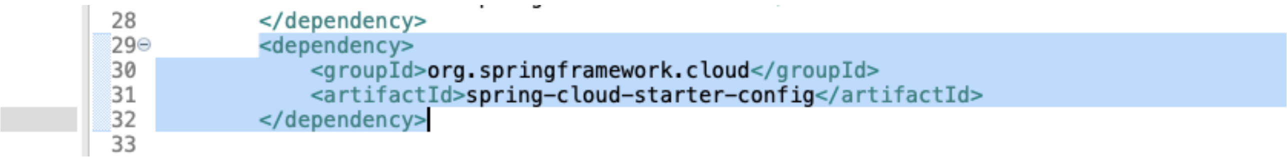
```java
package com.shadowise.microservices.springcloudconfigserver;

import org.springframework.boot.SpringApplication;

@EnableConfigServer
@SpringBootApplication
public class SpringCloudConfigServerApplication {

    public static void main(String[] args) {
        SpringApplication.run(SpringCloudConfigServerApplication.class, args);
    }

}
```

3. Connect limit service to Spring cloud Config server

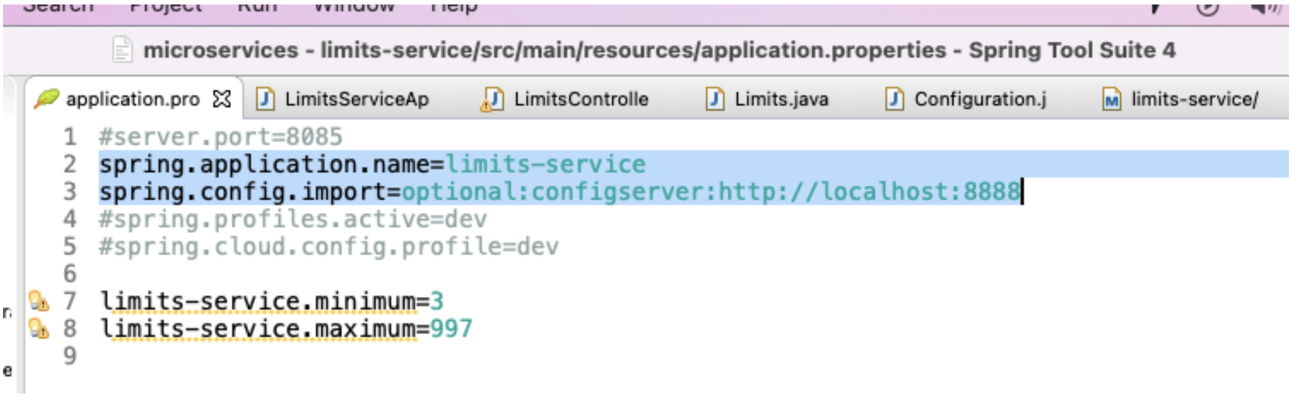
Limits-service : Pom.xml



```
        </dependency>
        <dependency>
            <groupId>org.springframework.cloud</groupId>
            <artifactId>spring-cloud-starter-config</artifactId>
        </dependency>
```

Above dependency already added .so this is required to connect with cloud config server.

Limits-service :Application.properties file

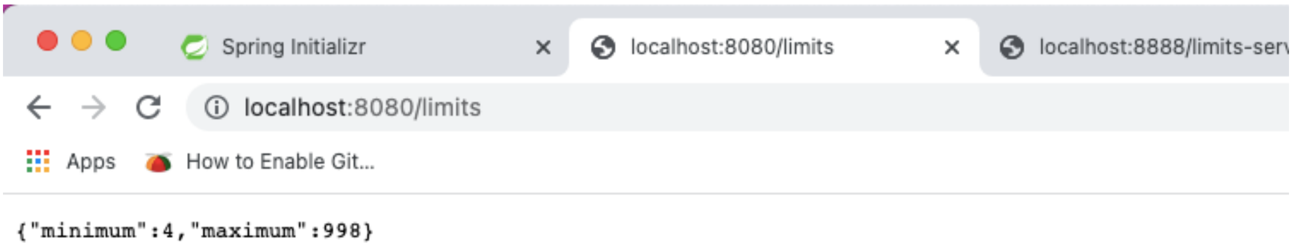

Search Project Run Window Help
microservices - limits-service/src/main/resources/application.properties - Spring Tool Suite 4
application.pro
LimitsServiceAp
LimitsControlle
Limits.java
Configuration.j
limits-service/

```
#server.port=8085
spring.application.name=limits-service
spring.config.import=optional:configserver:http://localhost:8888
#spring.profiles.active=dev
#spring.cloud.config.profile=dev

limits-service.minimum=3
limits-service.maximum=997
```

After done this.

