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1. H2 欄位、初始值

English

Preferences Tools Help

Login

Saved Settings: Generic H2 (Embedded)

Setting Name: Generic H2 (Embedded) Save Remove

Driver Class: org.h2.Driver

JDBC URL: jdbc:h2:mem:testdb

User Name: sa

Password:

Connect Test Connection

SELECT \* FROM CURRENCY;

CURRENCYID	CURRENCYNAME	CURRENCYENAME	SYMBOL	RATE	RATEFLOAT	CREATETIME	UPDATETIME
TWD	新台幣	TAIWAN DOLLAR	NT\$	32.250000	32.250000	2025-05-30 13:16:45.176	2025-05-30 13:16:45.176
USD	美元	UNITED STATES DOLLAR	\$	1.000000	1.000000	2025-05-30 13:16:45.176	2025-05-30 13:16:45.176
EUR	歐元	EURO	€	1.080000	1.080000	2025-05-30 13:16:45.176	2025-05-30 13:16:45.176
JPY	日圓	JAPANESE YEN	¥	156.430000	156.430000	2025-05-30 13:16:45.176	2025-05-30 13:16:45.176
CNY	人民幣	CHINESE YUAN	¥	7.240000	7.240000	2025-05-30 13:16:45.176	2025-05-30 13:16:45.176

(5 rows, 11 ms)

## 2. 畫面初始頁

2.1. HTTP.doGET 呼叫 API：http://localhost:8080/currencyInfo/init

2.2. 下行：

2.2.1. 提供「幣別選項」：預設選項為「全部」

2.2.2. 提供「資料刷新模式選項」：預設選項為「更新」

Request URL

http://localhost:8080/currencyInfo/init

Server response

Code

Details

200

Response body

```
{
  "accessTime": "2025-05-30T05:19:50.805+00:00",
  "rtnCode": "0000",
  "rtnMsg": "執行成功",
  "resBody": {
    "currencyList": [
      {
        "name": "全部",
        "value": "ALL"
      },
      {
        "name": "美元",
        "value": "USD"
      },
      {
        "name": "歐元",
        "value": "EUR"
      },
      {
        "name": "英鎊",
        "value": "GBP"
      },
      {
        "name": "日圓",
        "value": "JPY"
      },
      {
        "name": "人民幣",
        "value": "CNY"
      },
      {
        "name": "新台幣",
        "value": "TWD"
      },
      {
        "name": "港幣",
        "value": "HKD"
      },
      {
        "name": "韓圓",

```

```
    "value": "KRW"
  },
  {
    "name": "澳幣",
    "value": "AUD"
  },
  {
    "name": "加幣",
    "value": "CAD"
  },
  {
    "name": "瑞士法郎",
    "value": "CHF"
  },
  {
    "name": "新加坡幣",
    "value": "SGD"
  },
  {
    "name": "泰銖",
    "value": "THB"
  },
  {
    "name": "紐西蘭幣",
    "value": "NZD"
  },
  {
    "name": "南非幣",
    "value": "ZAR"
  },
  {
    "name": "瑞典克朗",
    "value": "SEK"
  },
  {
    "name": "挪威克朗",
    "value": "NOK"
  },
  {
    "name": "丹麥克朗",
    "value": "DKK"
  },
  {
    "name": "俄羅斯盧布",
    "value": "RUB"
  },
  {
    "name": "菲律賓披索",
    "value": "PHP"
  },
  {
    "name": "越南盾",
    "value": "VND"
  },
  {
    "name": "印度盧比",
    "value": "INR"
  },
  {
    "name": "印尼盾",
```

```
    "value": "IDR",
  },
  {
    "name": "馬來幣",
    "value": "MYR"
  },
  {
    "name": "墨西哥披索",
    "value": "MXN"
  },
  {
    "name": "巴西雷亞爾",
    "value": "BRL"
  },
  {
    "name": "土耳其里拉",
    "value": "TRY"
  }
],
"renewActions": [
  {
    "name": "更新",
    "value": "1"
  },
  {
    "name": "全部移除並刷新",
    "value": "2"
  }
]
}
}
```



