WEEK 5

MICROSERVICES

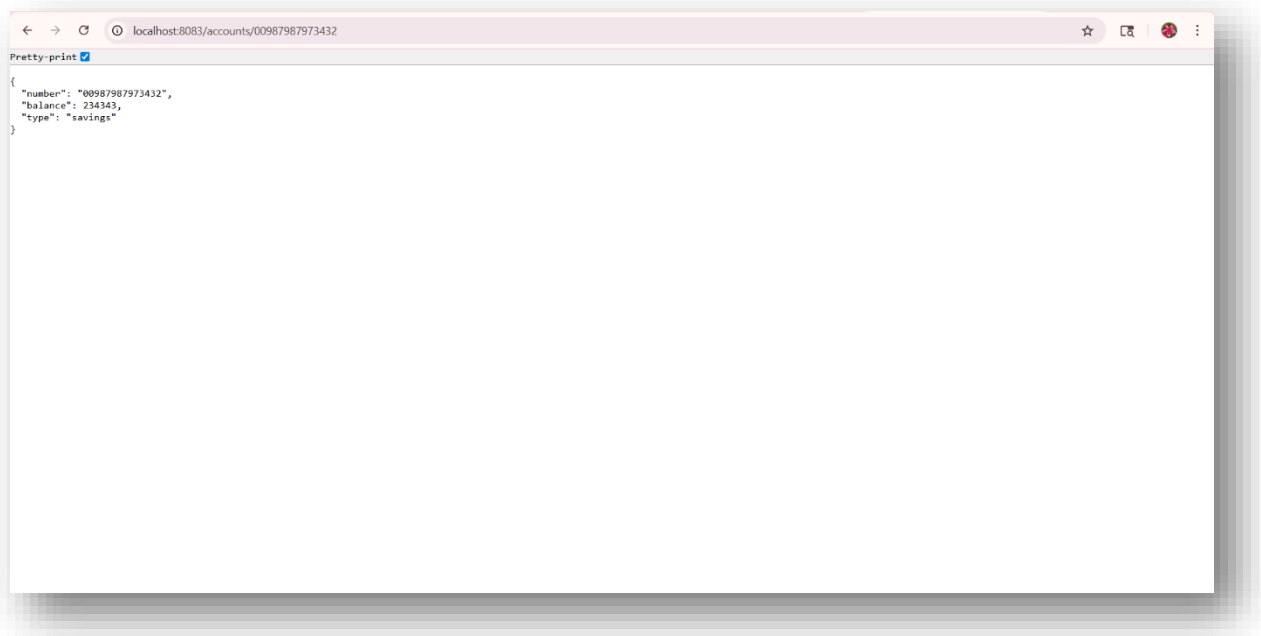
Creating Microservices for account and loan

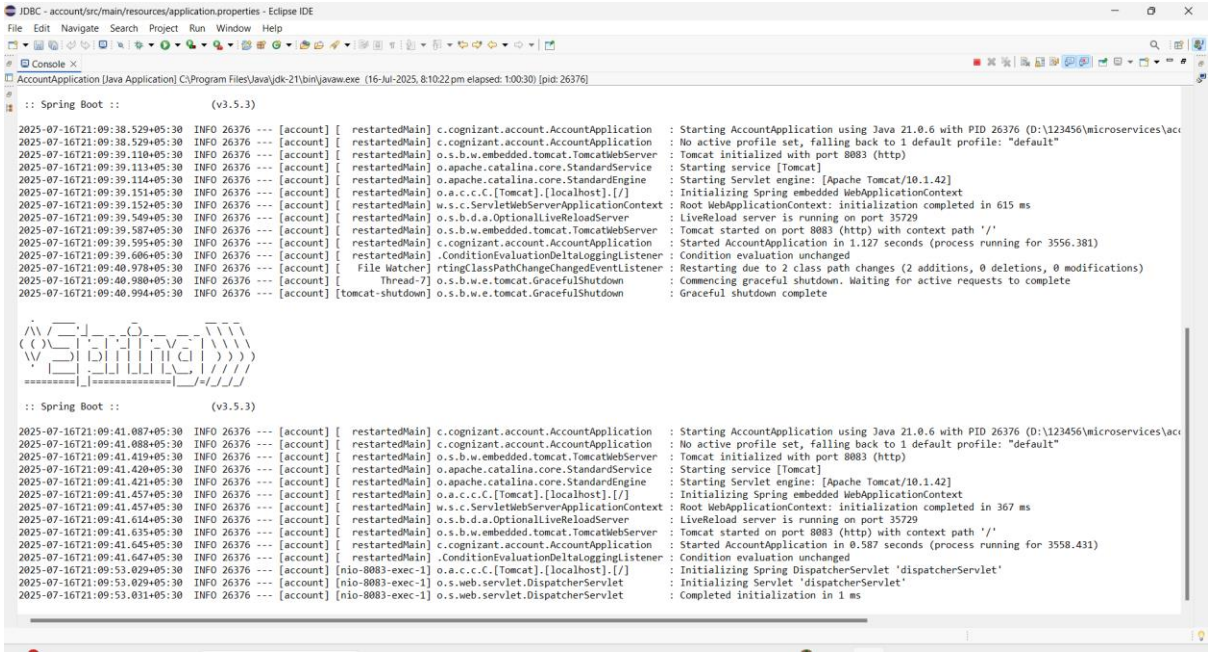
Account Microservice:

