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Dokumentasi

1. Build and Run

The screenshot displays the Docker Desktop application window. The left sidebar contains navigation options: Ask Gordon, Containers (selected), Images, Volumes, Kubernetes, Builds, Models, MCP Toolkit, Docker Hub, Docker Scout, and Extensions. The main area shows the 'Containers' tab with a search bar and a toggle for 'Only show running containers'. Below this is a table of containers:

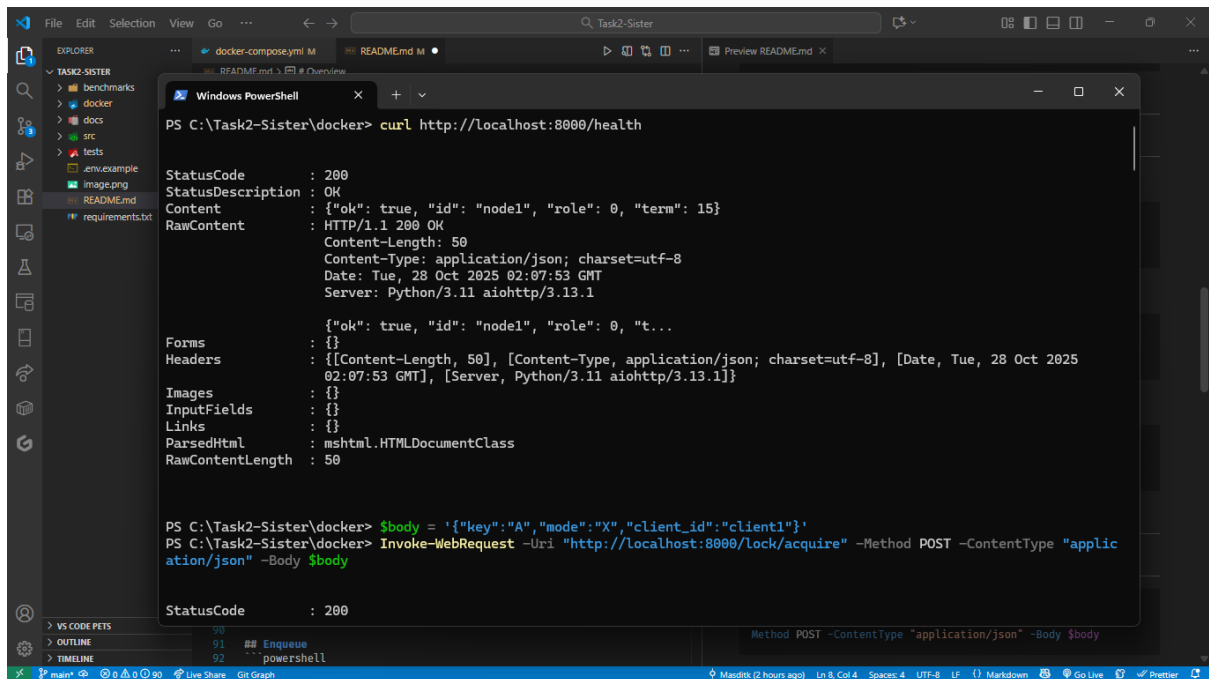
	Name	Container ID	Image	Port(s)	CPU (%)	Memory use	Actions
<input type="checkbox"/>	node3	bf5d72cd7485	docker-node3	8002:8002	1.5%	33.4MB / 3.6GB	
<input type="checkbox"/>	cache2	a34700aab3e8	docker-cache2	8201:8201	1.06%	33.34MB / 3.6GB	
<input type="checkbox"/>	queue3	18a62e65798e	docker-queue3	8102:8102	3.78%	33.39MB / 3.6GB	
<input type="checkbox"/>	cache3	44245bf50h57	docker-cache3	8202:8202	1.07%	33.50MB / 3.6GB	

Below the container list is a terminal window showing the output of a Docker command:

```
PS C:\Task2-Sister\docker> docker compose up --build
[+] Building 79.4s (28/28) FINISHED
=> [internal] load local bake definitions 0.2s
=> => reading from stdin 3.72kB 0.2s
=> [queue3 internal] load build definition from Dockerfile 0.3s
=> => transferring dockerfile: 227B 0.2s
=> [node3 internal] load metadata for docker.io/library/python:3.11-slim 1.6s
=> [cache2 internal] load .dockerignore 0.5s
=> => transferring context: 2B 0.1s
=> [node1 1/5] FROM docker.io/library/python:3.11-slim@sha256:8eb5fc663972b871c528fef04be4eaa9ab8ab4539a5316c4b8c133 0.7s
=> => resolve docker.io/library/python:3.11-slim@sha256:8eb5fc663972b871c528fef04be4eaa9ab8ab4539a5316c4b8c133771214 0.3s
```

The bottom status bar indicates 'Engine running', 'RAM 2.89 GB', 'CPU 6.47%', and 'Disk: 6.26 GB used (limit 1006.85 GB)'. A 'New version available' notification is also present.