Download

#### Response headers

```
connection: keep-alive
content-type: application/json
date: Fri,30 May 2025 05:19:50 GMT
keep-alive: timeout=60
transfer-encoding: chunked
```

### 3. 刷新幣別資料

3.1. HTTP.doGET 呼叫 API：http://localhost:8080/currencyInfo/renewData?renewActions=?

3.2. 從 CoinDesk API 取回資料，並寫入 DB

3.2.1. CoinDesk 資料

```
{
  "time": {
    "updated": "Sep 2, 2024 07:07:20 UTC",
    "updatedISO": "2024-09-02T07:07:20+00:00",
    "updateduk": "Sep 2, 2024 at 08:07 BST"
  },
  "disclaimer": "just for test",
  "chartName": "Bitcoin",
  "bpi": {
    "USD": {
      "code": "USD",
      "symbol": "&#36;",
      "rate": "57,756.298",
      "description": "United States Dollar",
      "rate_float": 57756.2984
    },
    "GBP": {
      "code": "GBP",
      "symbol": "&pound;",
      "rate": "43,984.02",
      "description": "British Pound Sterling",
      "rate_float": 43984.0203
    },
    "EUR": {
      "code": "EUR",
      "symbol": "&euro;",
      "rate": "52,243.287",
      "description": "Euro",
      "rate_float": 52243.2865
    }
  }
}
```

3.2.2. 寫入 DB：

3.2.2.1. bpi.XXX.code 寫入 CURRENCY.CURRENCYID KEY 值

3.2.2.2. bpi.XXX.symbol 寫入 CURRENCY.SYMBOL，轉換為符號，如無法轉換則維持原資料

3.2.2.3. bpi.XXX.rate 寫入 CURRENCY.RATE，轉換為 DECIMAL

3.2.2.4. bpi.XXX.description 寫入 CURRENCY.CURRENCYNAME

3.2.2.5. bpi.XXX.rate\_float 寫入 CURRENCY.RATEFLOAT，轉換為 DECIMAL

- 3.2.2.6. 依據 bpi.XXX.code 轉換為對應中文名稱，寫入 CURRECY.CURRECNYNAME，如無對應則寫入空白
- 3.2.2.7. 依據 time.updatedISO 作為「 CURRENCY.CREATETIME」，時區轉換為「系統時區(+08:00)」
- 3.2.2.8. 依據當下執行系統時間作為「 CURRENCY.UPDATETIME」

SELECT \* FROM CURRENCY;

CURRENCYID	CURRENCYNAME	CURRENCYENAME	SYMBOL	RATE	RATEFLOAT	CREATETIME	UPDATETIME
USD	美元	United States Dollar	\$	57756.298000	57756.298400	2024-09-02 15:07:20	2025-05-30 13:47:21.153
GBP	英鎊	British Pound Sterling	£	43984.020000	43984.020300	2024-09-02 15:07:20	2025-05-30 13:47:21.171
EUR	歐元	Euro	€	52243.287000	52243.286500	2024-09-02 15:07:20	2025-05-30 13:47:21.171

(3 rows, 4 ms)



3.3. 根據 Request Param 參數 renewAction，決定資料庫更新方式

3.3.1. 當 renewAction 為 1 時，CoinDesk 取回的資料只會替代有存在相同幣別的資料，不影響其他幣別

(呼叫 /renewData 前)

SELECT \* FROM CURRENCY;

CURRENCYID	CURRENCYNAME	CURRENCYENNAME	SYMBOL	RATE	RATEFLOAT	CREATETIME	UPDATETIME
TWD	新台幣	TAIWAN DOLLAR	NT\$	32.250000	32.250000	2025-05-30 19:12:42.889	2025-05-30 19:12:42.889
USD	美元	UNITED STATES DOLLAR	\$	1.000000	1.000000	2025-05-30 19:12:42.889	2025-05-30 19:12:42.889
EUR	歐元	EURO	€	1.080000	1.080000	2025-05-30 19:12:42.889	2025-05-30 19:12:42.889
JPY	日圓	JAPANESE YEN	¥	156.430000	156.430000	2025-05-30 19:12:42.889	2025-05-30 19:12:42.889
CNY	人民幣	CHINESE YUAN	¥	7.240000	7.240000	2025-05-30 19:12:42.889	2025-05-30 19:12:42.889

