

NMeman1 - Testing & Quality Assurance Checklist

Test ID	Category	Test Description	Command / Action (Example)	Expected Result	Test Status
T01	Unit	Verify service health endpoint	<code>curl -s http://localhost:8080/actuator/health</code>	<code>{"status":"UP"}</code>	Passed
T02	Integration	Create a new issue (Smoke Test)	<code>curl -i -X POST http://localhost:8080/issues -H 'Content-Type: application/json' -d '{"title":"Hello from Person C","body":"demo","labels":["test"]}'</code>	HTTP/1.1 201 Created + Issue appears on GitHub	Passed
T03	Integration	Retrieve all issues	<code>curl -s http://localhost:8080/issues jq .</code>	JSON array of all issues	Passed
T04	Integration	Retrieve specific issue	<code>curl -s http://localhost:8080/issues/<number> jq .</code>	JSON object with issue details	Passed
T05	Integration	Update issue title and body	<code>curl -i -X PATCH http://localhost:8080/issues/<number> -H 'Content-Type: application/json' -d '{"title":"Updated by Person C"}'</code>	HTTP/1.1 200 OK + Updated title visible on GitHub	Passed
T06	Integration	Close and reopen an issue	<code>curl -X PATCH ... -d '{"state":"closed"}' → curl -X PATCH ... -d '{"state":"open"}'</code>	Issue closes and reopens successfully on GitHub	Passed
T07	Integration	Add a comment to an issue	<code>curl -i -X POST http://localhost:8080/issues/<number>/comments -H 'Content-Type: application/json' -d '{"body":"Comment test from Person C"}'</code>	HTTP/1.1 201 Created + Comment visible on GitHub	Passed
T08	Negative	Get non-existent issue	<code>curl -i http://localhost:8080/issues/99999</code>	HTTP/1.1 404 Not Found	Passed
T09	Negative	Create issue without title	<code>curl -i -X POST ... -d '{"body":"no title"}'</code>	HTTP/1.1 400 Bad Request	Passed
T10	Negative	Invalid state in PATCH	<code>curl -i -X PATCH ... -d '{"state":"invalid"}'</code>	HTTP/1.1 400 Bad Request	Passed
T11	Unit /	Webhook	Send real GitHub webhook (using	204 No	Pass

1	Integration	JWT signature validation	ngrok or smee.io)	Content (valid) / 401 Unauthorized (invalid)	Passed
T1 2	Integration	Pagination test	curl -i http://localhost:8080/issues?per_page=2&page=1	Only 2 issues returned + Link pagination headers	Passed
T1 3	Integration	Rate limit handling (mock)	Simulate 429/503 via mock test or manual retry	Graceful error message + retry header	Passed
T1 4	Integration	Webhook event storage	Trigger real webhook → curl -s http://localhost:8080/events jq .	Event logged with ID, type, and timestamp	Passed
T1 5	Unit / Coverage	Overall test coverage	mvn test	BUILD SUCCESS 90% (Required : + ≥ 80% line coverage)	Passed

Overall Test Coverage is – 90%

GitHub URL - <https://github.com/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven>

T01 & T02 Screenshot –

Verify service health endpoint
Create a new issue (Smoke Test)

```
...oven.org.codehaus.plexus.classworlds.launcher.Launcher spring-bootrun
~/Desktop/CMPE272-GitHub-TestRepository-CodeCoven -- -zsh
~/Desktop/CMPE272-GitHub-TestRepository-CodeCoven -- -zsh

Last login: Sun Oct 5 05:58:48 on ttys001
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven % curl -s http://localhost:8080/actuator/health
{"status":"UP"}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven % curl -i -X POST http://localhost:8080/issues \
-H "Content-Type: application/json" \
-d '{"title":"Hello from Person C","body":"demo","labels":["test"]}'
HTTP/1.1 503
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 13:53:25 GMT
Connection: close

{"code":"error","message":"JSON decoding error: Cannot deserialize value of type 'java.lang.String' from Object value (token 'JsonToken.START_OBJECT')","details":{}}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven % curl -i -X POST http://localhost:8080/issues \
-H "Content-Type: application/json" \
-d '{"title":"Hello from Person C","body":"demo","labels":["test"]}'
HTTP/1.1 201
Location: /issues/11
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 14:19:35 GMT

{"number":11,"html_url":"https://github.com/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/11","state":"open","title":"Hello from Person C","body":"demo","labels":[{"id":9405872366,"node_id":"LA_kwDOP4Mh68BAAAKMIA7g","url":"https://api.github.com/repos/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/labels/test","name":"test","color":"ededed","default":false,"description":null}],created_at":"2025-10-05T14:19:34Z"}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven %
```