2. Cek Health



```
PS C:\Task2-Sister\docker> curl http://localhost:8000/health

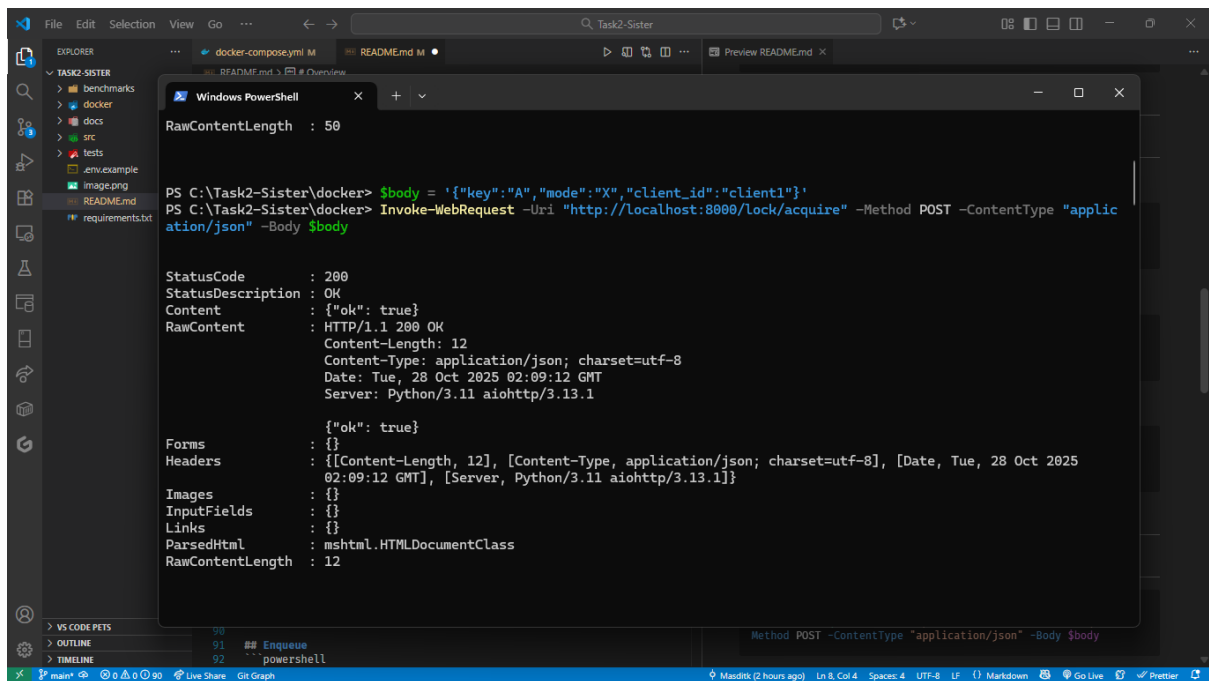
StatusCode      : 200
StatusDescription : OK
Content          : {"ok": true, "id": "node1", "role": 0, "term": 15}
RawContent       : HTTP/1.1 200 OK
                  Content-Length: 50
                  Content-Type: application/json; charset=utf-8
                  Date: Tue, 28 Oct 2025 02:07:53 GMT
                  Server: Python/3.11 aiohttp/3.13.1

Forms           : {}
Headers         : {[Content-Length, 50], [Content-Type, application/json; charset=utf-8], [Date, Tue, 28 Oct 2025 02:07:53 GMT], [Server, Python/3.11 aiohttp/3.13.1]}
Images          : {}
InputFields     : {}
Links           : {}
ParsedHtml      : mshtml.HTMLDocumentClass
RawContentLength : 50

PS C:\Task2-Sister\docker> $body = '{"key": "A", "mode": "X", "client_id": "client1"}'
PS C:\Task2-Sister\docker> Invoke-WebRequest -Uri "http://localhost:8000/lock/acquire" -Method POST -ContentType "application/json" -Body $body

StatusCode      : 200
```