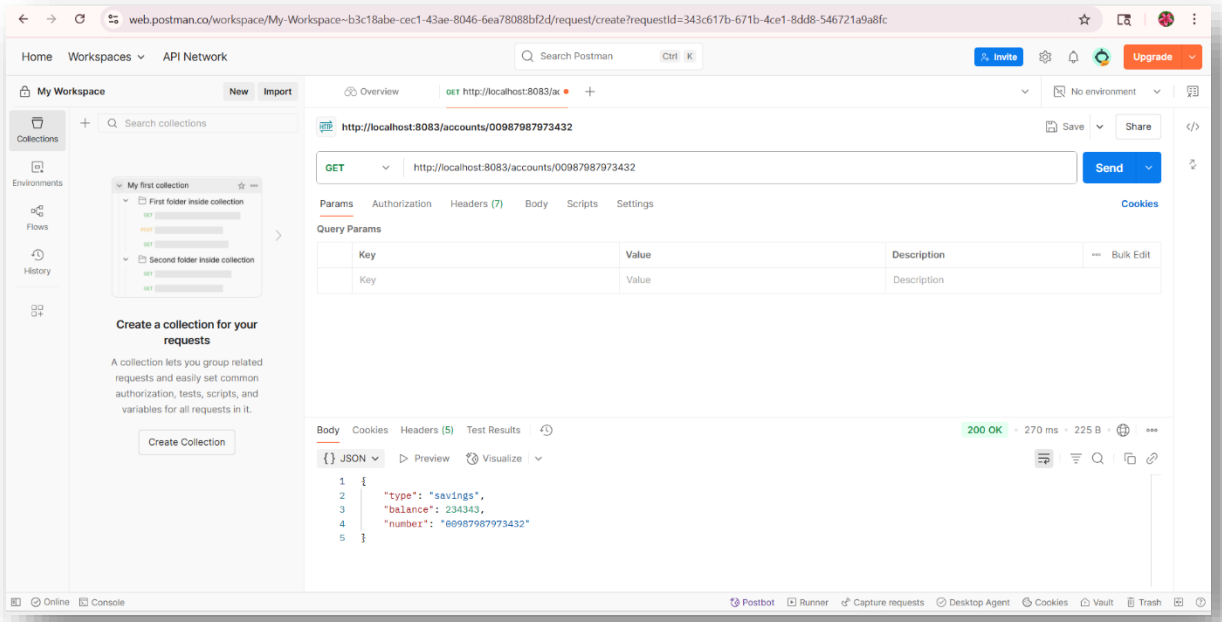
Method: GET Endpoint: /accounts/{number}