(5 rows, 14 ms)

(呼叫 /renewData 後)

Curl

curl -X 'GET' \
'http://localhost:8080/currencyInfo/renewData?renewAction=1' \
-H 'accept: \*/\*'

SELECT \* FROM CURRENCY;

CURRENCYID	CURRENCYNAME	CURRENCYENNAME	SYMBOL	RATE	RATEFLOAT	CREATETIME	UPDATETIME
TWD	新台幣	TAIWAN DOLLAR	NT\$	32.250000	32.250000	2025-05-30 19:12:42.889	2025-05-30 19:12:42.889
USD	美元	United States Dollar	\$	57756.298000	57756.298400	2024-09-02 15:07:20	2025-05-30 19:18:30.968
EUR	歐元	Euro	€	52243.287000	52243.286500	2024-09-02 15:07:20	2025-05-30 19:18:30.974
JPY	日圓	JAPANESE YEN	¥	156.430000	156.430000	2025-05-30 19:12:42.889	2025-05-30 19:12:42.889
CNY	人民幣	CHINESE YUAN	¥	7.240000	7.240000	2025-05-30 19:12:42.889	2025-05-30 19:12:42.889
GBP	英鎊	British Pound Sterling	£	43984.020000	43984.020300	2024-09-02 15:07:20	2025-05-30 19:18:30.974

(6 rows, 12 ms)

3.3.2. 當 renewAction 為 2 時，先清空資料庫所有資料，再寫入 CoinDesk 取回的資料

(呼叫 /renewData 前)

SELECT \* FROM CURRENCY;

CURRENCYID	CURRENCYNAME	CURRENCYENNAME	SYMBOL	RATE	RATEFLOAT	CREATETIME	UPDATETIME
TWD	新台幣	TAIWAN DOLLAR	NT\$	32.250000	32.250000	2025-05-30 19:12:42.889	2025-05-30 19:12:42.889
USD	美元	United States Dollar	\$	57756.298000	57756.298400	2024-09-02 15:07:20	2025-05-30 19:18:30.968
EUR	歐元	Euro	€	52243.287000	52243.286500	2024-09-02 15:07:20	2025-05-30 19:18:30.974
JPY	日圓	JAPANESE YEN	¥	156.430000	156.430000	2025-05-30 19:12:42.889	2025-05-30 19:12:42.889
CNY	人民幣	CHINESE YUAN	¥	7.240000	7.240000	2025-05-30 19:12:42.889	2025-05-30 19:12:42.889
GBP	英鎊	British Pound Sterling	£	43984.020000	43984.020300	2024-09-02 15:07:20	2025-05-30 19:18:30.974

(6 rows, 12 ms)

(呼叫 /renewData 後)

Curl

curl -X 'GET' \
'http://localhost:8080/currencyInfo/renewData?renewAction=2' \
-H 'accept: \*/\*'

SELECT \* FROM CURRENCY;

CURRENCYID	CURRENCYNAME	CURRENCYENAME	SYMBOL	RATE	RATEFLOAT	CREATETIME	UPDATETIME
USD	美元	United States Dollar	\$	57756.298000	57756.298400	2024-09-02 15:07:20	2025-05-30 19:21:29.255
GBP	英鎊	British Pound Sterling	£	43984.020000	43984.020300	2024-09-02 15:07:20	2025-05-30 19:21:29.256
EUR	歐元	Euro	€	52243.287000	52243.286500	2024-09-02 15:07:20	2025-05-30 19:21:29.256

(3 rows, 15 ms)

