



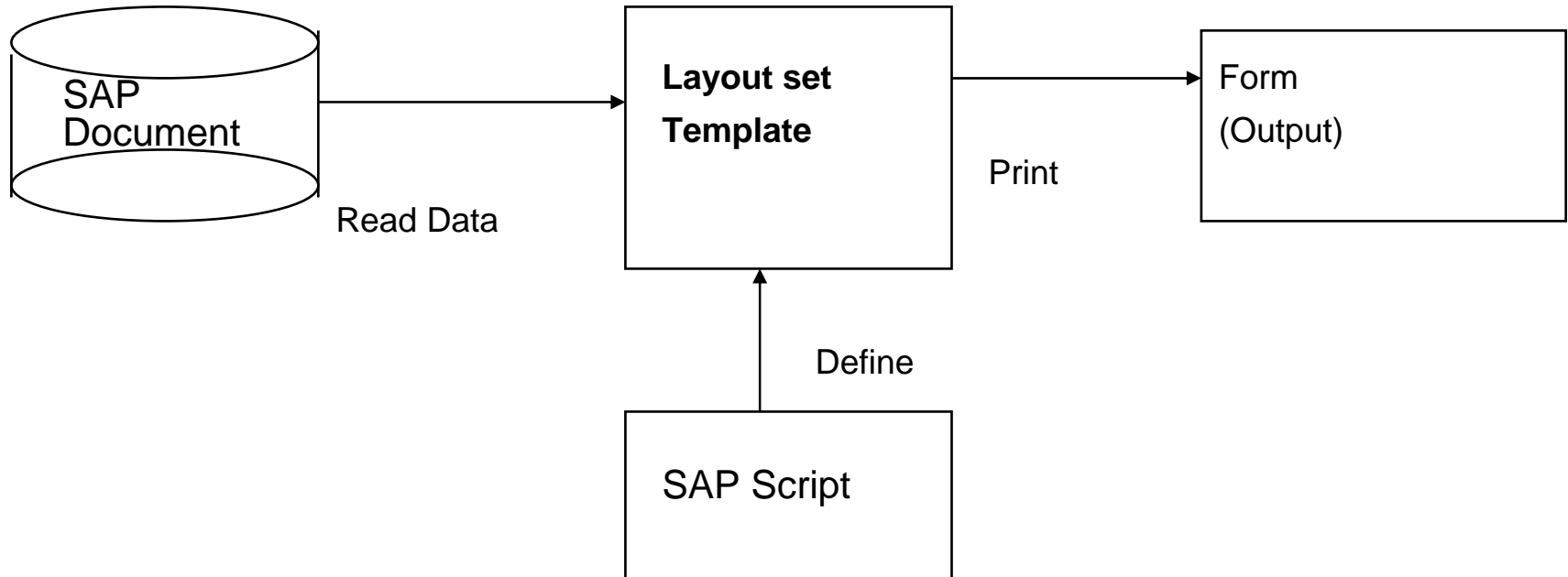
**SAP Scripts**

# What is SAP Script?

---

- **SAP Script is used to print forms.**
- **Form Vs. Reports**
  - **Forms look “nicer”.**
  - **Forms can have graphic elements.**
  - **Forms can be event-triggered.**
- **SAP Script has two parts: one print program and another layout set.**
- **Print Program is written in SE38 transaction.**
- **While for layout set SE71 Transaction is used.**

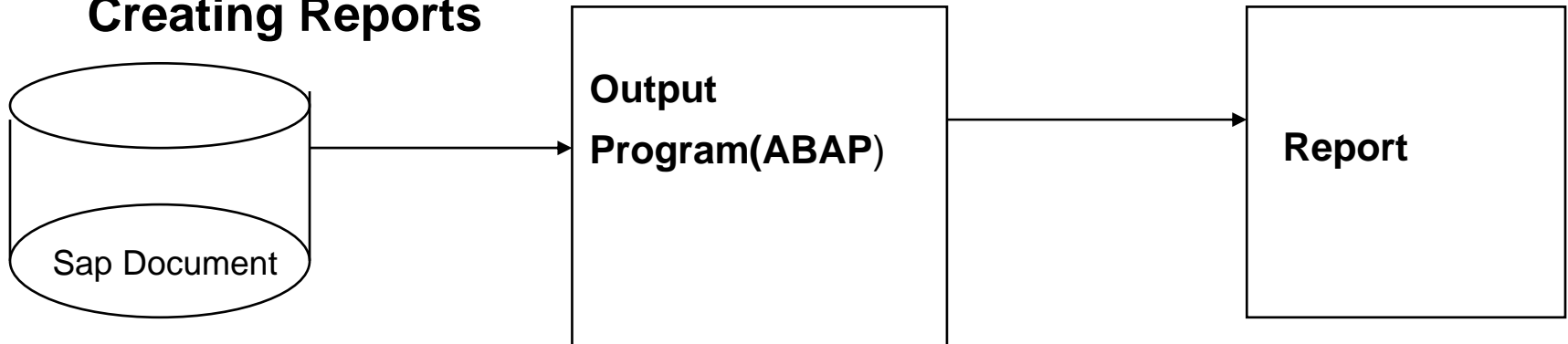
# How SAP Script Works?