T03 Screenshot – (Retrieve all issues)

```
...oven.org.codehaus.plexus.classworlds.launcher.Launcher spring-bootrun ...
~/Desktop/CMPE272-GitHub-TestRepository-CodeCoven -- -zsh
~/Desktop/CMPE272-GitHub-TestRepository-CodeCoven -- -zsh

ach route, or it need screenshots of each route in static web page!v@NMemane1 \n","labels":[{"id":9363336979,"node_id":"LA_kwDOP4Mh68BAAAKMIA7g","url":"https://api.github.com/repos/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/labels/hug","name":"hug","color":"d7344a","default":true,"description":"Something isn't working"}],"created_at":"2025-09-28T04:06:22Z","updated_at":"2025-09-29T06:09:13Z"},"number":1,"html_url":"https://github.com/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/1","state":"open","title":"Modify for patch issue","body":"","take screenshots for patch issue","labels":[]],"created_at":"2025-09-28T03:36:06Z","updated_at":"2025-10-05T14:19:34Z"}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven % curl -s http://localhost:8080/issues | jq
[
  {
    "number": 11,
    "html_url": "https://github.com/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/11",
    "state": "open",
    "title": "Hello from Person C",
    "body": "demo",
    "labels": [
      {
        "id": 9405872366,
        "node_id": "LA_kwDOP4Mh68BAAAKMIA7g",
        "url": "https://api.github.com/repos/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/labels/test",
        "name": "test",
        "color": "ededed",
        "default": false,
        "description": null
      }
    ],
    "created_at": "2025-10-05T14:19:34Z",
    "updated_at": "2025-10-05T14:19:34Z"
  },
  {
    "number": 10,
    "html_url": "https://github.com/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/10",
    "state": "open",
    "title": "Hello from Person C",
    "body": "demo",
    "labels": [
      {
        "id": 9405872366,
        "node_id": "LA_kwDOP4Mh68BAAAKMIA7g",
        "url": "https://api.github.com/repos/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/labels/test",
        "name": "test",
        "color": "ededed",
        "default": false,
        "description": null
      }
    ],
    "created_at": "2025-10-05T13:03:20Z",
    "updated_at": "2025-10-05T13:03:20Z"
  },
  {
    "number": 9,
    "html_url": "https://github.com/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/9",
    "state": "open",
    "title": "Hello from Person C",
    "body": "demo",
    "labels": [
      {
        "id": 9405872366,
        "node_id": "LA_kwDOP4Mh68BAAAKMIA7g",
        "url": "https://api.github.com/repos/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/labels/test",
        "name": "test",
        "color": "ededed",
        "default": false,
        "description": null
      }
    ],
    "created_at": "2025-10-05T13:19:34Z",
    "updated_at": "2025-10-05T13:19:34Z"
  }
]
```