### 3.4. 下行：

3.4.1. queryTime：當下系統時間，格式：yyyy/MM/dd HH:mm:ss

3.4.2. details：幣別列表，帶出資料庫所有幣別明細

3.4.2.1. currencyId：幣別，不可為空

3.4.2.2. currencyName：幣別中文名稱

3.4.2.3. symbol：幣別符號

3.4.2.4. rate：匯率

3.4.2.5. rateFloat：完整匯率

3.4.2.6. updateTime：資料更新時間，格式：yyyy/MM/dd HH:mm:ss

3.4.2.7. createTime：資料建立時間，有可能是透過「新增」時紀錄的時間或 CoinDesk 帶回的 time.updatedISO 轉換為系統時區的時間，格式：yyyy/MM/dd HH:mm:ss

Request URL


http://localhost:8080/currencyInfo/renewData?renewAction=2

Server response

CodeDetails

200Response body

```
{
  "accessTime": "2025-05-30T11:21:29.286+00:00",
  "rtnCode": "0000",
  "rtnMsg": "執行成功",
  "resBody": {
    "queryTime": "2025/05/30 19:21:29",
    "details": [
      {
        "currencyId": "USD",
        "currencyName": "美元",
        "currencyEName": "United States Dollar",
        "symbol": "$",
        "rate": "57756.298",
        "rateFloat": "57756.2984",
        "updateTime": "2025/05/30 19:21:29",
        "createTime": "2024/09/02 15:07:20"
      },
      {
        "currencyId": "GBP",
        "currencyName": "英鎊",
        "currencyEName": "British Pound Sterling",
        "symbol": "£",
        "rate": "43984.02",
        "rateFloat": "43984.0203",
        "updateTime": "2025/05/30 19:21:29",
        "createTime": "2024/09/02 15:07:20"
      },
      {
        "currencyId": "EUR",
        "currencyName": "歐元",
        "currencyEName": "Euro",
        "symbol": "€",
        "rate": "52243.287",
        "rateFloat": "52243.2865",
        "updateTime": "2025/05/30 19:21:29",
        "createTime": "2024/09/02 15:07:20"
      }
    ]
  }
}
```

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## 4. 查詢結果頁

4.1. HTTP.doGET 呼叫 API：http://localhost:8080/currencyInfo/query?currencyId=?

4.2. 下行：

4.2.1. queryTime：當下系統時間，格式：yyyy/MM/dd HH:mm:ss

4.2.2. details：幣別列表，帶出資料庫所有幣別明細

4.2.2.1. currencyId：幣別，不可為空

4.2.2.2. currencyName：幣別中文名稱

4.2.2.3. symbol：幣別符號

4.2.2.4. rate：匯率

4.2.2.5. rateFloat：完整匯率

4.2.2.6. updateTime：資料更新時間，格式：yyyy/MM/dd HH:mm:ss

4.2.2.7. createTime：資料建立時間，有可能是透過「新增」時紀錄的時間或 CoinDesk 帶回的 time.updatedISO 轉換為系統時區的時間，格式：yyyy/MM/dd HH:mm:ss

4.3. 根據 Request Param 參數 currencyId，決定查詢方式

4.3.1. 當 currency 為 ALL 時，查詢所有幣別資料

Request URL

http://localhost:8080/currencyInfo/query?currencyId=ALL

Server response


Code

Details

200

Response body

```
{
  "accessTime": "2025-05-30T11:49:48.790+00:00",
  "rtnCode": "0000",
  "rtnMsg": "執行成功",
  "resBody": {
    "queryTime": "2025/05/30 19:49:48",
    "details": [
      {
        "currencyId": "USD",
        "currencyName": "美元",
        "currencyEName": "United States Dollar",
        "symbol": "$",
        "rate": "57756.298000",
        "rateFloat": "57756.298400",
        "updateTime": "2025/05/30 19:21:29",
        "createTime": "2024/09/02 15:07:20"
      },
      {
        "currencyId": "GBP",
        "currencyName": "英鎊",
        "currencyEName": "British Pound Sterling",
        "symbol": "£",
        "rate": "43984.020000",
        "rateFloat": "43984.020300",
        "updateTime": "2025/05/30 19:21:29",
        "createTime": "2024/09/02 15:07:20"
      },
      {
        "currencyId": "EUR",
        "currencyName": "歐元",
        "currencyEName": "Euro",
        "symbol": "€",
        "rate": "52243.287000",
        "rateFloat": "52243.286500",
        "updateTime": "2025/05/30 19:21:29",
        "createTime": "2024/09/02 15:07:20"
      }
    ]
  }
}
```

