Cloud Development Microservice Application Logic service Document

Project Name: Holiday Query and Data Storage Service (Holiday Cache Service)
Group: r
File: r_logic_service.py
Deployment Address: https://sanqiqi7.pythonanywhere.com/

1. Verify that the service is running normally on pythonanywhere.

1.1-Here I test the Logic service endpoint with curl.
1.1.1
①**curl:**
curl "http://localhost:5001/logic/test"
②**screenshots:**

```
C:\Users\OMEN>curl "http://localhost:5001/logic/test"
{
  "message": "r Group Logic Service is running"
}
```

1.1.2
①**curl:**

curl "https://sanqiqi7.pythonanywhere.com/logic/test"
②**screenshots:**

```
C:\Users\OMEN>curl "https://sanqiqi7.pythonanywhere.com/logic/test"
{"message":"r Group Logic Service is running"}
```

1.2 -Query Irish Holiday Data

1.2.1-Database data cache has expired.

①**curl:**
curl "https://hua123456.pythonanywhere.com/db/get-ireland?year=2026"
②**screenshots:"cache_time":"2025-11-20 09:30:02"**

C:\Users\OMEN>curl "https://hua123456.pythonanywhere.com/db/get-ireland?year=2026"
{"count":11,"data":[{"cache_time":"2025-11-20 09:30:02","countryCode":"IE","date":"2026-01-01","month":"01","name":"New
Year's Day"},{"cache_time":"2025-11-20 09:30:02","countryCode":"IE","date":"2026-02-02","month":"02","name":"Saint Brigi
d's Day"},{"cache_time":"2025-11-20 09:30:02","countryCode":"IE","date":"2026-03-17","month":"03","name":"Saint Patrick'
s Day"},{"cache_time":"2025-11-20 09:30:02","countryCode":"IE","date":"2026-04-03","month":"04","name":"Good Friday"},{"
cache_time":"2025-11-20 09:30:02","countryCode":"IE","date":"2026-04-06","month":"04","name":"Easter Monday"},{"cache_ti
me":"2025-11-20 09:30:02","countryCode":"IE","date":"2026-05-04","month":"05","name":"May Day"},{"cache_time":"2025-11-2
0 09:30:02","countryCode":"IE","date":"2026-06-01","month":"06","name":"June Holiday"},{"cache_time":"2025-11-20 09:30:0
2","countryCode":"IE","date":"2026-08-03","month":"08","name":"August Holiday"},{"cache_time":"2025-11-20 09:30:02","cou
ntryCode":"IE","date":"2026-10-26","month":"10","name":"October Holiday"},{"cache_time":"2025-11-20 09:30:02","countryCo
de":"IE","date":"2026-12-25","month":"12","name":"Christmas Day"},{"cache_time":"2025-11-20 09:30:02","countryCode":"IE"
,"date":"2026-12-26","month":"12","name":"St. Stephen's Day"}],"message":"IE holiday data get successfully"}

a.

Country &Year

①curl:

**curl
"https://sanqiqi7.pythonanywhere.com/logic/holidays?country=IE&year=2026"**

②screenshots:

C:\Users\OMEN>curl "https://sanqiqi7.pythonanywhere.com/logic/holidays?country=IE&year=2026"
{"count":11,"country":"IE","data":[{"countryCode":"IE","date":"2026-01-01","month":"01","name":"New Year's Day"},{"count
ryCode":"IE","date":"2026-02-02","month":"02","name":"Saint Brigid's Day"},{"countryCode":"IE","date":"2026-03-17","mont
h":"03","name":"Saint Patrick's Day"},{"countryCode":"IE","date":"2026-04-03","month":"04","name":"Good Friday"},{"count
ryCode":"IE","date":"2026-04-06","month":"04","name":"Easter Monday"},{"countryCode":"IE","date":"2026-05-04","month":"0
5","name":"May Day"},{"countryCode":"IE","date":"2026-06-01","month":"06","name":"June Holiday"},{"countryCode":"IE","da
te":"2026-08-03","month":"08","name":"August Holiday"},{"countryCode":"IE","date":"2026-10-26","month":"10","name":"Octo
ber Holiday"},{"countryCode":"IE","date":"2026-12-25","month":"12","name":"Christmas Day"},{"countryCode":"IE","date":"2
026-12-26","month":"12","name":"St. Stephen's Day"}],"message":"IE holiday data retrieved successfully","source":"api","
year":"2026"}

1.2.2-Database data cache has been updated.