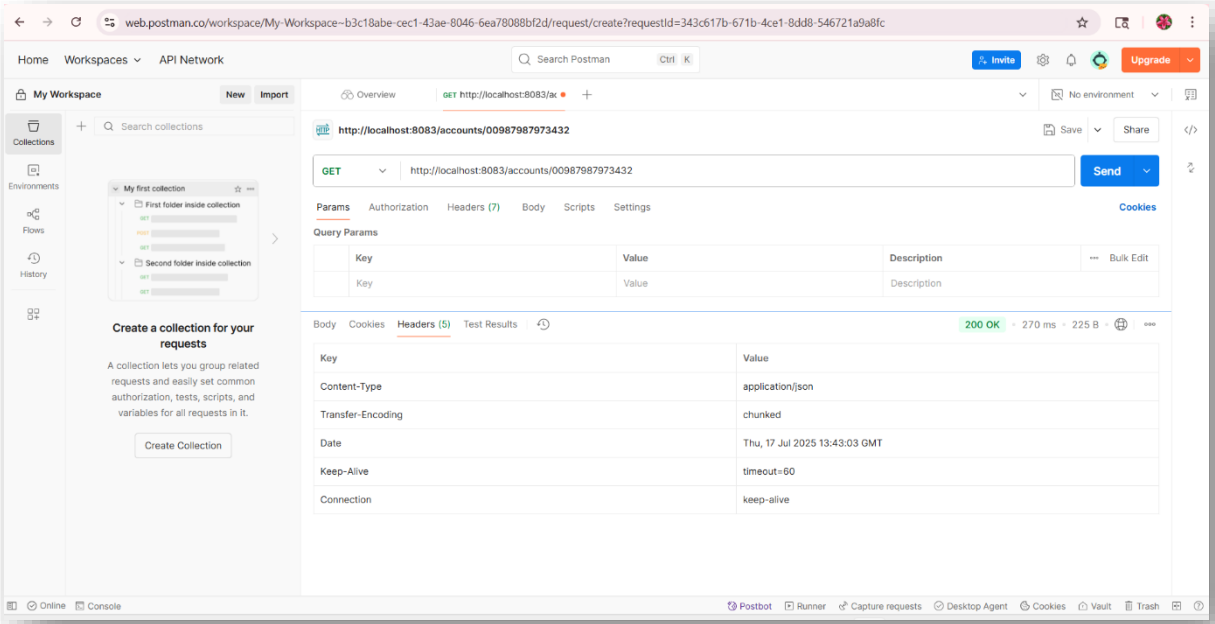
Sample Response Eg:{ number: "00987987973432", type: "savings", balance: 234343 }

OUTPUT SNAPSHOTS:




