

Processing Control Levels: Brief Explanation on the Functioning of Control Level Statements in ABAP.



Applies to:

ABAP. For more information, visit the [ABAP homepage](#).

Summary

This document provides details as to how the Control Level Statements work, (AT FIRST, AT NEW <fieldname>, AT END OF <fieldname>, AT LAST also called as Control Break Statements). These statements are required when data from an internal table is required to be displayed in a particular format. After sorting the internal table data, these statements can be used within a loop. The system processes the logic in between the Control Break statements (AT..ENDAT) only at a control break i.e. when the control level changes.

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Requirement

Sometimes, in a program, certain set of statements need to be processed conditionally.

For instance,

- >at the start of the internal table (at first)
- >at the end of the internal table (at end, at last).
- >when a field value of internal table changes.

In order to format & display the Internal Table data according to the above requirement we use

Control Level Statements that help in reducing the lines of code. Also the Internal Table is to be 'Sorted' before using the Control Level Statements.

Following are the Control Level Statements.

1. AT FIRST.....ENDAT
2. AT LAST.....ENDAT
3. AT NEW <COL>.....ENDAT
4. AT END OF <COL>.....ENDAT

At First:

To display the required data at the beginning of the internal table.

```

SORT t_sflight.

LOOP AT t_sflight INTO sflight.
  AT FIRST.
    WRITE: 'Control break statement AT FIRST'.
  ENDAT.
  WRITE:/ sflight-carrid,
          sflight-connid,
          sflight-fldate,
          sflight-seatsmax,
          sflight-seatsocc.
ENDLOOP.

```

The output is displayed as follows.

control break statements

control break statements				
control break statements				
Control break statement AT FIRST				
AA	0017	01.11.2006	385	349
AA	0017	29.11.2006	385	350
AA	0017	27.12.2006	385	356
AA	0017	24.01.2007	385	349
AA	0017	21.02.2007	385	348
AA	0017	21.03.2007	385	353
AA	0017	18.04.2007	385	345
AA	0017	16.05.2007	385	355
AA	0017	13.06.2007	385	354
AA	0017	11.07.2007	385	88
AA	0017	08.08.2007	385	42

At Last:

To display the required data as LAST line of the internal table.

```
SORT t_sflight.

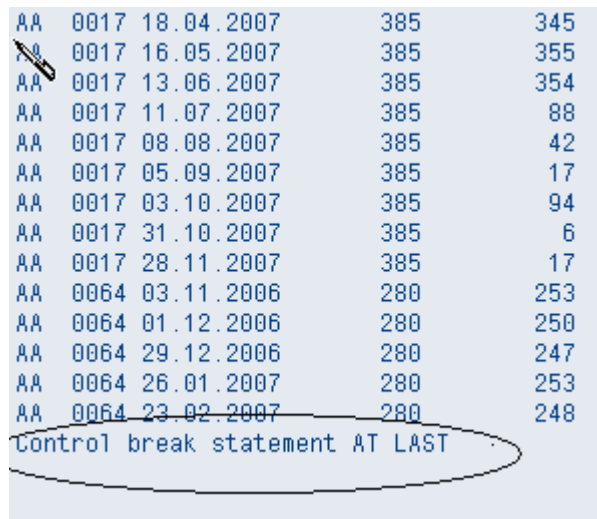
LOOP AT t_sflight INTO sflight.

WRITE:/ sflight-carrid,
        sflight-connid,
        sflight-fldate,
        sflight-seatsmax,
        sflight-seatsocc.

      AT LAST.
        WRITE:/ 'Control break statement AT LAST'.
      ENDAT.

ENDLOOP.
```

The output is displayed as follows:



The screenshot shows the output of the ABAP program. It consists of a table of flight data followed by a control break statement. The table has five columns: a two-character carrier code, a four-digit flight number, a date in YYYY.MM.DD format, a three-digit seat maximum, and a three-digit seat occupancy. The data is sorted by carrier code and flight number. The last row of the table is circled in red. Below the table, the text 'Control break statement AT LAST' is displayed, also circled in red.

AA	0017	18.04.2007	385	345
AA	0017	16.05.2007	385	355
AA	0017	13.06.2007	385	354
AA	0017	11.07.2007	385	88
AA	0017	08.08.2007	385	42
AA	0017	05.09.2007	385	17
AA	0017	03.10.2007	385	94
AA	0017	31.10.2007	385	6
AA	0017	28.11.2007	385	17
AA	0064	03.11.2006	280	253
AA	0064	01.12.2006	280	250
AA	0064	29.12.2006	280	247
AA	0064	26.01.2007	280	253
AA	0064	23.02.2007	280	248
Control break statement AT LAST				

At New:

If a group of lines of a particular column have same value, it can be displayed at the beginning only once using the control level statement

At New <column name>.