T04 & T05 Screenshot –

Retrieve specific issue

Update issue title and body

```
j1
{"created_at": "2025-09-29T04:05:21Z",
 "updated_at": "2025-09-29T05:09:33Z"}
}
{"number": 1,
 "html_url": "https://github.com/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/1",
 "state": "open",
 "title": "Modify for patch issue",
 "body": "take screenshots for patch issue",
 "labels": [],
 "created_at": "2025-09-28T03:36:06Z",
 "updated_at": "2025-09-29T05:47:04Z"}
}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven % curl -s http://localhost:8080/issues/5 | jq .
{
  "number": 5,
  "html_url": "https://github.com/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/5",
  "state": "open",
  "title": "test",
  "body": null,
  "labels": [],
  "created_at": "2025-09-29T04:47:41Z",
  "updated_at": "2025-09-29T04:48:00Z"}
}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven % curl -i -X PATCH http://localhost:8080/issues/5 -H 'Content-Type: application/json' -d '{"title": "Updated by NMemane1"}'
HTTP/1.1 200
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:10:56 GMT

{"number": 5, "html_url": "https://github.com/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/5", "state": "open", "title": "Updated by NMemane1", "body": null, "labels": [], "created_at": "2025-09-29T04:47:41Z", "updated_at": "2025-10-05T16:10:55Z"}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven % curl -i -X PATCH http://localhost:8080/issues/5 -H 'Content-Type: application/json' -d '{"title": "state": "closed"}'
HTTP/1.1 200
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:10:57 GMT
Connection: close

{"code": "error", "message": "JSON parse error: Unexpected character (' ' (code 58)): was expecting comma to separate Object entries", "details": {}}
```

T06 & T07 Screenshot –

Close and reopen an issue

Add a comment to an issue

```
...oven org.codehaus.plexus.classworlds.launcher.Launcher spring-bootrun ... ~/Desktop/CMPE272-GitHub-TestRepository-CodeCoven -- -zsh ~/Desktop/CMPE272-GitHub-TestRepository-CodeCoven -- -zsh +
}
{"updated_at": "2025-09-29T04:48:00Z"}
}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven % curl -i -X PATCH http://localhost:8080/issues/5 -H 'Content-Type: application/json' -d '{"title": "Updated by NMemane1"}'
HTTP/1.1 200
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:10:56 GMT

{"number": 5, "html_url": "https://github.com/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/5", "state": "open", "title": "Updated by NMemane1", "body": null, "labels": [], "created_at": "2025-09-29T04:47:41Z", "updated_at": "2025-10-05T16:10:55Z"}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven % curl -i -X PATCH http://localhost:8080/issues/5 -H 'Content-Type: application/json' -d '{"title": "state": "closed"}'
HTTP/1.1 200
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:10:57 GMT
Connection: close

{"code": "error", "message": "JSON parse error: Unexpected character (' ' (code 58)): was expecting comma to separate Object entries", "details": {}}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven % curl -i -X PATCH http://localhost:8080/issues/5 -H 'Content-Type: application/json' -d '{"title": "state": "open"}'
HTTP/1.1 200
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:18:43 GMT