3. Acquire Lock



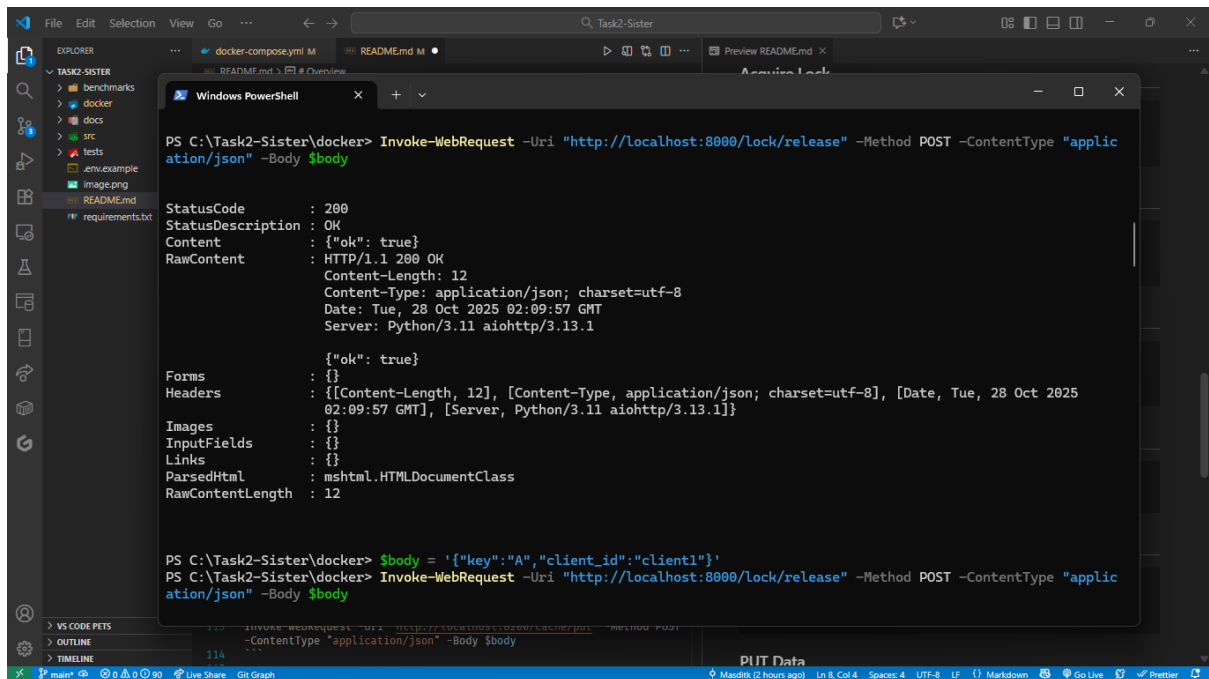
```
RawContentLength : 50

PS C:\Task2-Sister\docker> $body = '{"key": "A", "mode": "X", "client_id": "client1"}'
PS C:\Task2-Sister\docker> Invoke-WebRequest -Uri "http://localhost:8000/lock/acquire" -Method POST -ContentType "application/json" -Body $body

StatusCode      : 200
StatusDescription : OK
Content          : {"ok": true}
RawContent       : HTTP/1.1 200 OK
                  Content-Length: 12
                  Content-Type: application/json; charset=utf-8
                  Date: Tue, 28 Oct 2025 02:09:12 GMT
                  Server: Python/3.11 aiohttp/3.13.1

Forms           : {}
Headers         : {[Content-Length, 12], [Content-Type, application/json; charset=utf-8], [Date, Tue, 28 Oct 2025 02:09:12 GMT], [Server, Python/3.11 aiohttp/3.13.1]}
Images          : {}
InputFields     : {}
Links           : {}
ParsedHtml      : mshtml.HTMLDocumentClass
RawContentLength : 12
```

4. Release Lock



The screenshot shows a Visual Studio Code editor with a PowerShell terminal window open. The terminal displays a REST client request to `http://localhost:8000/lock/release` with a POST method and `application/json` content type. The request body is `{ "key": "A", "client_id": "client1" }`. The response is a 200 OK status with a JSON body `{ "ok": true }`. The terminal output shows the status code, status description, content, raw content, headers, and other details.