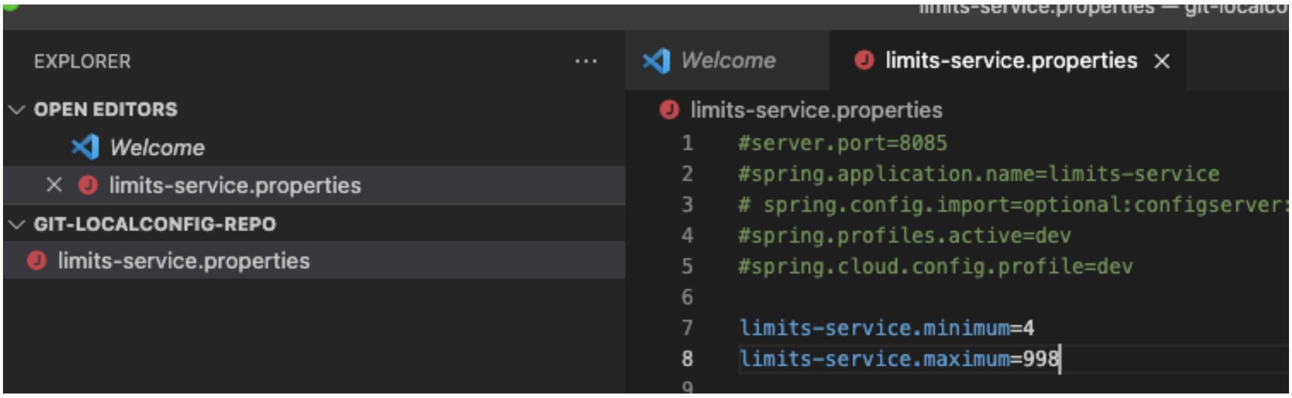
Run App and see result.

O/P:



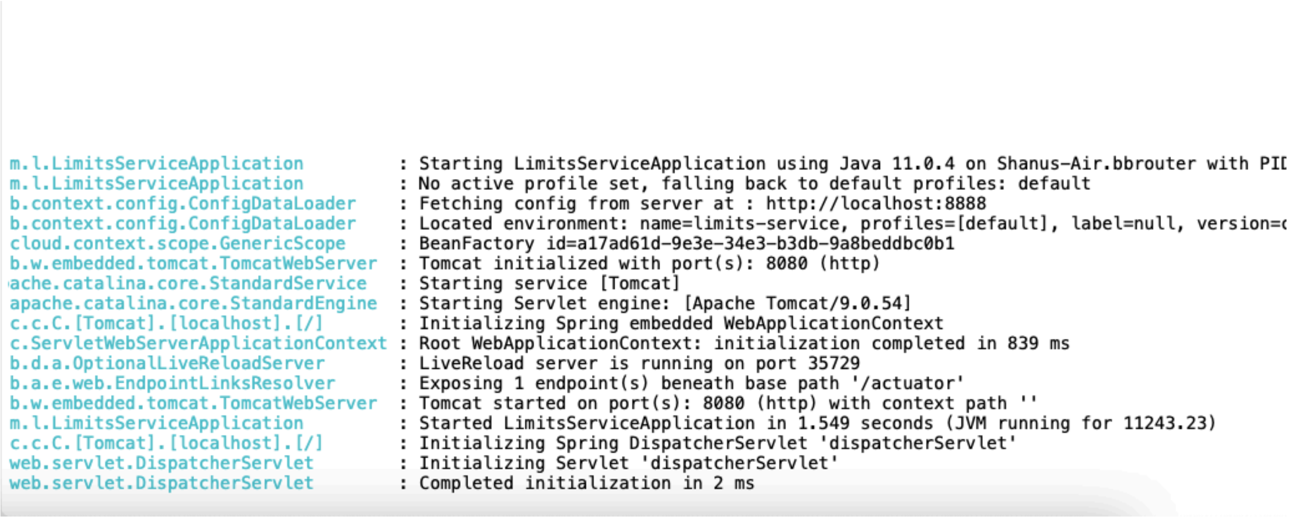
```
{"minimum":4,"maximum":998}
```

Value is fetching, after connecting spring cloud config server and read from get repo file limits-service.properties.


limits-service.properties — git-localco
EXPLORER
OPEN EDITORS
Welcome
limits-service.properties
GIT-LOCALCONFIG-REPO
limits-service.properties
Welcome
limits-service.properties
limits-service.properties

```
#server.port=8085
#spring.application.name=limits-service
# spring.config.import=optional:configserver:
#spring.profiles.active=dev
#spring.cloud.config.profile=dev

limits-service.minimum=4
limits-service.maximum=998
```