JDBC - account/src/main/resources/application.properties - Eclipse IDE
File Edit Navigate Search Project Run Window Help
Console
AccountApplication [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (16-Jul-2025, 8:10:22 pm elapsed: 1:00:30) [pid: 26376]
:: Spring Boot :: (v3.5.3)
2025-07-16T21:09:38.529+05:30 INFO 26376 --- [account] [restartedMain] c.cognizant.account.AccountApplication : Starting AccountApplication using Java 21.0.6 with PID 26376 (D:\123456\microservices\ac
2025-07-16T21:09:38.529+05:30 INFO 26376 --- [account] [restartedMain] c.cognizant.account.AccountApplication : No active profile set, falling back to 1 default profile: "default"
2025-07-16T21:09:39.110+05:30 INFO 26376 --- [account] [restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port 8083 (http)
2025-07-16T21:09:39.113+05:30 INFO 26376 --- [account] [restartedMain] o.apache.catalina.core.StandardService : Starting service [Tomcat]
2025-07-16T21:09:39.114+05:30 INFO 26376 --- [account] [restartedMain] o.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/10.1.42]
2025-07-16T21:09:39.151+05:30 INFO 26376 --- [account] [restartedMain] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring embedded WebApplicationContext
2025-07-16T21:09:39.152+05:30 INFO 26376 --- [account] [restartedMain] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 615 ms
2025-07-16T21:09:39.549+05:30 INFO 26376 --- [account] [restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload server is running on port 35729
2025-07-16T21:09:39.587+05:30 INFO 26376 --- [account] [restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port 8083 (http) with context path '/'
2025-07-16T21:09:39.595+05:30 INFO 26376 --- [account] [restartedMain] c.cognizant.account.AccountApplication : Started AccountApplication in 1.127 seconds (process running for 3556.381)
2025-07-16T21:09:39.606+05:30 INFO 26376 --- [account] [restartedMain] .ConditionEvaluationDeltaLoggingListener : Condition evaluation unchanged
2025-07-16T21:09:40.978+05:30 INFO 26376 --- [account] [File Watcher] rtingClassPathChangeChangedEventListener : Restarting due to 2 class path changes (2 additions, 0 deletions, 0 modifications)
2025-07-16T21:09:40.980+05:30 INFO 26376 --- [account] [Thread-7] o.s.b.w.e.tomcat.GracefulShutdown : Commencing graceful shutdown. Waiting for active requests to complete
2025-07-16T21:09:40.994+05:30 INFO 26376 --- [account] [tomcat-shutdown] o.s.b.w.e.tomcat.GracefulShutdown : Graceful shutdown complete
:: Spring Boot :: (v3.5.3)
2025-07-16T21:09:41.087+05:30 INFO 26376 --- [account] [restartedMain] c.cognizant.account.AccountApplication : Starting AccountApplication using Java 21.0.6 with PID 26376 (D:\123456\microservices\ac
2025-07-16T21:09:41.088+05:30 INFO 26376 --- [account] [restartedMain] c.cognizant.account.AccountApplication : No active profile set, falling back to 1 default profile: "default"
2025-07-16T21:09:41.419+05:30 INFO 26376 --- [account] [restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port 8083 (http)
2025-07-16T21:09:41.420+05:30 INFO 26376 --- [account] [restartedMain] o.apache.catalina.core.StandardService : Starting service [Tomcat]
2025-07-16T21:09:41.421+05:30 INFO 26376 --- [account] [restartedMain] o.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/10.1.42]
2025-07-16T21:09:41.457+05:30 INFO 26376 --- [account] [restartedMain] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring embedded WebApplicationContext
2025-07-16T21:09:41.457+05:30 INFO 26376 --- [account] [restartedMain] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 367 ms
2025-07-16T21:09:41.614+05:30 INFO 26376 --- [account] [restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload server is running on port 35729
2025-07-16T21:09:41.635+05:30 INFO 26376 --- [account] [restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port 8083 (http) with context path '/'
2025-07-16T21:09:41.645+05:30 INFO 26376 --- [account] [restartedMain] c.cognizant.account.AccountApplication : Started AccountApplication in 0.587 seconds (process running for 3558.431)
2025-07-16T21:09:41.647+05:30 INFO 26376 --- [account] [restartedMain] .ConditionEvaluationDeltaLoggingListener : Condition evaluation unchanged
2025-07-16T21:09:53.029+05:30 INFO 26376 --- [account] [nio-8083-exec-1] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring DispatcherServlet 'dispatcherServlet'
2025-07-16T21:09:53.029+05:30 INFO 26376 --- [account] [nio-8083-exec-1] o.s.web.servlet.DispatcherServlet : Initializing Servlet 'dispatcherServlet'
2025-07-16T21:09:53.031+05:30 INFO 26376 --- [account] [nio-8083-exec-1] o.s.web.servlet.DispatcherServlet : Completed initialization in 1 ms

