

## Part II:

```
<dependency>
  <groupId>net.secod0.jcircuitbreaker</groupId>
  <artifactId>jcircuitbreaker-core</artifactId>
  <version>1.2.0</version>
</dependency>
```

Figure 1: Add maven dependency for jcircuitbreaker-core to pom.xml

```
private static CircuitBreaker<String> circuitBreaker;
private static BreakHandler<String> breakHandler;
private static BreakStrategy<String> breakStrategy;
```

Figure 2: Prepare circuit breaker

```
static class Website extends HttpServlet {
    @Override
    protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException {
        new IndexPage(retrieveNewsData(), retrieveWeatherData()).writeTo(resp);
    }
    private String retrieveNewsData() { return fetchDataFrom(NEWS_URI); }
    private String retrieveWeatherData() {
        try {
            return circuitBreaker.execute(() -> fetchDataFrom(WEATHER_URI), breakStrategy, breakHandler);
        } catch (TaskExecutionException e) {
            System.out.println("Resulted in exception: " + e.getTaskException());
            throw new RuntimeException(e.getTaskException().getMessage(), e.getTaskException());
        }
    }
    private String fetchDataFrom(String newsUri) {
        try {
            return Request.Get(newsUri).execute().returnContent().asString();
        } catch (IOException e) {
            throw new RuntimeException(e);
        }
    }
}
```

Figure 3: Replace circuit breaker for fetchDataFrom() function

If we implement the Jcircuitbreaker<sup>1</sup> successfully, when we open the front-end page: <http://localhost/8080/> the first time, it displays as lefthand side of Figure 4. Afterwards, if we refresh the page several times, it overloads as righthand side. It can finally display correct information by refreshing the page again if the overload stops.

### Daily Planet

#### News Headlines:

Government Minister Suspected of Scandal

#### Weather Forecast:

Latest temp forecast: 9 celcius

### Daily Planet

#### News Headlines:

Government Minister Suspected of Scandal

#### Weather Forecast:

no weather due to too many requests

Figure 4: Left: a single request; Right: more than one requests

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<sup>1</sup><http://secodo.net/projects/jcircuitbreaker/usage.html>