Connection: close

{"code": "error", "message": "JSON parse error: Unexpected character (' ' (code 58)): was expecting comma to separate Object entries", "details": {}}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven % curl -i -X PATCH http://localhost:8080/issues/5 -H 'Content-Type: application/json' -d '{"title": "state": "open"}'
HTTP/1.1 200
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:28:52 GMT

{"number": 5, "html_url": "https://github.com/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/5", "state": "closed", "title": "Updated by NMemane1", "body": null, "labels": [], "created_at": "2025-09-29T04:47:41Z", "updated_at": "2025-10-05T16:28:52Z"}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven % curl -i -X PATCH http://localhost:8080/issues/5 -H 'Content-Type: application/json' -d '{"state": "open"}'
HTTP/1.1 200
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:29:47 GMT

{"number": 5, "html_url": "https://github.com/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/5", "state": "open", "title": "Updated by NMemane1", "body": null, "labels": [], "created_at": "2025-09-29T04:47:41Z", "updated_at": "2025-10-05T16:29:46Z"}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven % curl -i -X POST http://localhost:8080/issues/5/comments -H 'Content-Type: application/json' -d '{"body": "Testing by NMemane1"}'
HTTP/1.1 201
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:32:51 GMT

{"url": "https://api.github.com/repos/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/comments/3369169188", "html_url": "https://github.com/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/5#issuecomment-3369169188", "issue_url": "https://api.github.com/repos/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/5", "id": 3369169188, "node_id": "IC_kw00P4Mh8718XDU", "user": {"login": "NMemane1", "id": 234857384, "node_id": "U_kg00DF-JMA", "avatar_url": "https://avatars.githubusercontent.com/u/234857384?v=4", "gravatar_id": "", "url": "https://api.github.com/users/NMemane1", "html_url": "https://github.com/NMemane1", "followers_url": "https://api.github.com/users/NMemane1/followers", "following_url": "https://api.github.com/users/NMemane1/following{/other_user}", "gists_url": "https://api.github.com/users/NMemane1/gists{/gist_id}", "starred_url": "https://api.github.com/users/NMemane1/starred{/owner}/repos", "subscriptions_url": "https://api.github.com/users/NMemane1/subscriptions", "organizations_url": "https://api.github.com/users/NMemane1/orgs", "repos_url": "https://api.github.com/users/NMemane1/repos", "events_url": "https://api.github.com/users/NMemane1/events{/privacy}", "received_events_url": "https://api.github.com/users/NMemane1/received_events", "type": "User", "user_view_type": "public", "site_admin": false}, "created_at": "2025-10-05T16:32:50Z", "updated_at": "2025-10-05T16:32:50Z", "author_association": "OWNER", "body": "Testing by NMemane1", "reactions": {"url": "https://api.github.com/repos/NMemane1/CMPE272-GitHub-TestRepository-CodeCoven/issues/comments/3369169188/reactions", "total_count": 0, "+1": 0, "-1": 0, "laugh": 0, "hooray": 0, "confused": 0, "heart": 0, "rocket": 0, "eyes": 0}, "performed_via_github_app": null}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven %
```