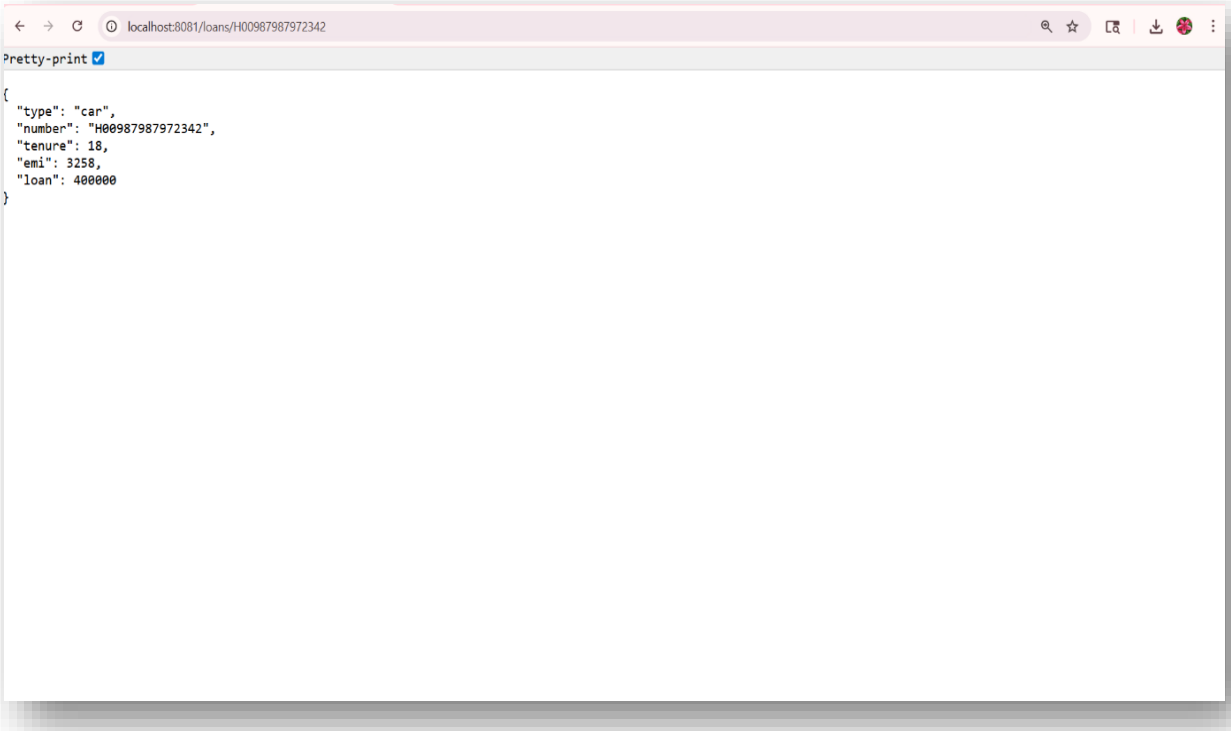

web.postman.co/workspace/My-Workspace~b3c18abe-cec1-43ae-8046-6ea78088bf2d/request/create?requestId=343c617b-671b-4ce1-8dd8-546721a9a8fc
Home Workspaces API Network
Search Postman Ctrl K
Invite
Upgrade
My Workspace
New Import
Collections
Environments
Flows
History
Search collections
Create a collection for your requests
A collection lets you group related requests and easily set common authorization, tests, scripts, and variables for all requests in it.
Create Collection
Overview
GET http://localhost:8083/ac
No environment
http://localhost:8083/accounts/00987987973432
Save
Share
GET
http://localhost:8083/accounts/00987987973432
Send
Params Authorization Headers (7) Body Scripts Settings
Cookies
Query Params
Key Value Description Bulk Edit
Body Cookies Headers (5) Test Results
200 OK 270 ms 225 B
{ } JSON Preview Visualize
{
"type": "savings",
"balance": 234343,
"number": "00987987973432"
}
Online Console
Postbot Runner Capture requests Desktop Agent Cookies Vault Trash

