With implementing circit breaker if one service is down we can still provide the response to client with other services responses and fallback method response.

As an example we have a request which comes to rent service. within rent service it calls to customer service and vehicle service for generating the output. But let's think customer service is down. If we have implemented circit breaker pattern, then without failing the whole request we can provide the output by combining customer service output and fallback method output of vehicle service.

We need to implement circit breaker within calling service and not for the service being called.(In our case we need to implement inside rent service)

In this example we have implemented circit breaker using hestrix. (No annotations , by extending HystrixCommand class and overriding its run and getFallback methods )

Using zipking we can do distributed log tracing.

For starting zipking server run zipkin jar file. (java -jar zipkin-server-2.23.16-exec.jar)

When using zipking two ids are included into log messages as below. (So, for trace an issue we can grep using Trace ID in each log )

Trace ID - Same for all microservices for one request

Span ID - Unique id is assigned for each microservice for one request

Zipking dashboard can be viewed using <http://127.0.0.1:9411/zipkin/> (Put zipking server port here)

If we change any configuration in git config repository it is automatically picked by git cloud config server.( No need to restart the git cloud config server)

The API Gateway Service is a Spring Boot application that routes client requests to relevant micro service. API gateway also need to register as an eureka client.