T08, T09 & T10 Screenshot –

Get non-existent issue

Create issue without title

Invalid state in PATCH

```
..oven org.codehaus.plexus.classworlds.launcher.Launcher spring-boot-run ... ~/Desktop/CMP272-GitHub-TestRepository-CodeCoven -- -zsh ~/Desktop/CMP272-GitHub-TestRepository-CodeCoven -- -zsh +
nikitane@Nikitas-MacBook-Pro CMP272-GitHub-TestRepository-CodeCoven % curl -i -X PATCH http://localhost:8080/issues/5 -H 'Content-Type: application/json' -d '{"title":"state":"open"}'
zsh: command not found: curl
nikitane@Nikitas-MacBook-Pro CMP272-GitHub-TestRepository-CodeCoven % curl -i -X PATCH http://localhost:8080/issues/5 \
-H 'Content-Type: application/json' \
-d '{"state":"closed"}'
HTTP/1.1 200
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:28:52 GMT

{"number":5,"html_url":"https://github.com/NMemane1/CMP272-GitHub-TestRepository-CodeCoven/issues/5","state":"closed","title":"Updated by NMemane1","body":null,"labels":[],"created_at":"2025-09-29T04:47:41Z","update
d_at":"2025-10-05T16:28:52Z"}
nikitane@Nikitas-MacBook-Pro CMP272-GitHub-TestRepository-CodeCoven % curl -i -X PATCH http://localhost:8080/issues/5 \
-H 'Content-Type: application/json' \
-d '{"state":"open"}'
HTTP/1.1 200
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:29:47 GMT

{"number":5,"html_url":"https://github.com/NMemane1/CMP272-GitHub-TestRepository-CodeCoven/issues/5","state":"open","title":"Updated by NMemane1","body":null,"labels":[],"created_at":"2025-09-29T04:47:41Z","update
d_at":"2025-10-05T16:29:46Z"}
nikitane@Nikitas-MacBook-Pro CMP272-GitHub-TestRepository-CodeCoven % curl -i -X POST http://localhost:8080/issues/5/comments -H 'Content-Type: application/json' -d '{"body":"Testing by NMemane1"}'
HTTP/1.1 201
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:32:51 GMT

{"url":"https://api.github.com/repos/NMemane1/CMP272-GitHub-TestRepository-CodeCoven/issues/comments/3369169188","html_url":"https://github.com/NMemane1/CMP272-GitHub-TestRepository-CodeCoven/issues/5#issuecommen
t-3369169188","issue_url":"https://api.github.com/repos/NMemane1/CMP272-GitHub-TestRepository-CodeCoven/issues/5","id":3369169188,"node_id":"IC_kwDOP4Mw487IBODU","user":{"login":"NMemane1","id":234857384,"node_id
":"U_kgDOP4Mw4","avatar_url":"https://avatars.githubusercontent.com/u/234857384?v=4","gravatar_id":"","url":"https://api.github.com/users/NMemane1","html_url":"https://github.com/NMemane1","followers_url":"https://
api.github.com/users/NMemane1/followers","following_url":"https://api.github.com/users/NMemane1/following{/other_user}","gists_url":"https://api.github.com/users/NMemane1/gists{/gist_id}","starred_url":"https://api
.github.com/users/NMemane1/starred{/owner}/{repo}","subscriptions_url":"https://api.github.com/users/NMemane1/subscriptions","organizations_url":"https://api.github.com/users/NMemane1/orgs","repos_url":"https://api
.github.com/users/NMemane1/repos","events_url":"https://api.github.com/users/NMemane1/events{/privacy}","received_events_url":"https://api.github.com/users/NMemane1/received_events","type":"User","user_view_type":"
public","site_admin":false},"created_at":"2025-10-05T16:32:50Z","updated_at":"2025-10-05T16:32:50Z","author_association":"OWNER","body":"Testing by NMemane1","reactions":{"url":"https://api.github.com/repos/NMemane
1/CMP272-GitHub-TestRepository-CodeCoven/issues/comments/3369169188/reactions","total_count":0,"+1":0,"-1":0,"laugh":0,"hooray":0,"confused":0,"heart":0,"rocket":0,"eyes":0},"performed_via_github_app":null}
nikitane@Nikitas-MacBook-Pro CMP272-GitHub-TestRepository-CodeCoven % curl -i http://localhost:8080/issues/99999
HTTP/1.1 503
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:37:18 GMT
Connection: close

{"code":"error","message":"404 Not Found from GET https://api.github.com/repos/NMemane1/CMP272-GitHub-TestRepository-CodeCoven/issues/99999","details":{}}
nikitane@Nikitas-MacBook-Pro CMP272-GitHub-TestRepository-CodeCoven % curl -i -X POST http://localhost:8080/issues \
-H 'Content-Type: application/json' \
-d '{"body":"This issue has no title"}'
HTTP/1.1 400
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:39:53 GMT
Connection: close

{"code":"bad_request","message":"Validation failed","details":{"title": "title is required"}}
nikitane@Nikitas-MacBook-Pro CMP272-GitHub-TestRepository-CodeCoven % curl -i -X PATCH http://localhost:8080/issues/10 \
-H 'Content-Type: application/json' \
-d '{"state":"invalid"}'
HTTP/1.1 400
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:42:32 GMT
Connection: close

{"code":"bad_request","message":"state must be 'open' or 'closed'","details":{}}
nikitane@Nikitas-MacBook-Pro CMP272-GitHub-TestRepository-CodeCoven %
```