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4.3.2. 當 currency 為某幣別時，查詢該幣別資料

Request URL

http://localhost:8080/currencyInfo/query?currencyId=USD

Server response

CodeDetails

200

Response body

```
{
  "accessTime": "2025-05-30T11:46:40.715+00:00",
  "rtnCode": "0000",
  "rtnMsg": "执行成功",
  "resBody": {
    "queryTime": "2025/05/30 19:46:40",
    "details": [
      {
        "currencyId": "USD",
        "currencyName": "美元",
        "currencyEName": "United States Dollar",
        "symbol": "$",
        "rate": "57756.298000",
        "rateFloat": "57756.298400",
        "updateTime": "2025/05/30 19:21:29",
        "createTime": "2024/09/02 15:07:20"
      }
    ]
  }
}
```



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## 5. 單筆檢視頁

5.1. HTTP.doGET 呼叫 API：http://localhost:8080/currencyInfo/query/{currencyId}

5.2. 根據 PathVariable 中的 currencyId，查詢該幣別資料。currencyId 來源為查詢結果頁明細中的 currencyId

5.3. 下行：

5.3.1. detail：幣別明細

5.3.1.1. currencyId：幣別，不可為空

5.3.1.2. currencyName：幣別中文名稱

5.3.1.3. symbol：幣別符號

5.3.1.4. rate：匯率

5.3.1.5. rateFloat：完整匯率

5.3.1.6. updateTime：資料更新時間，格式：yyyy/MM/dd HH:mm:ss

5.3.1.7. createTime：資料建立時間，有可能是透過「新增」時紀錄的時間或 CoinDesk 帶回的 time.updatedISO 轉換為系統時區的時間，格式：yyyy/MM/dd HH:mm:ss

Request URL

http://localhost:8080/currencyInfo/query/USD

Server response


Code

Details

200

Response body

```
{
  "accessTime": "2025-05-30T11:58:25.328+00:00",
  "rtnCode": "0000",
  "rtnMsg": "執行成功",
  "resBody": {
    "detail": {
      "currencyId": "USD",
      "currencyName": "美元",
      "currencyEName": "United States Dollar",
      "symbol": "$",
      "rate": "57756.298000",
      "rateFloat": "57756.298400",
      "updateTime": "2025/05/30 19:21:29",
      "createTime": "2024/09/02 15:07:20"
    }
  }
}
```

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## 6. 單筆新增頁

6.1. HTTP.doPOST 呼叫 API：http://localhost:8080/currencyInfo/create

6.2. 上行：

6.2.1. currecnnyId：幣別，自動轉為全大寫，必填

6.2.2. currencyName：幣別中文名稱

6.2.3. currencyEName：幣別英文名稱

6.2.4. symbol：幣別符號

6.2.5. rate：匯率，必須為數字，不可為空

6.2.6. rateFloat：完整匯率，必須為數字，不可為空

Request body required

```
{
  "currencyId": "TWD",
  "currencyName": "新臺幣",
  "currencyEName": "TAIWAN DOLLOAR",
  "symbol": "$",
  "rate": "32.123",
  "rateFloat": "32.12345"
}
```

6.3. 根據上行，將資料寫入 DB

(寫入前)

SELECT \* FROM CURRENCY;

CURRENCYID	CURRENCYNAME	CURRENCYENAME	SYMBOL	RATE	RATEFLOAT	CREATETIME	UPDATETIME
USD	美元	United States Dollar	\$	57756.298000	57756.298400	2024-09-02 15:07:20	2025-05-30 20:28:19.989
GBP	英鎊	British Pound Sterling	£	43984.020000	43984.020300	2024-09-02 15:07:20	2025-05-30 20:28:19.999
EUR	歐元	Euro	€	52243.287000	52243.286500	2024-09-02 15:07:20	2025-05-30 20:28:19.999