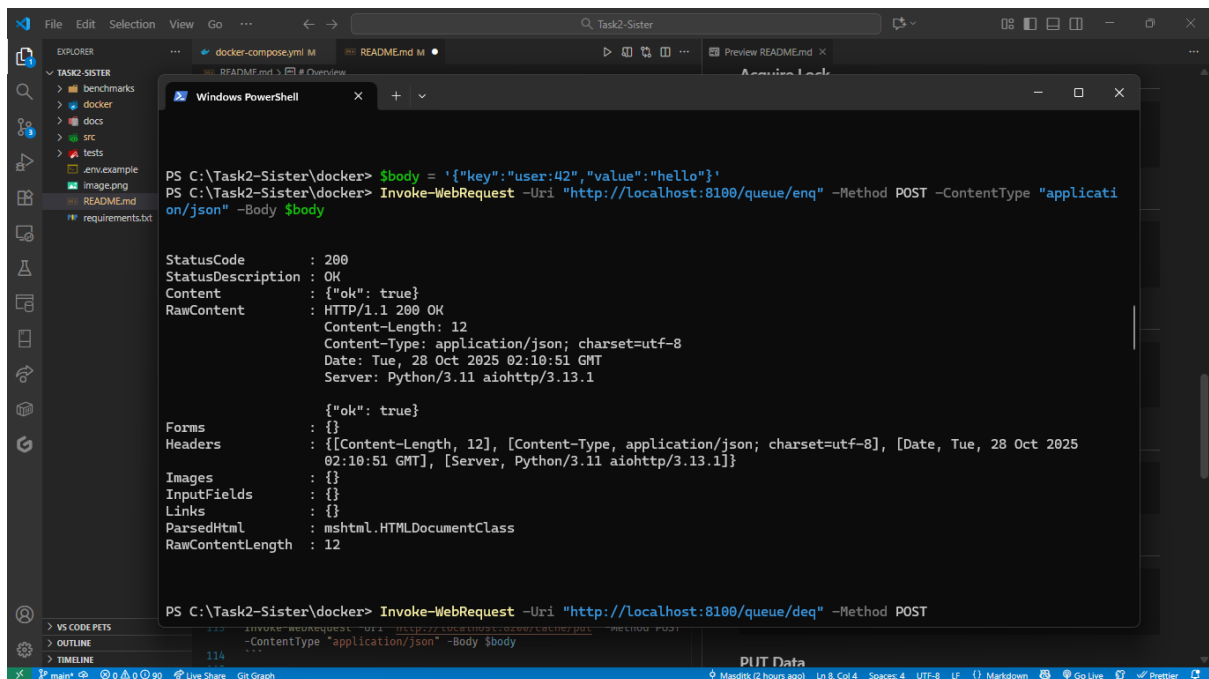
```
PS C:\Task2-Sister\docker> Invoke-WebRequest -Uri "http://localhost:8000/lock/release" -Method POST -ContentType "application/json" -Body $body

StatusCode      : 200
StatusDescription : OK
Content         : {"ok": true}
RawContent      : HTTP/1.1 200 OK
                  Content-Length: 12
                  Content-Type: application/json; charset=utf-8
                  Date: Tue, 28 Oct 2025 02:09:57 GMT
                  Server: Python/3.11 aiohttp/3.13.1

Forms           : {}
Headers         : {[Content-Length, 12], [Content-Type, application/json; charset=utf-8], [Date, Tue, 28 Oct 2025 02:09:57 GMT], [Server, Python/3.11 aiohttp/3.13.1]}
Images          : {}
InputFields     : {}
Links           : {}
ParsedHtml      : mshtml.HTMLDocumentClass
RawContentLength : 12

PS C:\Task2-Sister\docker> $body = '{"key": "A", "client_id": "client1"}'
PS C:\Task2-Sister\docker> Invoke-WebRequest -Uri "http://localhost:8000/lock/release" -Method POST -ContentType "application/json" -Body $body
```

5. Enqueue



The screenshot shows a Visual Studio Code editor with a PowerShell terminal window open. The terminal displays a REST client request to `http://localhost:8100/queue/enq` with a POST method and `application/json` content type. The request body is `{ "key": "user:42", "value": "hello" }`. The response is a 200 OK status with a JSON body `{ "ok": true }`. The terminal output shows the status code, status description, content, raw content, headers, and other details.