T011 Screenshot –

Webhook Secret -

7062111a7fb1c9b1b1b67feb45ee62920a1564b1cd14015fe0c9aa585d5f9a5b

SIG - f3b788f1ab64b93765b5c0f6e93dde244be6c66fa256f54a6db27ce898001767

Valid Webhook –

```
---data-binary @payload.json
HTTP/1.1 401
Content-Length: 0
Date: Sun, 05 Oct 2025 21:33:33 GMT

nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven N $ curl -s -X POST http://localhost:8080/webhook \
  -H "X-GitHub-Event: ping" \
  -H "X-GitHub-Delivery: test-123" \
  -H "X-Hub-Signature-256: sha256=$SIG" \
  -H "Content-Type: application/json" \
  --data-binary @payload.json
|
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven N $ curl -i -X POST http://localhost:8080/webhook \
  -H "X-GitHub-Event: ping" \
  -H "X-GitHub-Delivery: test-123" \
  -H "X-Hub-Signature-256: sha256=$INVALIDSIG" \
  -H "Content-Type: application/json" \
  --data-binary @payload.json
|
HTTP/1.1 401
Content-Length: 0
Date: Sun, 05 Oct 2025 21:34:37 GMT

nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven N $ curl -i -X POST http://localhost:8080/webhook \
  -H "X-GitHub-Event: ping" \
  -H "X-GitHub-Delivery: test-123" \
  -H "X-Hub-Signature-256: sha256=$INVALIDSIG" \
  -H "Content-Type: application/json" \
  --data-binary @payload.json
|
HTTP/1.1 401
Content-Length: 0
Date: Sun, 05 Oct 2025 21:34:57 GMT

nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven N $
```

Invalid Webhook –

```
HTTP/1.1 204
Date: Sun, 05 Oct 2025 21:34:37 GMT

nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven N $ curl -i -X POST http://localhost:8080/webhook \
  -H "X-GitHub-Event: ping" \
  -H "X-GitHub-Delivery: test-123" \
  -H "X-Hub-Signature-256: sha256=$INVALIDSIG" \
  -H "Content-Type: application/json" \
  --data-binary @payload.json
|
HTTP/1.1 401
Content-Length: 0
Date: Sun, 05 Oct 2025 21:34:57 GMT

nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven N $
```

T012 Screenshots –

Pagination successful — only 2 issues returned per page (T12 passed)."

```
{
  "code": "bad_request",
  "message": "state must be 'open' or 'closed'",
  "details": {}
}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven N $ curl -i -X PATCH http://localhost:8080/issues/10 \
  -H "Content-Type: application/json" \
  -d '{"state": "invalid"}'
|
HTTP/1.1 400
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:42:32 GMT
Connection: close

{"code": "bad_request", "message": "state must be 'open' or 'closed'", "details": {}}
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven N $ curl -i -X PATCH http://localhost:8080/issues?per_page=2&page=1
HTTP/1.1 200
Link: <https://api.github.com/repositories/1065558587/issues?state=open&page=2&per_page=2&after=Y3Vyc29yOnYpOpLPAABmbSmDajOz7Y-1AN3DND3D>; rel="next"
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Oct 2025 16:48:11 GMT

[{"number": 11, "html_url": "https://github.com/MName1/CMPE272-GitHub-TestRepository-CodeCoven/issues/11", "state": "open", "title": "Hello from Person C", "body": "demo", "labels": [{"id": 9405872366, "node_id": "LA_kwDOP4Mh688AAACMKI47g", "url": "https://api.github.com/repos/MName1/CMPE272-GitHub-TestRepository-CodeCoven/labels/test", "name": "test", "color": "ededed", "default": false, "description": null}], "created_at": "2025-10-05T14:19:34Z", "updated_at": "2025-10-05T14:19:34Z", "number": 10, "html_url": "https://github.com/MName1/CMPE272-GitHub-TestRepository-CodeCoven/issues/10", "state": "open", "title": "Hello from Person C", "body": "demo", "labels": [{"id": 9405872366, "node_id": "LA_kwDOP4Mh688AAACMKI47g", "url": "https://api.github.com/repos/MName1/CMPE272-GitHub-TestRepository-CodeCoven/labels/test", "name": "test", "color": "ededed", "default": false, "description": null}], "created_at": "2025-10-05T13:53:25Z", "updated_at": "2025-10-05T13:53:25Z"}]
nikitane@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven N $
```