(3 rows, 21 ms)

(寫入後)

SELECT \* FROM CURRENCY;

CURRENCYID	CURRENCYNAME	CURRENCYENAME	SYMBOL	RATE	RATEFLOAT	CREATETIME	UPDATETIME
USD	美元	United States Dollar	\$	57756.298000	57756.298400	2024-09-02 15:07:20	2025-05-30 20:28:19.989
GBP	英鎊	British Pound Sterling	£	43984.020000	43984.020300	2024-09-02 15:07:20	2025-05-30 20:28:19.999
EUR	歐元	Euro	€	52243.287000	52243.286500	2024-09-02 15:07:20	2025-05-30 20:28:19.999
TWD	新臺幣	TAIWAN DOLLOAR	\$	32.123000	32.123450	2025-05-30 20:30:20.679	2025-05-30 20:30:20.679

(4 rows, 13 ms)

## 6.4. 下行：

### 6.4.1. detail：幣別明細

6.4.1.1. currencyId：幣別，不可為空

6.4.1.2. currencyName：幣別中文名稱

6.4.1.3. symbol：幣別符號

6.4.1.4. rate：匯率

6.4.1.5. rateFloat：完整匯率

6.4.1.6. updateTime：執行 create 當下系統時間，格式：yyyy/MM/dd HH:mm:ss

6.4.1.7. createTime：執行 create 當下系統時間，格式：yyyy/MM/dd HH:mm:ss

Request URL

http://localhost:8080/currencyInfo/create

Server response

Code Details

200

Response body

```
{
  "accessTime": "2025-05-30T12:30:20.693+00:00",
  "rtnCode": "0000",
  "rtnMsg": "執行成功",
  "resBody": {
    "detail": {
      "currencyId": "TWD",
      "currencyName": "新臺幣",
      "currencyName": "TAIWAN DOLLAR",
      "symbol": "$",
      "rate": "32.123",
      "rateFloat": "32.12345",
      "updateTime": "2025/05/30 20:30:20",
      "createTime": "2025/05/30 20:30:20"
    }
  }
}
```



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## 6.5. 錯誤案例：

### 6.5.1. 上行的 currencyId 為空時，顯示錯誤提示並停止流程

Request URL

```
http://localhost:8080/currencyInfo/create
```

Server response


Code	Details
200	<p>Response body</p> <pre>{   "accessTime": "2025-05-30T12:40:38.213+00:00",   "rtnCode": "9100",   "rtnMsg": "必填欄位不可為空" }</pre> <div> Download</div>

### 6.5.2. 上行的 currencyId 在 DB 已存在相同幣別資料，顯示錯誤提示並停止流程

Request URL

```
http://localhost:8080/currencyInfo/create
```

Server response

Code	Details
200	<p>Response body</p> <pre>{   "accessTime": "2025-05-30T12:38:58.437+00:00",   "rtnCode": "9002",   "rtnMsg": "資料已存在" }</pre> <div> Download</div>

### 6.5.3. 上行的 rate 或 rateFloat 數字格式錯誤或為空時，顯示錯誤訊息並停止流程

Request URL

```
http://localhost:8080/currencyInfo/create
```

Server response

Code	Details
200	<p>Response body</p> <pre>{   "accessTime": "2025-05-30T12:41:35.901+00:00",   "rtnCode": "9101",   "rtnMsg": "金額格式錯誤" }</pre> <div> Download</div>

## 7. 單筆修改頁

7.1. HTTP.doPUT 呼叫 API：http://localhost:8080/currencyInfo/query/{currencyId}/update

7.2. 根據 PathVariable 中的 currencyId，查詢該幣別資料。currencyId 來源為查詢結果頁明細中的 currencyId

7.3. 上行：

7.3.1. currencyName：幣別中文名稱

7.3.2. currencyENAME：幣別英文名稱

7.3.3. symbol：幣別符號

7.3.4. rate：匯率，必須為數字，不可為空

7.3.5. rateFloat：完整匯率，必須為數字，不可為空

Request body **required**

```
{
  "currencyName": "新臺幣",
  "currencyENAME": "NEW TAIWAN DOLLOAR",
  "symbol": "NT$",
  "rate": "32.321",
  "rateFloat": "32.54321"
}
```