The columns to the left of <column name> are also considered by the 'At New' condition.

Say internal table contents are as follows:

Carrid	connid		
AA	0017	385	349
AA	0017	386	432
AB	0017	345	254
AB	0016	243	423

"At New Connid." Works as follows:

Carrid	connid		
AA	0017		
		385	349
		386	432
AB	0017	345	254
AB	0016	243	423

Example 1:

```

SORT t_sflight.

LOOP AT t_sflight INTO sflight.
  AT NEW connid.
    WRITE:/ 'Control break statement AT NEW',
      / sflight-carrid,
      sflight-connid.
  ENDAT.

  WRITE:/40 sflight-fldate,
    sflight-seatsmax,
    sflight-seatsocc.

ENDLOOP.

```

The output is displayed as follows:

```
Control break statement AT NEW
AA 0017
```

01.11.2006	385	349
29.11.2006	385	350
27.12.2006	385	356
24.01.2007	385	349
21.02.2007	385	348
21.03.2007	385	353
18.04.2007	385	345
16.05.2007	385	355
13.06.2007	385	354
11.07.2007	385	88
08.08.2007	385	42
05.09.2007	385	17
03.10.2007	385	94
31.10.2007	385	6
28.11.2007	385	17

```
Control break statement AT NEW
AA 0064
```

03.11.2006	280	253
01.12.2006	280	250
29.12.2006	280	247
26.01.2007	280	253
23.02.2007	280	248
23.03.2007	280	251
20.04.2007	280	253
18.05.2007	280	246

Example 2:

The columns to the right of the specified column appear as ***** when specified inside the At New ...Endat loop.

```

SORT t_sflight.

LOOP AT t_sflight INTO sflight.
  AT NEW connid.
    WRITE:/ 'Control break statement AT NEW',
           / sflight-carrid,
           sflight-connid,
           sflight-fldate.
  ENDAT.

  WRITE:/40 sflight-fldate,
         sflight-seatsmax,|
         sflight-seatsocc.

ENDLOOP.

```

The output is displayed as follows:

Control break statement AT NEW			
AA 0017	**.**.*.*.*.*.*.*	01.11.2006	385 349
		29.11.2006	385 350
		27.12.2006	385 356
		24.01.2007	385 349
		21.02.2007	385 348
		21.03.2007	385 353
		18.04.2007	385 345
		16.05.2007	385 355
		13.06.2007	385 354
		11.07.2007	385 88
		08.08.2007	385 42
		05.09.2007	385 17
		03.10.2007	385 94
		31.10.2007	385 6
		28.11.2007	385 17
Control break statement AT NEW			
AA 0064	**.**.*.*.*.*.*.*	03.11.2006	280 253
		01.12.2006	280 250
		29.12.2006	280 247
		26.01.2007	280 253
		23.02.2007	280 248
		23.03.2007	280 251

At End of <fieldname>:

If a group of lines of a particular column have same value, it can be displayed at the End of the group only once using the control level statement

At End of <column name>.

The columns to the left of <column name> are also considered by the 'At End Of' condition.

Example:

```

SORT t_sflight.

LOOP AT t_sflight."into sflight.
  WRITE:/
    t_sflight-carrid,
    t_sflight-connid.

  AT END OF seatsmax.
    WRITE:/ 'Control Based Statement: At End Of',
    t_sflight-seatsmax.
  ENDAT.

ENDLOOP.

```

The output is displayed as follows:

```
AA 0017  
AA 0017  
AA 0017  
AA 0017  
AA 0017  
AA 0017  
AA 0017  
AA 0017  
Control Break Statement: At End Of 385  
AA 0064  
AA 0064  
AA 0064  
AA 0064  
AA 0064  
AA 0064  
AA 0064  
AA 0064  
AA 0064  
AA 0064  
AA 0064  
AA 0064  
AA 0064  
AA 0064  
AA 0064  
Control Break Statement: At End Of 280  
AZ 0555  
AZ 0555  
AZ 0555  
AZ 0555
```


Related Content

For more information, visit the [ABAP homepage](#).

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