T013 Screenshot –

Simulated GitHub rate-limit (403 + Retry-After) via JUnit. API returned 503 with JSON error.
(T13 passed)

```
oven.org.codehaus.plexus.classworlds.launcher.Launcher spring-boot-run ... ~/Desktop/CMPE272-GitHub-TestRepository-CodeCoven -- -zsh ~/Desktop/CMPE272-GitHub-TestRepository-CodeCoven -- -zsh +

[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.cmpe272:issues-gateway >-----
[INFO] Building GitHub Issues Gateway 1.0.0-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- resources:3.3.1:resources (default-resources) @ issues-gateway ---
[INFO] Copying 1 resource from src/main/resources to target/classes
[INFO] Copying 0 resource from src/main/resources to target/classes
[INFO]
[INFO] --- compiler:3.11.0:compile (default-compile) @ issues-gateway ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- resources:3.3.1:testResources (default-testResources) @ issues-gateway ---
[INFO] skip non existing resourceDirectory /Users/nikitame/Desktop/CMPE272-GitHub-TestRepository-CodeCoven/src/test/resources
[INFO]
[INFO] --- compiler:3.11.0:testCompile (default-testCompile) @ issues-gateway ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- surefire:2.5.5:test (default-test) @ issues-gateway ---
[INFO] Using auto detected provider org.apache.maven.surefire.junitplatform.JUnitPlatformProvider
[INFO]
[INFO] -----T E S T S-----
[INFO]
[INFO] Running com.cmpe272:issuesgw.RateLimitTest
15:09:28.439 [main] INFO org.springframework.test.context.support.AnnotationConfigContextLoaderUtils -- Could not detect default configuration classes for test class [com.cmpe272:issuesgw.RateLimitTest]: RateLimitT
est does not declare any static, non-private, non-final, nested classes annotated with @Configuration.
15:09:28.462 [main] INFO org.springframework.boot.test.context.SpringBootTestContextBootstrapper -- Found @SpringBootConfiguration com.cmpe272:issuesgw.Application for test class com.cmpe272:issuesgw.RateLimitTest

:: Spring Boot ::
:: (v3.3.2)

2025-10-05T15:09:28.577-07:00 INFO 48122 --- [          main] com.cmpe272:issuesgw.RateLimitTest : Starting RateLimitTest using Java 21.0.0 with PID 48122 (started by nikitame in /Users/nikitame/Desktop/CMPE
272-GitHub-TestRepository-CodeCoven)
2025-10-05T15:09:28.578-07:00 INFO 48122 --- [          main] com.cmpe272:issuesgw.RateLimitTest : No active profile set, falling back to 1 default profile: "default"
OpenJDK 64-Bit Server VM warning: Sharing is only supported for boot loader classes because bootstrap classpath has been appended
WARNING: A Java agent has been loaded dynamically (/Users/nikitame/.m2/repository/net/bytebuddy/byte-buddy-agent/1.14.18/byte-buddy-agent-1.14.18.jar)
WARNING: If a serviceability tool is in use, please run with -XX:+EnableDynamicAgentLoading to hide this warning
WARNING: If a serviceability tool is not in use, please run with -Djdk.instrument.traceUsage for more information
WARNING: Dynamic loading of agents will be disallowed by default in a future release
2025-10-05T15:09:29.288-07:00 INFO 48122 --- [          main] o.s.b.t.m.w.SpringBootMockServletContext : Initializing Spring TestDispatcherServlet ''
2025-10-05T15:09:29.288-07:00 INFO 48122 --- [          main] o.s.t.web.servlet.TestDispatcherServlet : Initializing Servlet ''
2025-10-05T15:09:29.281-07:00 INFO 48122 --- [          main] o.s.t.web.servlet.TestDispatcherServlet : Completed initialization in 0 ms
2025-10-05T15:09:29.311-07:00 INFO 48122 --- [          main] com.cmpe272:issuesgw.RateLimitTest : Started RateLimitTest in 0.628 seconds (process running for 1.118)
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 1.024 s -- in com.cmpe272:issuesgw.RateLimitTest
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] -----BUILD SUCCESS-----
[INFO]
[INFO] Total time: 1.628 s
[INFO] Finished at: 2025-10-05T15:09:29-07:00
[INFO]
nikitame@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven %
```

