“**Problem Solving**: **“Market Hour Differences”** and **“Holiday”**

**Product: KTB3 (Derivatives) / Market: KRX / Regular market hour: 09:00 ~ 15:45**

**What if:**   
(A): What if the “market’s opening hour” and “market’s closing hour” are different to the “regular market’s opening and closing hour”?

(B): What about Public, Temporary, Substitute Holidays? How can I figure this out from Financial Market Data?

**Problem Analysis:**

(A) There are three cases that the trading hours are different to the regular hours in KRX as below,

1) Expiry Date

- Contract Months: March, June, September, and December

- Trading hours: 09:00 ~ 11:30

- Expiry Date: Third Tuesday of the contract month

2) Korean SAT (Scholastic Ability Test)

- When? – The exact date will be different in each year.

- Trading hours: 10:00 ~ 16:45

3) The day after New Year’s Day in weekday

- When? – The exact date will be different in each year.

- Trading hours: 10:00 ~ 15:45

4) Public, Temporary, Substitute Holidays

* When? – The Public Holidays are prefixed, but the Temporary and Substitute Holidays are fixed whenever it is announced by government.
* Trading hours: closed

(B) However, the KRX’s market data (tick data) doesn’t tell us the above factors. The KRX announces the information via email every year. Once the email is received, I might need to change the trading hour’s parameter manually, which is not a good option.

**Problem Solution:**

(A) Expiry date:

- **Match** 1) [A0016] code of 446-454 bytes & 2) [A0016] code of 10~18 bytes

* If the above condition is a “True”, then the trading hour needs to be changed from “09:00:00-000000~15:45:00-000000” to “09:00:00~11:30:00-000000”

(B) Korean SAT / the day after New Year’s Day in weekday / Public, Temporary, Substitute Holidays:

- Use the **“Naver Calendar API”** to figure out the three conditions.

- Why am I using the “Naver Calendar API”?

* 1) Naver is a trustful and very supportive company in South Korea. They react promptly compare to the other APIs. They are even faster than APIs that provided by government.
* 2) They provide the information of “Public, Temporary, Substitute Holidays” whenever it is announced, and the “Korean SAT date” and “the day after New Years’ Day in weekday” are included in the calendar API.

**Conclusion:**

By matching the codes and using the “Naver Calendar API”, it is eligible to fix the problem.