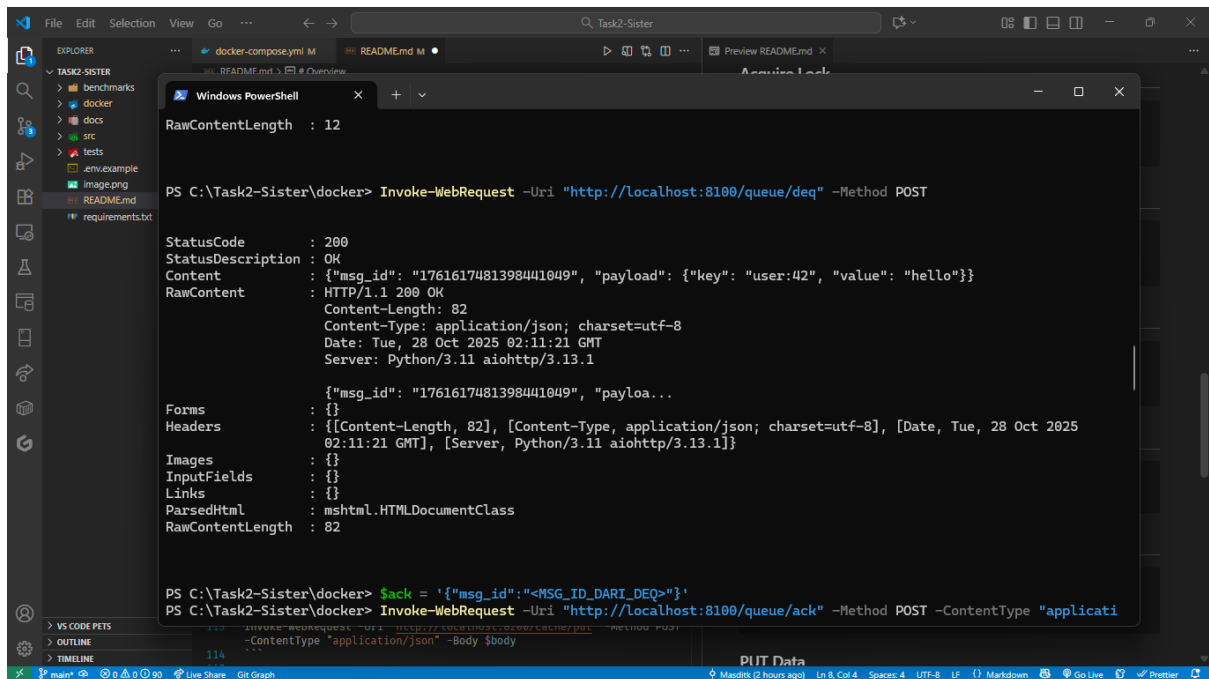
```
PS C:\Task2-Sister\docker> $body = '{"key": "user:42", "value": "hello"}'
PS C:\Task2-Sister\docker> Invoke-WebRequest -Uri "http://localhost:8100/queue/enq" -Method POST -ContentType "application/json" -Body $body

StatusCode      : 200
StatusDescription : OK
Content         : {"ok": true}
RawContent      : HTTP/1.1 200 OK
                  Content-Length: 12
                  Content-Type: application/json; charset=utf-8
                  Date: Tue, 28 Oct 2025 02:10:51 GMT
                  Server: Python/3.11 aiohttp/3.13.1

Forms           : {}
Headers         : {[Content-Length, 12], [Content-Type, application/json; charset=utf-8], [Date, Tue, 28 Oct 2025 02:10:51 GMT], [Server, Python/3.11 aiohttp/3.13.1]}
Images          : {}
InputFields     : {}
Links           : {}
ParsedHtml      : mshtml.HTMLDocumentClass
RawContentLength : 12

PS C:\Task2-Sister\docker> Invoke-WebRequest -Uri "http://localhost:8100/queue/deq" -Method POST -ContentType "application/json" -Body $body
```