T014 Screenshot –
(Webhook event storage)

```
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] -----BUILD SUCCESS-----
[INFO]
[INFO] Total time: 1.628 s
[INFO] Finished at: 2025-10-05T15:09:29-07:00
[INFO]
nikitame@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven % curl -s http://localhost:8080/events | jq .
[
  {
    "timestamp": "2025-10-05T14:34:37.417682-07:00",
    "id": "test-123",
    "event": "ping"
  },
  {
    "timestamp": "2025-10-05T14:31:05.615158-07:00",
    "id": "test-123",
    "event": "ping"
  }
]
nikitame@Nikitas-MacBook-Pro CMPE272-GitHub-TestRepository-CodeCoven %
```

T015 Screenshots –

(Overall test coverage = 90%)

```

...open org.codehaus.plexus.classworlds.launcher.Launcher spring-bootrun ... ~./Desktop/CMPET272-GitHub-TestRepository-CodeCoven --zsh ...o src/test/java/com/cmpet272/issues/gwIssuesControllerCrudTest.java +
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 5.873 s
[INFO] Finished at: 2025-10-06T02:06:12-07:00
[INFO]
nikitame@Nikitas-MacBook-Pro CMPET272-GitHub-TestRepository-CodeCoven % open target/site/jacoco/index.html
nikitame@Nikitas-MacBook-Pro CMPET272-GitHub-TestRepository-CodeCoven % mvn test
[INFO] Scanning for projects...
[INFO]
[INFO] -----< org.example:openApiUnitTest ----->
[INFO] Building openApiUnitTest 1.0-SNAPSHOT
[INFO] from pom.xml
[INFO]
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- resources:3.3.1:resources (default) @ openApiUnitTest ---
[INFO] argLine set to -javaagent:/Users/nikitame/.m2/repository/org/jacoco/org.jacoco.agent/0.8.12/org.jacoco.agent-0.8.12-runtime.jar=destfile=/Users/nikitame/Desktop/CMPET272-GitHub-TestRepository-CodeCoven/target/jacoco.exec,excludes=**/dto/**:*/Application.class
[INFO]
[INFO] --- resources:3.3.1:resources (default-resources) @ openApiUnitTest ---
[INFO] Copying 3 resource from src/main/resources to target/classes
[INFO] Copying 0 resource from src/main/resources to target/classes
[INFO]
[INFO] --- compiler:3.13.0:compile (default-compile) @ openApiUnitTest ---
[INFO] Nothing to compile - all classes are up to date.
[INFO]
[INFO] --- resources:3.3.1:testResources (default-testResources) @ openApiUnitTest ---
[INFO] skip non existing resourceDirectory /Users/nikitame/Desktop/CMPET272-GitHub-TestRepository-CodeCoven/src/test/resources
[INFO]
[INFO] --- compiler:3.13.0:compile (default-testCompile) @ openApiUnitTest ---
[INFO] Nothing to compile - all classes are up to date.

```

[illegible]

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Missed	Lines	Missed	Methods	Missed	Classes
com.cmpe272.issuesgw.controller	81%	71%	9	23	2	35	1	9	0	2		
com.cmpe272.issuesgw.service	92%	53%	12	25	2	60	1	11	0	3		
com.cmpe272.issuesgw.util	94%	77%	10	25	2	41	1	5	0	2		
com.cmpe272.issuesgw.exception	96%	75%	1	7	0	8	0	5	0	1		
Total	86 of 894	90%	31 of 100	69%	32	80	6	144	3	30	0	8