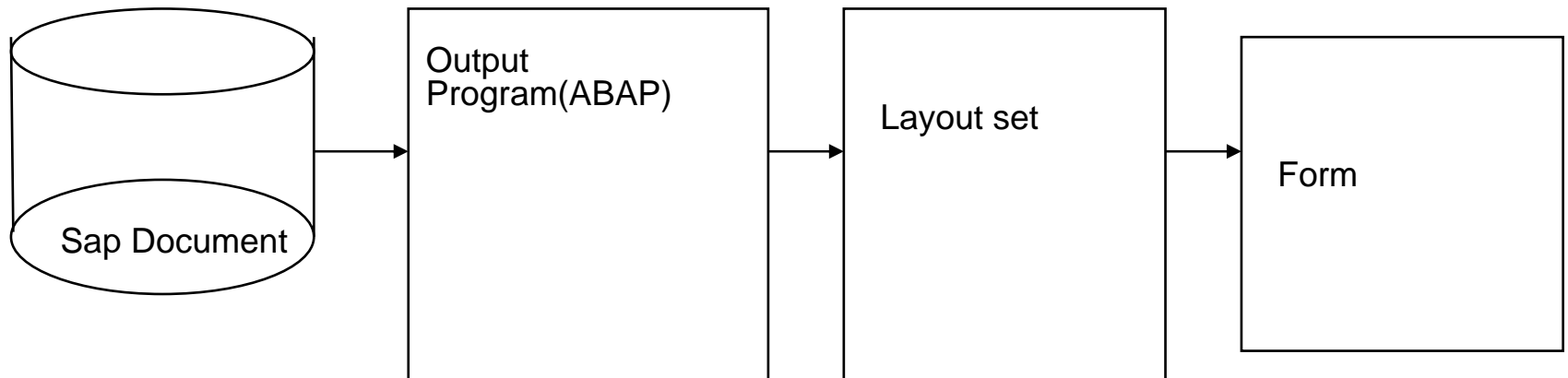
- **SAP Documents are printed using forms.**
- **Forms are defined and formatted using layout sets.**
- **SAP script is a tool that SAP provides for creating layout sets.**