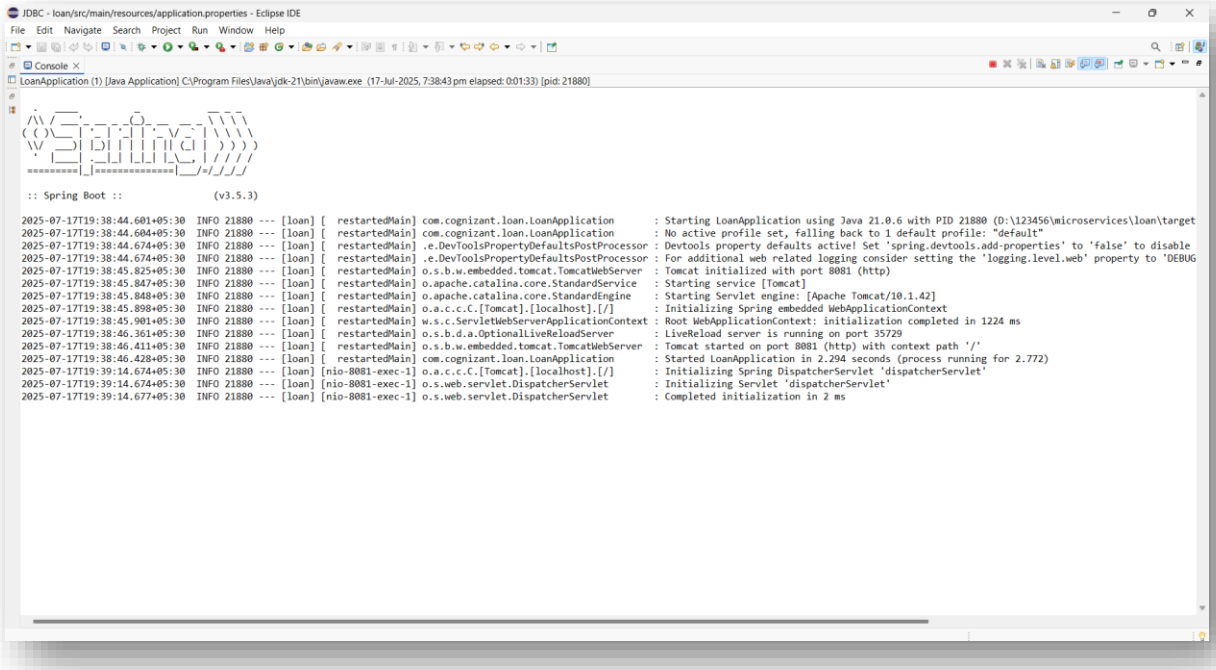


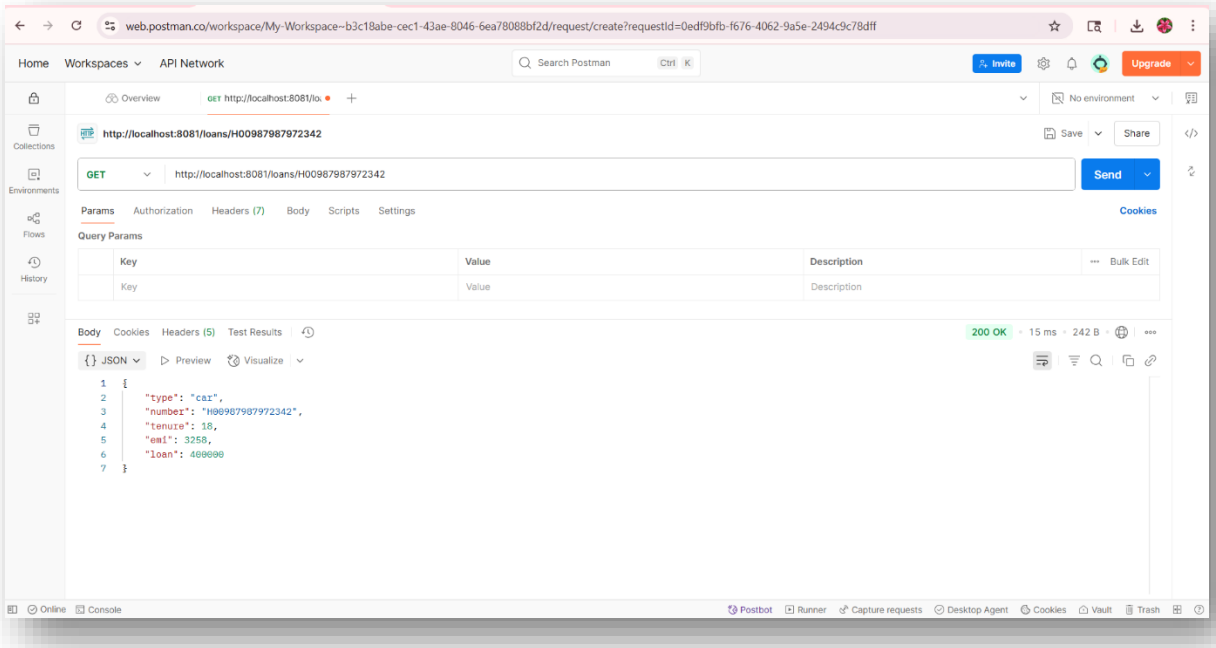
Loan Microservice

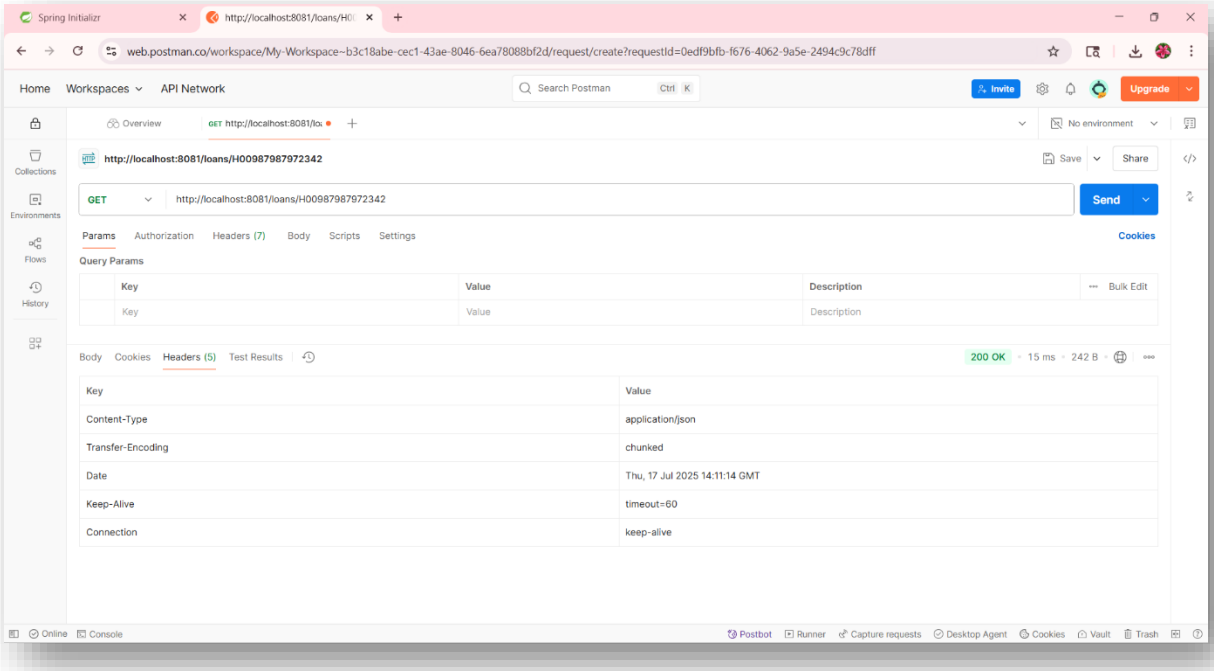
Implement a service API to get loan account details Method: GET Endpoint: /loans/{number}

Sample Response Eg: { number: "H00987987972342", type: "car", loan: 400000, emi: 3258, tenure: 18 }