6. Dequeue



```
RawContentLength : 12

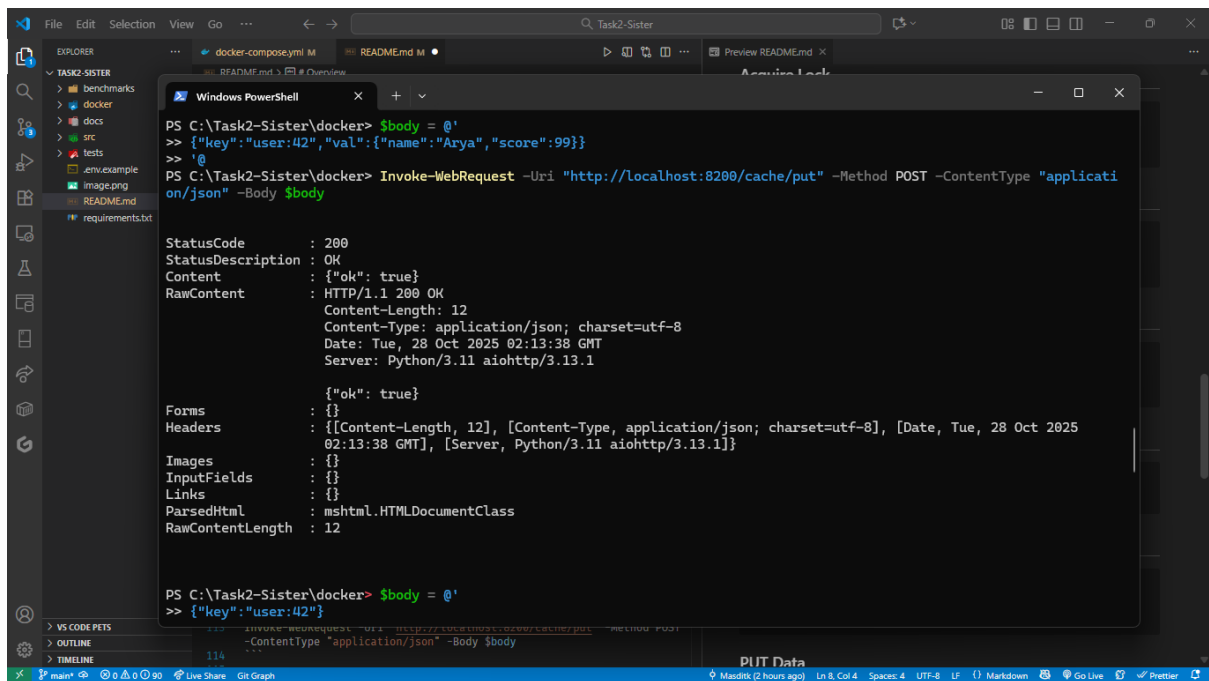
PS C:\Task2-Sister\docker> Invoke-WebRequest -Uri "http://localhost:8100/queue/deq" -Method POST

StatusCode      : 200
StatusDescription : OK
Content          : {"msg_id": "1761617481398441049", "payload": {"key": "user:42", "value": "hello"}}
RawContent       : HTTP/1.1 200 OK
                  Content-Length: 82
                  Content-Type: application/json; charset=utf-8
                  Date: Tue, 28 Oct 2025 02:11:21 GMT
                  Server: Python/3.11 aiohttp/3.13.1

Forms           : {}
Headers         : {[Content-Length, 82], [Content-Type, application/json; charset=utf-8], [Date, Tue, 28 Oct 2025 02:11:21 GMT], [Server, Python/3.11 aiohttp/3.13.1]}
Images          : {}
InputFields     : {}
Links           : {}
ParsedHtml      : mshtml.HTMLDocumentClass
RawContentLength : 82

PS C:\Task2-Sister\docker> $ack = '{"msg_id": "<MSG_ID_DARI_DEQ>"}'
PS C:\Task2-Sister\docker> Invoke-WebRequest -Uri "http://localhost:8100/queue/ack" -Method POST -ContentType "applicati
-ContentType "application/json" -Body $body
```

7. Put Data



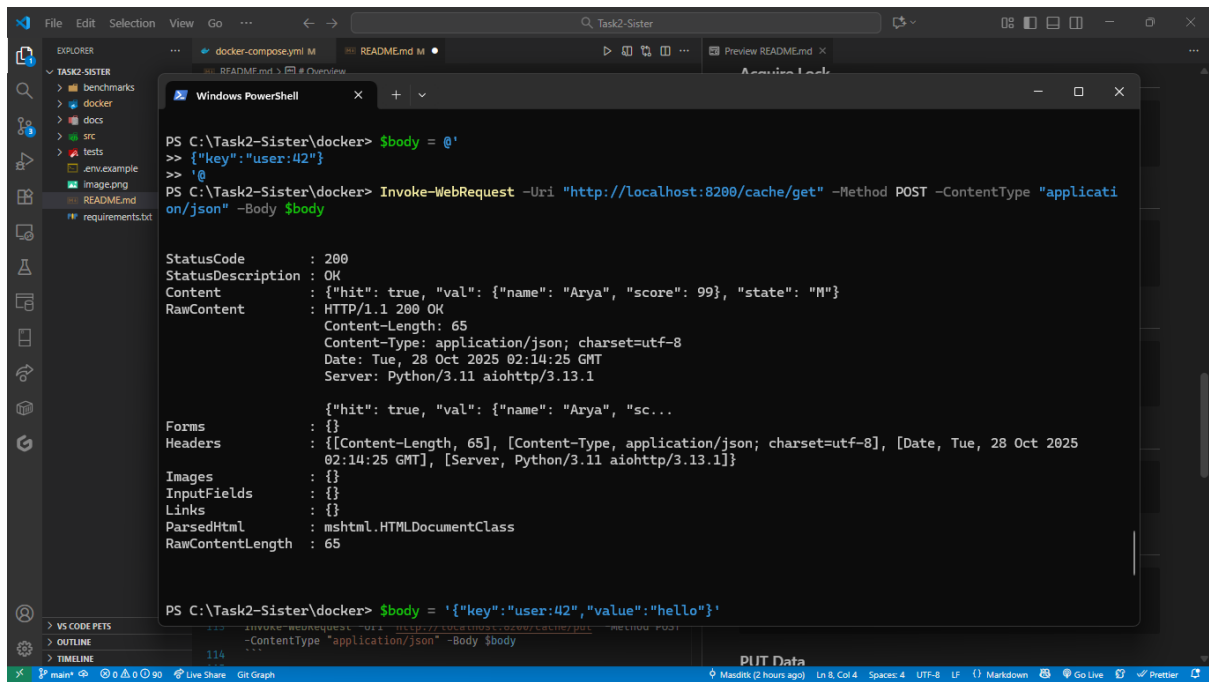
```
PS C:\Task2-Sister\docker> $body = @'
>> {"key": "user:42", "val": {"name": "Arya", "score": 99}}
>> '@
PS C:\Task2-Sister\docker> Invoke-WebRequest -Uri "http://localhost:8200/cache/put" -Method POST -ContentType "applicati
on/json" -Body $body

StatusCode      : 200
StatusDescription : OK
Content          : {"ok": true}
RawContent       : HTTP/1.1 200 OK
                  Content-Length: 12
                  Content-Type: application/json; charset=utf-8
                  Date: Tue, 28 Oct 2025 02:13:38 GMT
                  Server: Python/3.11 aiohttp/3.13.1

Forms           : {}
Headers         : {[Content-Length, 12], [Content-Type, application/json; charset=utf-8], [Date, Tue, 28 Oct 2025 02:13:38 GMT], [Server, Python/3.11 aiohttp/3.13.1]}
Images          : {}
InputFields     : {}
Links           : {}
ParsedHtml      : mshtml.HTMLDocumentClass
RawContentLength : 12

PS C:\Task2-Sister\docker> $body = @'
>> {"key": "user:42"}
>> '@
Invoke-WebRequest -Uri "http://localhost:8200/cache/put" -Method POST
-ContentType "application/json" -Body $body
```