7.4. 根據上行，將資料更新至 DB 中對應 currencyId 的幣別資料中

(寫入前)

SELECT \* FROM CURRENCY WHERE CURRENCYID='TWD';

CURRENCYID	CURRENCYNAME	CURRENCYENAME	SYMBOL	RATE	RATEFLOAT	CREATETIME	UPDATETIME
TWD	新臺幣	TAIWAN DOLLOAR	\$	32.123000	32.123450	2025-05-30 20:52:41.349	2025-05-30 20:52:41.349

(1 row, 9 ms)

(寫入後)

SELECT \* FROM CURRENCY WHERE CURRENCYID='TWD';

CURRENCYID	CURRENCYNAME	CURRENCYENAME	SYMBOL	RATE	RATEFLOAT	CREATETIME	UPDATETIME
TWD	新臺幣	NEW TAIWAN DOLLOAR	NT\$	32.321000	32.543210	2025-05-30 20:52:41.349	2025-05-30 20:53:42.832

(1 row, 12 ms)

## 7.5. 下行：

### 7.5.1. detail：幣別明細

7.5.1.1. currencyId：幣別，不可為空

7.5.1.2. currencyName：幣別中文名稱

7.5.1.3. symbol：幣別符號

7.5.1.4. rate：匯率

7.5.1.5. rateFloat：完整匯率

7.5.1.6. updateTime：執行 update 當下系統時間，格式：yyyy/MM/dd HH:mm:ss

7.5.1.7. createTime：維持原本新增時的時間不變，格式：yyyy/MM/dd HH:mm:ss

Request URL

http://localhost:8080/currencyInfo/query/TWD/update

Server response

Code Details

200

Response body

```
{
  "accessTime": "2025-05-30T12:53:42.845+00:00",
  "rtnCode": "0000",
  "rtnMsg": "執行成功",
  "resBody": {
    "detail": {
      "currencyId": "TWD",
      "currencyName": "新臺幣",
      "currencyEName": "NEW TAIWAN DOLLAR",
      "symbol": "NT$",
      "rate": "32.321",
      "rateFloat": "32.54321",
      "updateTime": "2025/05/30 20:53:42",
      "createTime": "2025/05/30 20:52:41"
    }
  }
}
```



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## 7.6. 錯誤案例：

### 7.6.1. 上行的 rate 或 rateFloat 數字格式錯誤或為空時，顯示錯誤訊息並停止流程

Request URL

http://localhost:8080/currencyInfo/query/TWD/update

Server response

Code	Details
200	<div>Response body</div> <div><pre>{   "accessTime": "2025-05-30T12:57:34.767+00:00",   "rtnCode": "9101",   "rtnMsg": "金額格式錯誤" }</pre></div> <div> Download</div>

### 7.6.2. 編輯期間，資料已不存在時執行 update，顯示錯誤訊息並停止流程

Request URL

http://localhost:8080/currencyInfo/query/SSS/update

Server response

Code	Details
200	<div>Response body</div> <div><pre>{   "accessTime": "2025-05-30T12:59:18.473+00:00",   "rtnCode": "9001",   "rtnMsg": "資料不存在" }</pre></div> <div> Download</div>

## 8. 單筆刪除

8.1. HTTP.doDELETE 呼叫 API : `http://localhost:8080/currencyInfo/query/{currencyId}/delete`

8.2. 根據 PathVariable 中的 `currencyId` 將 DB 中對應幣別資料刪除。currencyId 來源為查詢結果頁明細中的 `currencyId`

(移除前)

SELECT \* FROM CURRENCY;