# Creating Report Vs. Form

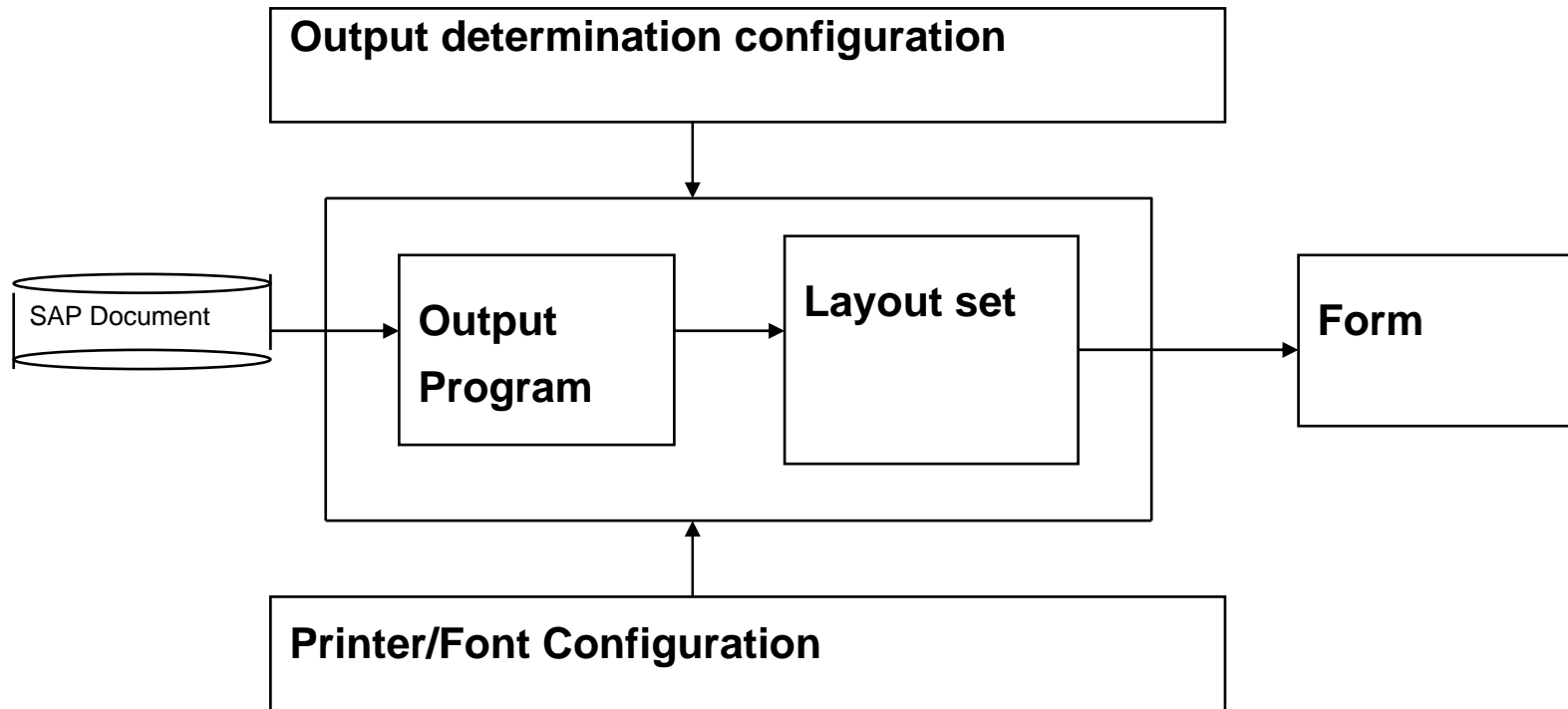
## Creating Reports



## Creating Forms



# Components of SAP Script

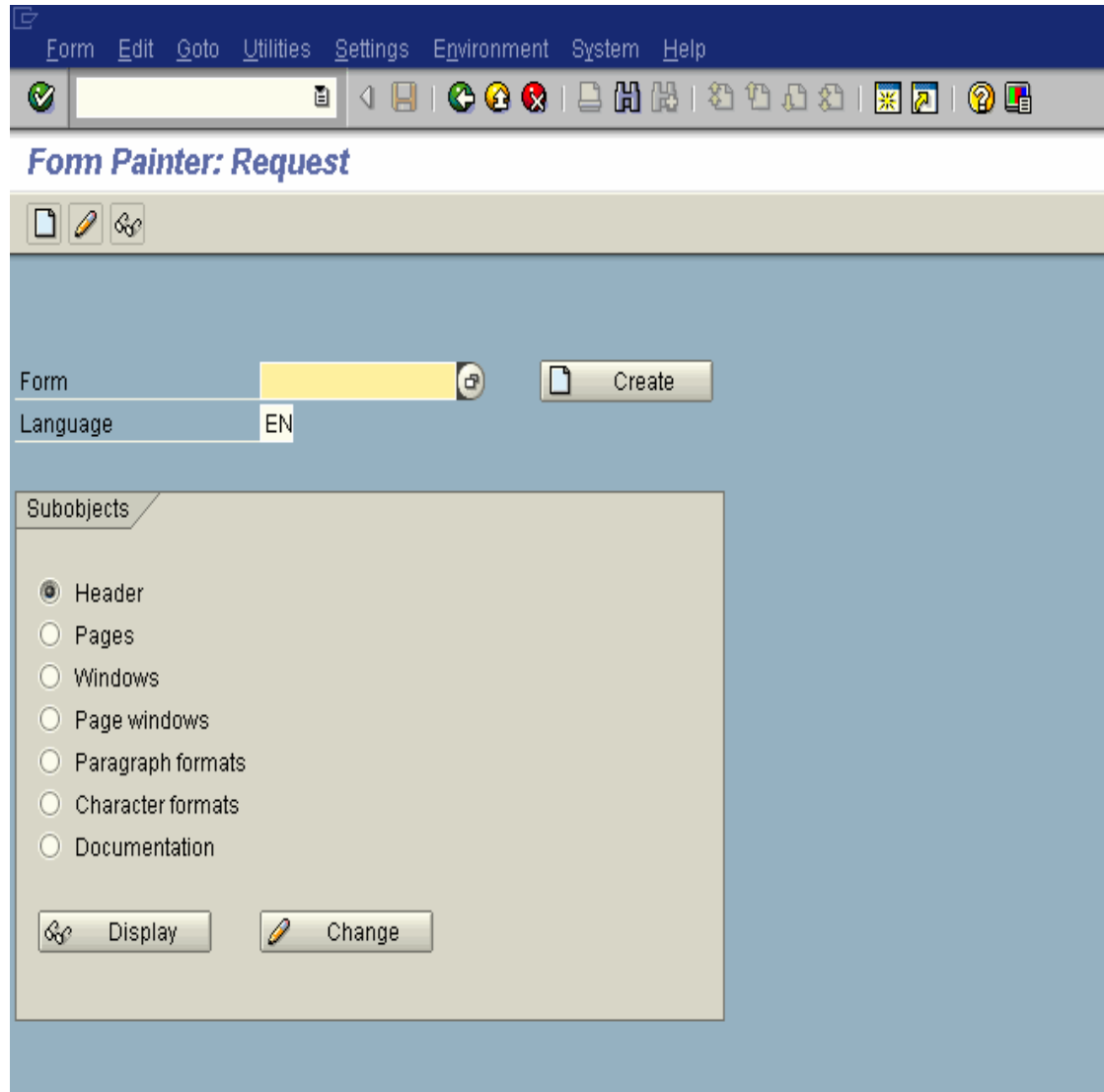


- **Output program:** Extracts data from SAP data dictionary
- **Layout set:** Formats the extracted data
- **Output determination configuration:** Configures triggering event, timing/destination
- **Printer/ Font configuration:** Configures impact/laser printer, bar code, logo

Component	Resource
Output Program	ABAP resource
Layout set	ABAP resource
Output determination configuration	Functional resource
<b>Printer configuration (Impact,Thermal,Laser)</b>	Basis/ABAP
Font configuration	Basis/ABAP
Testing	End-user/Functional/ABAP resource.

# Layout Set elements

## Initial Screen(SE71 Transaction)



Form Painter: Request

Form  Create

Language EN

Subobjects

- ☒ Header
- ☐ Pages
- ☐ Windows
- ☐ Page windows
- ☐ Paragraph formats
- ☐ Character formats
- ☐ Documentation

Display Change

- Header
- Paragraphs
- Character strings
- Windows
- Pages
- Page windows.