8. Get Data



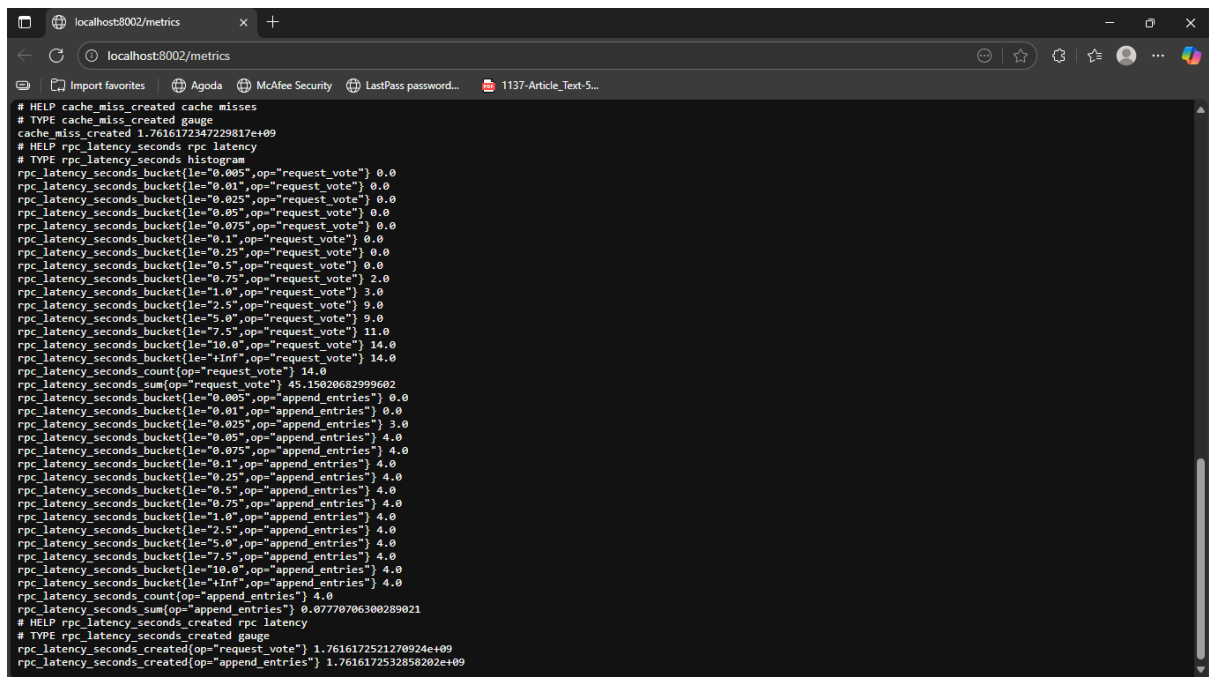
```
PS C:\Task2-Sister\docker> $body = @'
>> {"key": "user:42"}
>> '@
PS C:\Task2-Sister\docker> Invoke-WebRequest -Uri "http://localhost:8200/cache/get" -Method POST -ContentType "application/json" -Body $body

StatusCode      : 200
StatusDescription : OK
Content          : {"hit": true, "val": {"name": "Arya", "score": 99}, "state": "M"}
RawContent       : HTTP/1.1 200 OK
                  Content-Length: 65
                  Content-Type: application/json; charset=utf-8
                  Date: Tue, 28 Oct 2025 02:14:25 GMT
                  Server: Python/3.11 aiohttp/3.13.1

Forms            : {}
Headers          : [{"Content-Length", 65}, [{"Content-Type", application/json; charset=utf-8}, [{"Date", Tue, 28 Oct 2025 02:14:25 GMT}, [{"Server", Python/3.11 aiohttp/3.13.1}]]
Images           : {}
InputFields      : {}
Links            : {}
ParsedHtml       : mshtml.HTMLDocumentClass
RawContentLength : 65

PS C:\Task2-Sister\docker> $body = '{"key": "user:42", "value": "hello"}'
```