Logs for reference



```
m.l.LimitsServiceApplication          : Starting LimitsServiceApplication using Java 11.0.4 on Shanus-Air.bbrouter with PID
m.l.LimitsServiceApplication          : No active profile set, falling back to default profiles: default
b.context.config.ConfigDataLoader     : Fetching config from server at : http://localhost:8888
b.context.config.ConfigDataLoader     : Located environment: name=limits-service, profiles=[default], label=null, version=c
cloud.context.scope.GenericScope      : BeanFactory id=a17ad61d-9e3e-34e3-b3db-9a8beddbc0b1
b.w.embedded.tomcat.TomcatWebServer   : Tomcat initialized with port(s): 8080 (http)
ache.catalina.core.StandardService    : Starting service [Tomcat]
apache.catalina.core.StandardEngine   : Starting Servlet engine: [Apache Tomcat/9.0.54]
c.c.C.[Tomcat].[localhost].[/]        : Initializing Spring embedded WebApplicationContext
c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 839 ms
b.d.a.OptionalLiveReloadServer        : LiveReload server is running on port 35729
b.a.e.web.EndpointLinksResolver       : Exposing 1 endpoint(s) beneath base path '/actuator'
b.w.embedded.tomcat.TomcatWebServer   : Tomcat started on port(s): 8080 (http) with context path ''
m.l.LimitsServiceApplication          : Started LimitsServiceApplication in 1.549 seconds (JVM running for 11243.23)
c.c.C.[Tomcat].[localhost].[/]        : Initializing Spring DispatcherServlet 'dispatcherServlet'
web.servlet.DispatcherServlet         : Initializing Servlet 'dispatcherServlet'
web.servlet.DispatcherServlet         : Completed initialization in 2 ms
```

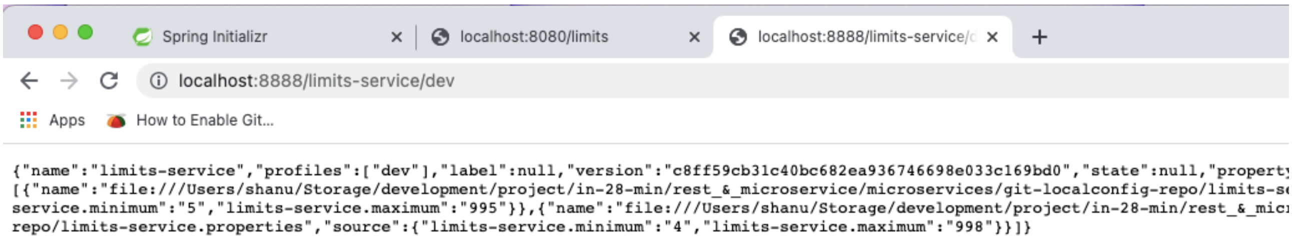
Environment based limit values.

Fetch Limit from spring cloud config server as per environment.

-created two file in git repo for dev and qa

limits-service-dev.properties

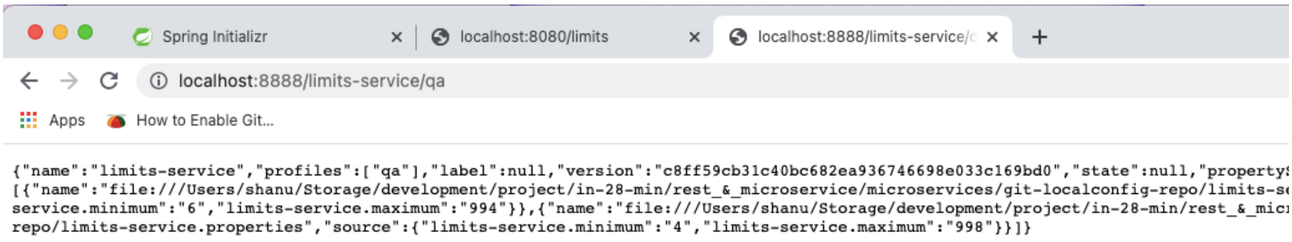
O/P:


Spring Initializr
localhost:8080/limits
localhost:8888/limits-service/c
localhost:8888/limits-service/dev
Apps
How to Enable Git...

```
{"name":"limits-service","profiles":["dev"],"label":null,"version":"c8ff59cb31c40bc682ea936746698e033c169bd0","state":null,"property
[{"name":"file:///Users/shanu/Storage/development/project/in-28-min/rest_&_microservice/microservices/git-localconfig-repo/limits-se
service.minimum":"5","limits-service.maximum":"995"}},{"name":"file:///Users/shanu/Storage/development/project/in-28-min/rest_&_mic
repo/limits-service.properties","source":{"limits-service.minimum":"4","limits-service.maximum":"998"}}]}
```

limits-service-qa-properties

O/P:

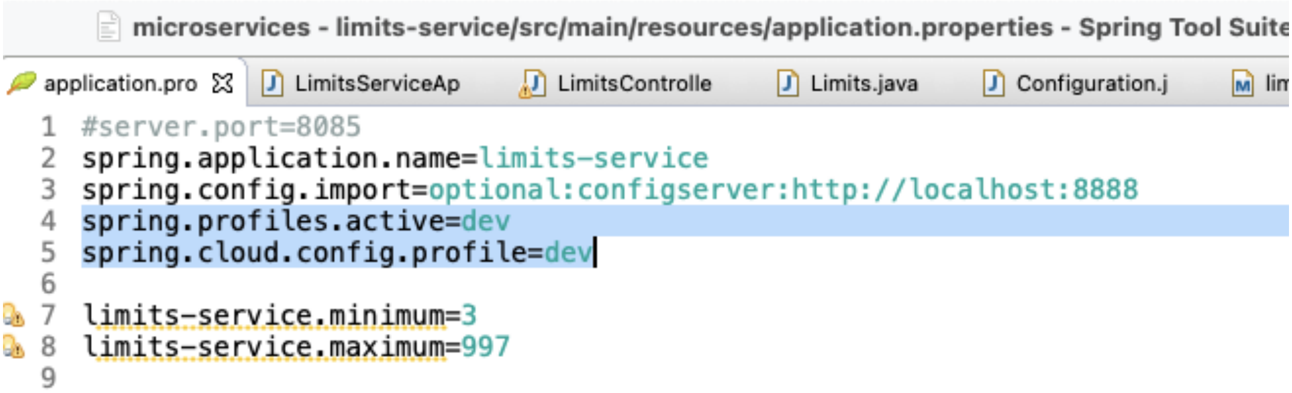

Spring Initializr
localhost:8080/limits
localhost:8888/limits-service/c
localhost:8888/limits-service/qa
Apps
How to Enable Git...

```
{"name":"limits-service","profiles":["qa"],"label":null,"version":"c8ff59cb31c40bc682ea936746698e033c169bd0","state":null,"propertyS
[{"name":"file:///Users/shanu/Storage/development/project/in-28-min/rest_&_microservice/microservices/git-localconfig-repo/limits-se
service.minimum":"6","limits-service.maximum":"994"}},{"name":"file:///Users/shanu/Storage/development/project/in-28-min/rest_&_mic
repo/limits-service.properties","source":{"limits-service.minimum":"4","limits-service.maximum":"998"}}]}
```

Now make default profile to pck value always.

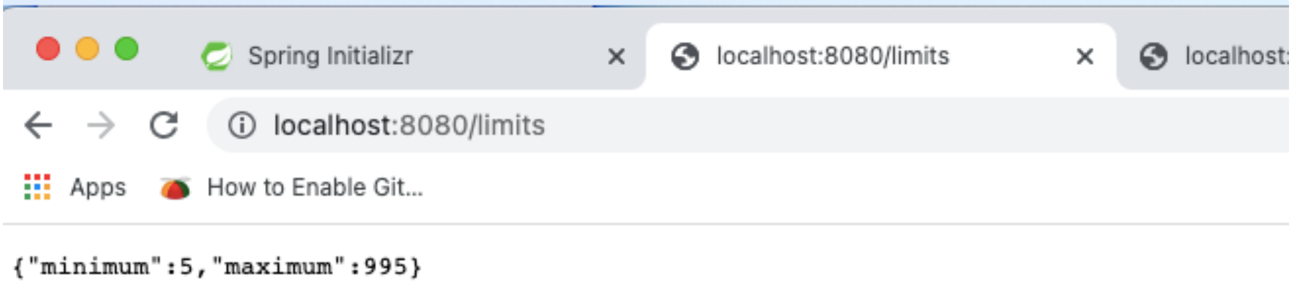
Add below properties in application.properties file

```
spring.profiles.active=dev
spring.cloud.config.profile=dev
```


microservices - limits-service/src/main/resources/application.properties - Spring Tool Suite
application.pro
LimitsServiceAp
LimitsControlle
Limits.java
Configuration.j
lim

```
#server.port=8085
spring.application.name=limits-service
spring.config.import=optional:configserver:http://localhost:8888
spring.profiles.active=dev
spring.cloud.config.profile=dev

limits-service.minimum=3
limits-service.maximum=997

```

O/p:



```
{"minimum":5,"maximum":995}
```

Value is picking from dev git repo file.

**************** DONE **************************

Check currency-exchange and Currency Conversion Microservices for more implementation example.