①curl:

curl "https://hua123456.pythonanywhere.com/db/get-ireland?year=2026"
②screenshots:"cache_time":"2025-11-23 07:19:25"

C:\Users\OMEN>curl "https://hua123456.pythonanywhere.com/db/get-ireland?year=2026"
{"count":11,"data":[{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-01-01","month":"01","name":"New
Year's Day"},{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-02-02","month":"02","name":"Saint Brigi
d's Day"},{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-03-17","month":"03","name":"Saint Patrick'
s Day"},{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-04-03","month":"04","name":"Good Friday"},{"
cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-04-06","month":"04","name":"Easter Monday"},{"cache_ti
me":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-05-04","month":"05","name":"May Day"},{"cache_time":"2025-11-2
3 07:19:25","countryCode":"IE","date":"2026-06-01","month":"06","name":"June Holiday"},{"cache_time":"2025-11-23 07:19:2
5","countryCode":"IE","date":"2026-08-03","month":"08","name":"August Holiday"},{"cache_time":"2025-11-23 07:19:25","cou
ntryCode":"IE","date":"2026-10-26","month":"10","name":"October Holiday"},{"cache_time":"2025-11-23 07:19:25","countryCo
de":"IE","date":"2026-12-25","month":"12","name":"Christmas Day"},{"cache_time":"2025-11-23 07:19:25","countryCode":"IE"
,"date":"2026-12-26","month":"12","name":"St. Stephen's Day"}],"message":"IE holiday data get successfully"}

b.

Country &Year & Month

①curl:

**curl
"https://sanqiqi7.pythonanywhere.com/logic/holidays?country=IE&year=2026&
month=03"**

②screenshots:

C:\Users\OMEN>curl "https://sanqiqi7.pythonanywhere.com/logic/holidays?country=IE&year=2026&month=03"
{"count":1,"country":"IE","data":[{"countryCode":"IE","date":"2026-03-17","month":"03","name":"Saint Patrick's Day"}],"m
essage":"IE holiday data retrieved successfully","source":"cache","year":"2026"}

c.

Country & Year & Holiday

[1]**curl:**

curl
"**https://sanqiqi7.pythonanywhere.com/logic/holidays?country=IE&year=2026&name=Christmas%20Day**"

[2]**screenshots:**

```
C:\Users\OMEN>curl "https://sanqiqi7.pythonanywhere.com/logic/holidays?country=IE&year=2026&name=Christmas%20Day"
{"count":1,"country":"IE","data":[{"countryCode":"IE","date":"2026-12-25","month":"12","name":"Christmas Day"}],"message":"IE holiday data retrieved successfully","source":"cache","year":"2026"}
```

```
C:\Users\OMEN>curl "https://hua123456.pythonanywhere.com/db/get-ireland?year=2026"
{"count":11,"data":[{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-01-01","month":"01","name":"New Year's Day"},{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-02-02","month":"02","name":"Saint Brigid's Day"},{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-03-17","month":"03","name":"Saint Patrick's Day"},{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-04-03","month":"04","name":"Good Friday"},{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-04-06","month":"04","name":"Easter Monday"},{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-05-04","month":"05","name":"May Day"},{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-06-01","month":"06","name":"June Holiday"},{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-08-03","month":"08","name":"August Holiday"},{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-10-26","month":"10","name":"October Holiday"},{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-12-25","month":"12","name":"Christmas Day"},{"cache_time":"2025-11-23 07:19:25","countryCode":"IE","date":"2026-12-26","month":"12","name":"St. Stephen's Day"}],"message":"IE holiday data get successfully"}
```