9. Metrics Monitoring



```
# HELP cache_miss_created cache misses
# TYPE cache_miss_created gauge
cache_miss_created 1.7616172521270924e+09
# HELP rpc_latency_seconds rpc latency
# TYPE rpc_latency_seconds histogram
rpc_latency_seconds_bucket{le="0.005",op="request_vote"} 0.0
rpc_latency_seconds_bucket{le="0.01",op="request_vote"} 0.0
rpc_latency_seconds_bucket{le="0.025",op="request_vote"} 0.0
rpc_latency_seconds_bucket{le="0.05",op="request_vote"} 0.0
rpc_latency_seconds_bucket{le="0.075",op="request_vote"} 0.0
rpc_latency_seconds_bucket{le="0.1",op="request_vote"} 0.0
rpc_latency_seconds_bucket{le="0.25",op="request_vote"} 0.0
rpc_latency_seconds_bucket{le="0.5",op="request_vote"} 0.0
rpc_latency_seconds_bucket{le="0.75",op="request_vote"} 2.0
rpc_latency_seconds_bucket{le="1.0",op="request_vote"} 3.0
rpc_latency_seconds_bucket{le="2.5",op="request_vote"} 9.0
rpc_latency_seconds_bucket{le="5.0",op="request_vote"} 9.0
rpc_latency_seconds_bucket{le="7.5",op="request_vote"} 11.0
rpc_latency_seconds_bucket{le="10.0",op="request_vote"} 14.0
rpc_latency_seconds_bucket{le="+Inf",op="request_vote"} 14.0
rpc_latency_seconds_count{op="request_vote"} 14.0
rpc_latency_seconds_sum{op="request_vote"} 45.15020682999602
rpc_latency_seconds_bucket{le="0.005",op="append_entries"} 0.0
rpc_latency_seconds_bucket{le="0.01",op="append_entries"} 0.0
rpc_latency_seconds_bucket{le="0.025",op="append_entries"} 3.0
rpc_latency_seconds_bucket{le="0.05",op="append_entries"} 4.0
rpc_latency_seconds_bucket{le="0.075",op="append_entries"} 4.0
rpc_latency_seconds_bucket{le="0.1",op="append_entries"} 4.0
rpc_latency_seconds_bucket{le="0.25",op="append_entries"} 4.0
rpc_latency_seconds_bucket{le="0.5",op="append_entries"} 4.0
rpc_latency_seconds_bucket{le="0.75",op="append_entries"} 4.0
rpc_latency_seconds_bucket{le="1.0",op="append_entries"} 4.0
rpc_latency_seconds_bucket{le="2.5",op="append_entries"} 4.0
rpc_latency_seconds_bucket{le="5.0",op="append_entries"} 4.0
rpc_latency_seconds_bucket{le="7.5",op="append_entries"} 4.0
rpc_latency_seconds_bucket{le="10.0",op="append_entries"} 4.0
rpc_latency_seconds_bucket{le="+Inf",op="append_entries"} 4.0
rpc_latency_seconds_count{op="append_entries"} 4.0
rpc_latency_seconds_sum{op="append_entries"} 0.07770706300289021
# HELP rpc_latency_seconds_created rpc latency
# TYPE rpc_latency_seconds_created gauge
rpc_latency_seconds_created{op="request_vote"} 1.7616172521270924e+09
rpc_latency_seconds_created{op="append_entries"} 1.7616172532858202e+09
```