Implementation of Calendar Chart in CICS Mainframes for Business Analysis

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Abstract

This paper provides a business solution to implement Calendar Chart in Mainframes for analysing the progress of a Bank by giving detailed report of number of new accounts created for the bank. A calendar chart is a visualization used to show activity over the course of a long span of time, such as months or years. They're best used when you want to illustrate how some quantity varies depending on the day of the week. This chart gives us the numerals so as to easily analyse the trends over time.

*Keywords***:** Business Analysis, Mainframes, Calendar Chart, Analyze Trends.

1. Introduction

Mainframes are large high speed computers, which are majorly used to handle bulk data. In order to analyze the working of a bank one needs go through a huge amount of data in the form of records and reports. But using the proposed Calendar Chart to analyze the same data can save a lot of man-power and time.

The various advantages of using Calendar Chart are as follows:

(1) It is easy to understand.

(2) It is best to show trends over time.

(3) It enables the viewer to analyse the data and thereby make predictions and further planning.

In the Application, I have made a Calendar Chart (as shown in Fig. 1) that shows the number of accounts created on any particular day. The Date for which the traffic is to be checked should be typed in the Date Field of the Map. The Day can be chosen by placing the Cursor on the box having the appropriate day. The data is fetched from the Database, and then, according to this data, the number of accounts created in each of the branches of the bank is displayed in the appropriate fields of the Map.

2. Flow to Process (Code)

2.1. *Input Fields, i.e., the fields that have to be entered by the user are*

"Enter Date" Field where Month and Year are Inputted as shown in Fig. 2.

The Day can be dynamically chosen by placing the Cursor on the appropriate box having the required day as shown in Fig. 2. (Here, we use Concept of Dynamic Cursor Positioning in CICS [1]).

2.2. *Output Fields*

On Pressing "Enter" key on the Keyboard, the number of new accounts created on that particular day along with the number of new accounts created in each of the cities of India i.e., Bangalore (BLR), Delhi (DLH), Kolkatta (KOL), Mumbai (MUM) are displayed in the respective output fields - NEW ACCOUNTS, BLR, DLH, KOL, MUM as shown in Fig. 3.

2.3. *Validating the Input Field*

If the user tries to enter a wrong date which is not present in the calendar then the Date Field and the particular Day are highlighted with Red as shown in Fig. 4.

2.4. *How it works?*

Upon taking the Valid Input from the user, the Application selects the appropriate Data in the Data Base and calculates (counts) the Total number of accounts created; number of accounts created in each of the cities and then displays the same on the respective Output Fields as shown in Fig. 3.

3. Algorithm to Create a Calendar Chart

Step 1:

> Create a Map as shown in Fig. 1.

Step 2:

> Calculate the Cursor Position for each and every "Box" contained in the Map using the formula

$$n = (r - l) * 80 + c$$

> where,

n - Absolute Position of cursor

r - Row Number on screen

c - Column Number on screen

(Screen Resolution: 24 X 80) [1].

Step 3:

Now, Input a valid Date (YYYY-MM-DD) by

(1) Typing "Month" and "Year" in the "Enter Date" Input Field in YYYY-MM format as shown in Fig. 2.

(2) Then Select the Day (DD) by putting the Cursor on the appropriate Box as shown in Fig. 2 and then press "Enter" Key.

(3) Now, concatenate Year, Month and Day to form the Date using the following COBOL code :

STRING WS-DATEINPUT DELIMITED BY SPACES, WS-DATE2 DELIMITED BY SPACES

INTO WS-DATESRCH

For instance, let us consider the Fig. 2, here the Date Inputted is "2014-09" and the Day is "22" as the cursor is in the Box containing 22. Now, both the strings get concatenated in the format of "2014-09-22".

Step 4:

(1) Now, from the Database, calculate the total number of accounts created for that inputted Date by using the following DB2 CODE:

SELECT   COUNT(CITY_ACRONYM)

INTO :H8-COUNTVAR

FROM TRT.TRT281SAVINGS_ACCOUNT

WHERE OPENING_DATE = :WS-DATESRCH

(2) Similarly, the total number of accounts created in each of the cities can be calculated by adding another condition in where clause. For instance, to calculate the total number of accounts created on a particular day in Bangalore City, the DB2 Code is :

SELECT COUNT(CITY_ACRONYM)

INTO :H8-COUNTVAR

FROM TRT.TRT281SAVINGS_ACCOUNT

WHERE CITY_ACRONYM = 'BLR' AND

OPENING_DATE = :WS-DATESRCH

Step 5:

Display the calculated number of accounts created on that particular inputted Date in their respective OUTPUT fields – NEW ACCOUNTS, BLR, DLH, KOL, MUM as shown in Fig. 3.