CURRENCYID	CURRENCYNAME	CURRENCYENAME	SYMBOL	RATE	RATEFLOAT	CREATETIME	UPDATETIME
USD	美元	United States Dollar	\$	57756.298000	57756.298400	2024-09-02 15:07:20	2025-05-30 20:38:47.963
GBP	英鎊	British Pound Sterling	£	43984.020000	43984.020300	2024-09-02 15:07:20	2025-05-30 20:38:47.963
EUR	歐元	Euro	€	52243.287000	52243.286500	2024-09-02 15:07:20	2025-05-30 20:38:47.963
TWD	新臺幣	NEW TAIWAN DOLLOAR	NT\$	32.321000	32.543210	2025-05-30 20:52:41.349	2025-05-30 20:53:42.832

(4 rows, 9 ms)

(移除後)

Curl

```
curl -X 'DELETE' \
'http://localhost:8080/currencyInfo/query/TWD/delete' \
-H 'accept: */*'
```

SELECT \* FROM CURRENCY;

CURRENCYID	CURRENCYNAME	CURRENCYENAME	SYMBOL	RATE	RATEFLOAT	CREATETIME	UPDATETIME
USD	美元	United States Dollar	\$	57756.298000	57756.298400	2024-09-02 15:07:20	2025-05-30 20:38:47.963
GBP	英鎊	British Pound Sterling	£	43984.020000	43984.020300	2024-09-02 15:07:20	2025-05-30 20:38:47.963
EUR	歐元	Euro	€	52243.287000	52243.286500	2024-09-02 15:07:20	2025-05-30 20:38:47.963

(3 rows, 6 ms)

### 8.3. 下行：

8.3.1. queryTime：當下系統時間，格式：yyyy/MM/dd HH:mm:ss

8.3.2. details：幣別列表，帶出資料庫所有幣別明細

8.3.2.1. currencyId：幣別，不可為空

8.3.2.2. currencyName：幣別中文名稱

8.3.2.3. symbol：幣別符號

8.3.2.4. rate：匯率

8.3.2.5. rateFloat：完整匯率

8.3.2.6. updateTime：資料更新時間，格式：yyyy/MM/dd HH:mm:ss

8.3.2.7. createTime：資料建立時間，有可能是透過「新增」時紀錄的時間或 CoinDesk 帶回的 time.updatedISO 轉換為系統時區的時間，格式：yyyy/MM/dd HH:mm:ss

Request URL

http://localhost:8080/currencyInfo/query/TWD/delete

Server response


Code

Details

200

Response body

```
{
  "accessTime": "2025-05-30T13:06:21.956+00:00",
  "rtnCode": "0000",
  "rtnMsg": "執行成功",
  "resBody": {
    "queryTime": "2025/05/30 21:06:21",
    "details": [
      {
        "currencyId": "USD",
        "currencyName": "美元",
        "currencyEName": "United States Dollar",
        "symbol": "$",
        "rate": "57756.298000",
        "rateFloat": "57756.298400",
        "updateTime": "2025/05/30 20:38:47",
        "createTime": "2024/09/02 15:07:20"
      },
      {
        "currencyId": "GBP",
        "currencyName": "英鎊",
        "currencyEName": "British Pound Sterling",
        "symbol": "£",
        "rate": "43984.020000",
        "rateFloat": "43984.020300",
        "updateTime": "2025/05/30 20:38:47",
        "createTime": "2024/09/02 15:07:20"
      },
      {
        "currencyId": "EUR",
        "currencyName": "歐元",
        "currencyEName": "Euro",
        "symbol": "€",
        "rate": "52243.287000",
        "rateFloat": "52243.286500",
        "updateTime": "2025/05/30 20:38:47",
        "createTime": "2024/09/02 15:07:20"
      }
    ]
  }
}
```

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## 8.4. 錯誤案例：

### 8.4.1. 移除前，資料已不存在時執行 delete，顯示錯誤訊息並停止流程

Request URL	
<code>http://localhost:8080/currencyInfo/query/TWD/delete</code>	
Server response	
Code	Details
200	<div><div>Response body</div><div><pre>{   "accessTime": "2025-05-30T13:13:01.390+00:00",   "rtnCode": "9001",   "rtnMsg": "資料不存在" }</pre></div><div> <a href="#">Download</a></div></div>