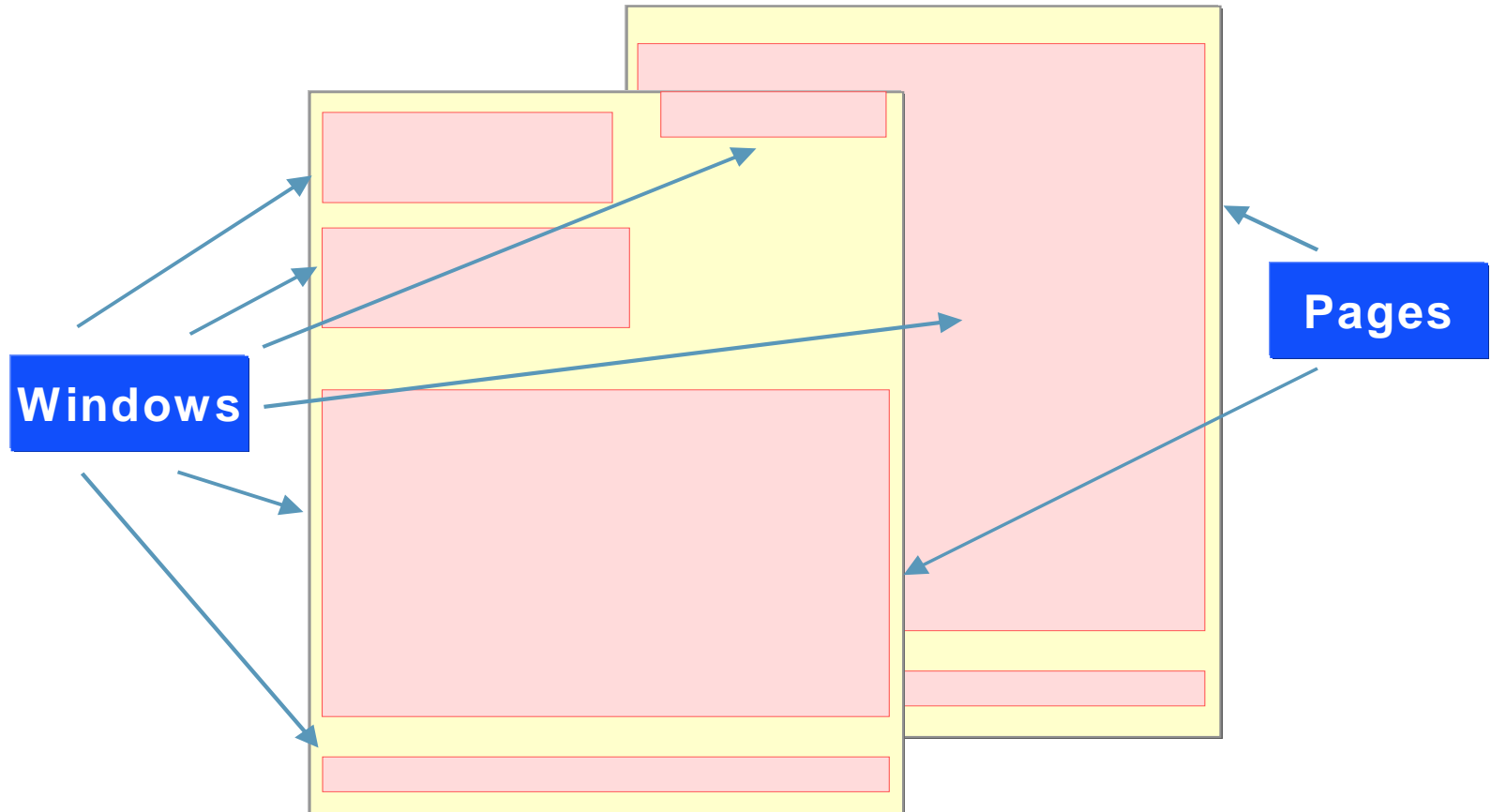
# Layout Set Elements Components

		S.O# P.O# Date
Sold-to	Ship-to	
Item	Material#	Price
10	Part A	\$500
20	Part B	\$350
30	Part C	\$800

S.O# P.O# Date		
Item	Material#	Price
40	Part D	\$250
50	Part E	\$400
60	Part F	\$350
70	Part G	\$150
Total		\$2,800

- Header** : General info AND default settings
- Paragraph** : Font and tab info
- Character strings** : Font info within a paragraph
- Windows** : Description of areas on the pages.
- Pages** : Name of the pages with page flow info
- Page windows** : Position and size of the windows on the pages





# Layout Set Elements

## Page Windows

Pages Windows Paragraph formats Character formats

Page window Windows (F7)

Page **FIRST**

Window	Description	Left	Upper	Width	Hght
MAIN	00 Main window	7,00 CH	32,00 LN	71,00 CH	26,00 LN
ADDRESS	Addressee	43,00 CH	14,00 LN	35,00 CH	7,00 LN
CONSGNEE	Ship-to address	7,00 CH	24,00 LN	35,00 CH	5,00 LN
DELDATE	Dates	43,00 CH	24,00 LN	35,00 CH	5,00 LN
FOOTLINE	Footers	7,00 CH	63,00 LN	70,00 CH	4,00 LN
INFO	Information (general data)	43,00 CH	10,00 LN	35,00 CH	3,00 LN
NEXTPAGE	Next page	31,00 CH	59,00 LN	20,00 CH	1,00 LN
PARTNER	Partner number	7,00 CH	16,00 LN	14,00 CH	1,00 LN
PURCHASE	Purchasing group	7,00 CH	14,00 LN	35,00 CH	2,00 LN
REFERENC	Reference data	7,00 CH	10,00 LN	35,00 CH	2,00 LN
SENDER	Sender	7,00 CH	18,00 LN	35,00 CH	5,00 LN
SIGN	Our reference	43,00 CH	16,00 LN	35,00 CH	2,00 LN
TERMS	Terms	7,00 CH	30,00 LN	71,00 CH	6,00 LN