4. Figures

Fig. 1. Screenshot depicting the Calendar Chart on Launch.
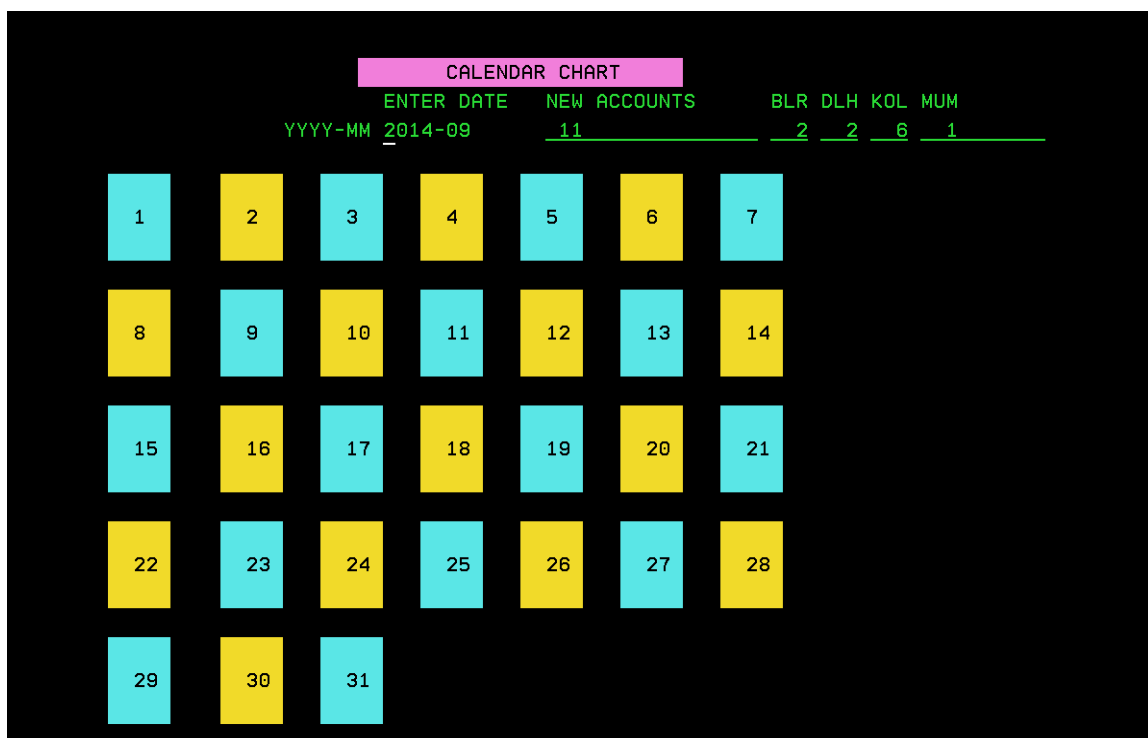
Fig. 2. Screenshot describing how to Input Date.

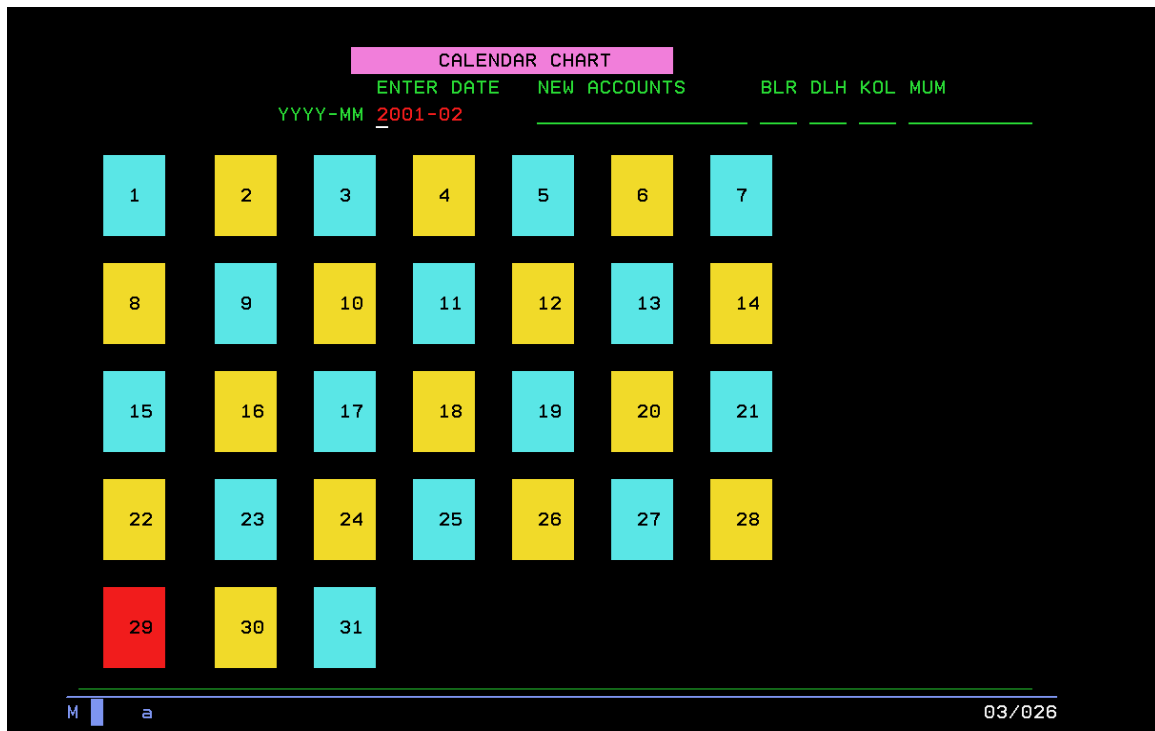Fig.3. Screenshot of the Output with number of new accounts created being displayed.

Fig.4. Screenshot depicting how the user is warned of the invalid input.

5. Conclusion

Although the same information can be inferred from studying many pages of company's batch reports, but the ease with which a single Calendar Chart can provide the same information is undeniable.

In the application, I have implemented a Calendar Chart that helps us to understand the speed with which a Bank is growing as detailed numerals of the new accounts created are obtained. After a careful study of the Chart, the Bank can take effective measures to improve its business.

References

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