JDBC - loan/src/main/resources/application.properties - Eclipse IDE
File Edit Navigate Search Project Run Window Help
Console
LoanApplication (1) [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (17-Jul-2025, 7:38:43 pm elapsed: 0:01:33) [pid: 21880]
:: Spring Boot :: (v3.5.3)
2025-07-17T19:38:44.601+05:30 INFO 21880 --- [loan] [restartedMain] com.cognizant.loan.LoanApplication : Starting LoanApplication using Java 21.0.6 with PID 21880 (D:\123456\microservices\loan\target
2025-07-17T19:38:44.604+05:30 INFO 21880 --- [loan] [restartedMain] com.cognizant.loan.LoanApplication : No active profile set, falling back to 1 default profile: "default"
2025-07-17T19:38:44.674+05:30 INFO 21880 --- [loan] [restartedMain] .e.DevToolsPropertyDefaultsPostProcessor : Devtools property defaults active! Set 'spring.devtools.add-properties' to 'false' to disable
2025-07-17T19:38:44.674+05:30 INFO 21880 --- [loan] [restartedMain] .e.DevToolsPropertyDefaultsPostProcessor : For additional web related logging consider setting the 'logging.level.web' property to 'DEBUG
2025-07-17T19:38:45.825+05:30 INFO 21880 --- [loan] [restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port 8081 (http)
2025-07-17T19:38:45.847+05:30 INFO 21880 --- [loan] [restartedMain] o.apache.catalina.core.StandardService : Starting service [Tomcat]
2025-07-17T19:38:45.848+05:30 INFO 21880 --- [loan] [restartedMain] o.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/10.1.42]
2025-07-17T19:38:45.898+05:30 INFO 21880 --- [loan] [restartedMain] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring embedded WebApplicationContext
2025-07-17T19:38:45.901+05:30 INFO 21880 --- [loan] [restartedMain] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 1224 ms
2025-07-17T19:38:46.361+05:30 INFO 21880 --- [loan] [restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload server is running on port 35729
2025-07-17T19:38:46.411+05:30 INFO 21880 --- [loan] [restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port 8081 (http) with context path '/'
2025-07-17T19:38:46.428+05:30 INFO 21880 --- [loan] [restartedMain] com.cognizant.loan.LoanApplication : Started LoanApplication in 2.294 seconds (process running for 2.772)
2025-07-17T19:39:14.674+05:30 INFO 21880 --- [loan] [nio-8081-exec-1] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring DispatcherServlet 'dispatcherServlet'
2025-07-17T19:39:14.674+05:30 INFO 21880 --- [loan] [nio-8081-exec-1] o.s.web.servlet.DispatcherServlet : Initializing Servlet 'dispatcherServlet'
2025-07-17T19:39:14.677+05:30 INFO 21880 --- [loan] [nio-8081-exec-1] o.s.web.servlet.DispatcherServlet : Completed initialization in 2 ms


web.postman.co/workspace/My-Workspace~b3c18abe-cec1-43ae-8046-6ea78088bf2d/request/create?requestId=0edf9bfb-f676-4062-9a5e-2494c9c78dff
Home Workspaces API Network
Search Postman Ctrl K
Invite Upgrade
Overview GET http://localhost:8081/lo
No environment
Collections Environments Flows History
http://localhost:8081/loans/H00987987972342
Save Share
GET http://localhost:8081/loans/H00987987972342
Send
Params Authorization Headers (7) Body Scripts Settings
Cookies
Query Params
Key Value Description Bulk Edit
Body Cookies Headers (5) Test Results
200 OK 15 ms 242 B
{ } JSON Preview Visualize
{
"type": "car",
"number": "H00987987972342",
"tenure": 18,
"emi": 3258,
"loan": 400000
}
Online Console
Postbot Runner Capture requests Desktop Agent Cookies Vault Trash


Spring Initializr
http://localhost:8081/loans/H0
web.postman.co/workspace/My-Workspace~b3c18abe-cec1-43ae-8046-6ea78088bf2d/request/create?requestId=0edf9bfb-f676-4062-9a5e-2494c9c78dff
Home
Workspaces
API Network
Search Postman
Ctrl K
Invite
Upgrade
Overview
GET http://localhost:8081/loa
No environment
Collections
Environments
Flows
History
http://localhost:8081/loans/H00987987972342
Save
Share
GET
http://localhost:8081/loans/H00987987972342
Send
Params
Authorization
Headers (7)
Body
Scripts
Settings
Cookies
Query Params
Key
Value
Description
Bulk Edit
Key
Value
Description
Body
Cookies
Headers (5)
Test Results
200 OK
15 ms
242 B
Key
Value
Content-Type
application/json
Transfer-Encoding
chunked
Date
Thu, 17 Jul 2025 14:11:14 GMT
Keep-Alive
timeout=60
Connection
keep-alive
Online
Console
Postbot
Runner
Capture requests
Desktop Agent
Cookies
Vault
Trash