Page window 1 of 14

Standard attributes

Window	MAIN	Description	Main window
Window type	MAIN 0		
Left margin	7,00 CH	Window width	71,00 CH
Upper margin	32,00 LN	Window height	26,00 LN

- List of all the windows on the page with coordinates.
- The coordinates are given by the upper left-hand corner and the width and length.
- Note: A window which should appear on a page must be first defined under "Windows" and then be added to the page windows.

Window

Window	Meaning	Type	Default par.
ADDRESS	Addressee	VAR	
CONSGNEE	Ship-to address	CONST	
DATE	Date of following page	CONST	
DELDATE	Dates	VAR	
DOCUMNO	Document number	CONST	
FOOTLINE	Footers	CONST	
INFO	Information (general data)	CONST	
MAIN	Main window	MAIN	
NEXTPAGE	Next page	CONST	
PAGECNT	Page counter	VAR	
PARTNER	Partner number	CONST	
PURCHASE	Purchasing group	CONST	
REFERENC	Reference data	CONST	
SENDER	Sender	CONST	
SENDER2	Sender	CONST	
SIGN	Our reference	CONST	

Window 1 of 18

Standard attributes

Window: ADDRESS Description: Addressee

Window type: VAR

Default paragraph:

Form BE\_MEDRUCK, language EN, from client 000 is displayed

- Types of windows:
  - Main-Special
  - VAR –Variable
  - CONST-Constant
- Shows list of all windows defined for the layout set.
- A window can contain hard-coded texts and the Variables to be printed in the window.

## Template

Fly & Smile  
4 Truckee Way  
Durango, CO 85650

07/15/98

Turnaround Inc.  
145 Apple Valley Ln.  
Ithaca, NY 14850

Dear Sir or Madam,

Thank you for your booking. We  
are pleased to confirm the  
following flights:

Flight	Date	Depart	Price
AA 0017	07/20/98	13:15	799.00 USD
AZ 0790	11/11/98	6:55	1644.00 USD
LH 0400	07/21/98	6:07	387.80 USD
LH 0400	07/28/98	6:07	398.80 USD

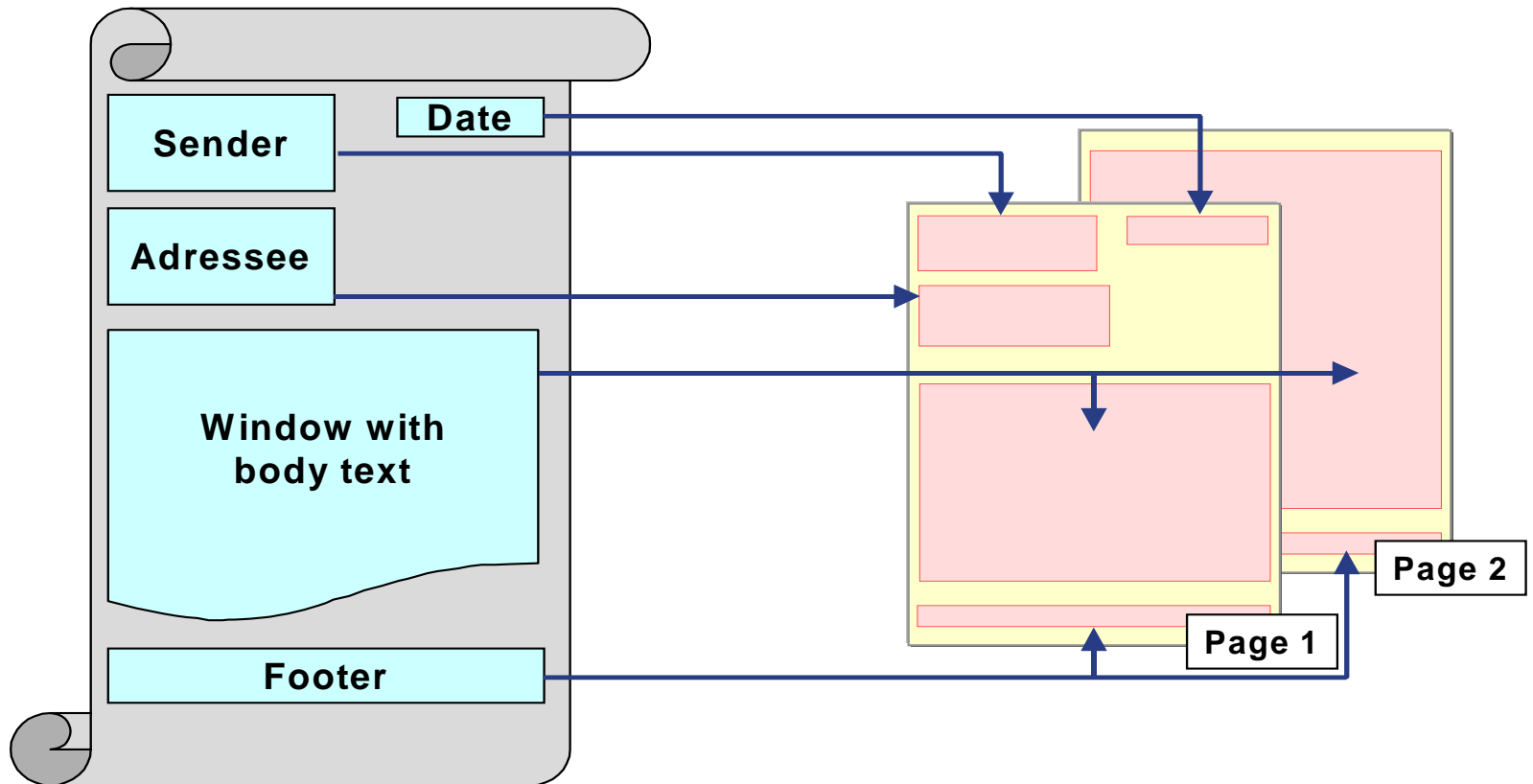
Page 1

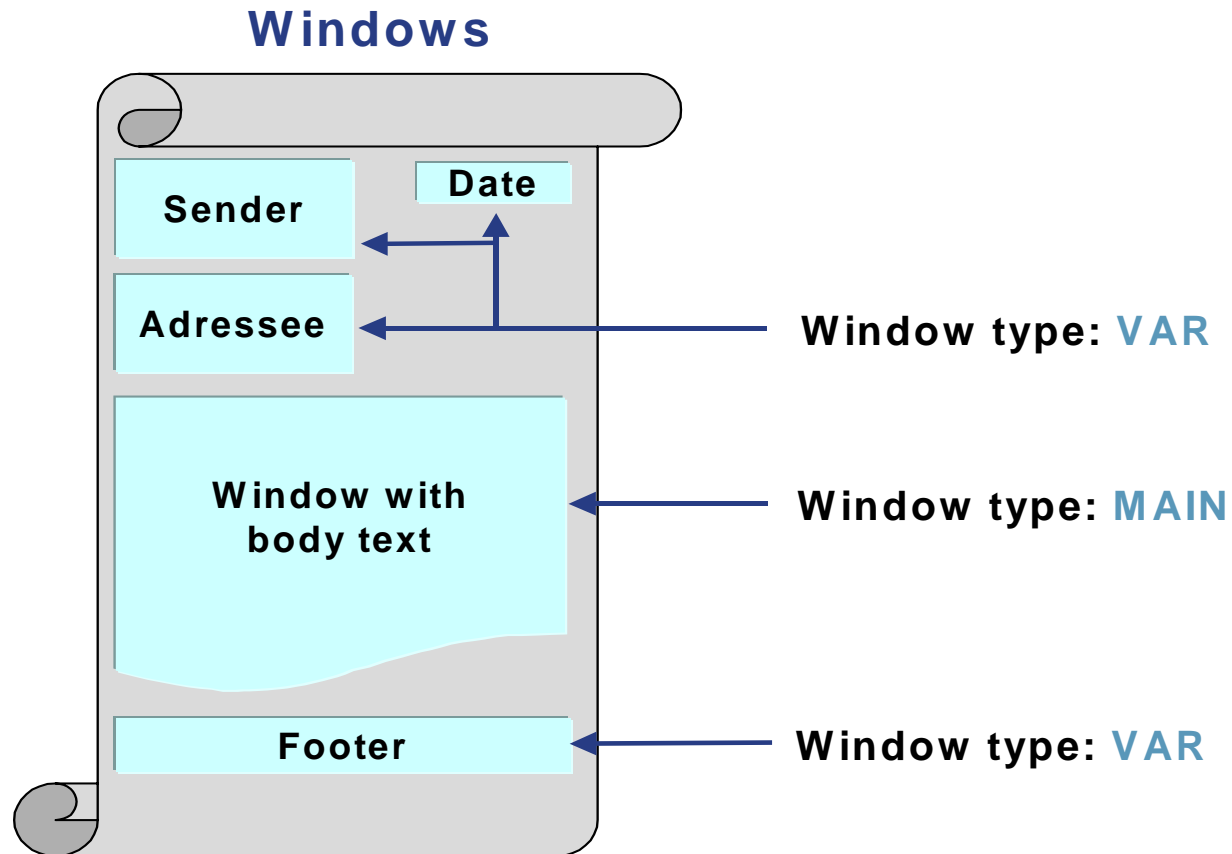
## Form: Windows

The form layout consists of a yellow rectangular container. Inside this container, there are four pink rectangular windows. The first window is located in the top-left corner. The second window is located in the top-right corner. The third window is located in the middle-left area. The fourth window is a large rectangle occupying the bottom half of the container. At the very bottom of the container, there is a thin pink horizontal bar.

## Windows

## Form: Page windows





Fly & Smile  
4 Truckee Way  
Durango, CO 85650

7/15/98

Turnaround Inc.  
145 Apple Valley Ln.  
Ithaca, NY 14850

Dear Sir or Madam,

Thank you for your booking. We are  
pleased to confirm the following  
flights:

Flight	Date	Depart	Price
AA 0017	07/20/98	13:15	799.00 USD
AZ 0790	11/11/98	6:55	1644.00 USD
AA 2017	12/21/98	21:55	799.00 USD
LH 0400	12/28/98	6:07	398.80 USD

Flight	Date	Depart	Price
LH 0400	07/28/98	6:07	398.80 USD
LH 0003	08/16/98	15:06	990.00 USD

Yours faithfully  
...

```

.....1.....2.....3.....4.....5.....6.....7...
/* -----
/* Header data
/* -----
/E HEADER_TEXT
L
/: INCLUDE &T166K-TXNAM& OBJECT &T166K-TDOBJECT& ID &T166K-TDID& LANGUAGE >
/E HEADER_INFO_ACKNOW
IN We require an order acknowledgment for the following items:
/E HEADER_INFO
IN &'Your ref.: 'EKKO-IHREZ&
/ &'Your order acknowledgment: 'PEKKO-LABNR&
/E TERMS_OF_PAYMENT
IN &RM06P-PHTXT&
/E HEADER_TARGET_VALUE
IN &'Target value 'EKKO-KTWRT& &EKKO-WAERS&
/E CHANGE_REMARKS
IN *** &T166T-CHTXT& ***
/* -----
/* Item data
/* -----
/* -- Purchase order -----
/E ITEM_HEADER_F
/
IL
/ <b>Item,,Material,,Description</>
----- BE_MEDRUCK ----- Lines 1 - 25 / 224 -----

```

- A window can contain hard-coded texts and the variables to be printed in the window.
- Tag column: Specifies format of the text
- Text line column: contains the actual content of the window.
- Special characters
  - \* Default paragraph
  - /: Command line
  - /\* Comment line
  - /E Text element





```

.....1.....2.....3.....4.....5.....6.....7..
/E  ITEM_INFO_2
IN  ,,&'Your material number: 'EKPO-IDNLF&
/   ,,&'Your order acknowledgment: 'EKPO-LABNR&
/   ,,&'Release order against contract 'EKPO-KONNR& &'Item 'EKPO-KTPNR&
/   ,,&'Shipping instructions: 'T027B-EVTXT&
/E  ITEM_INFO_ACKNOW
IN  ,,&'We require an order acknowledgment for this item
/E  ITEM_TEXT
/:  INCLUDE &T166P-TXNAM& OBJECT &T166P-TDOBJECT& ID &T166P-TDID& LANGUAGE & >
/E  ITEM_DELADDRESS
IX
/   <i>Please deliver to:</i>
/:  ADDRESS DELIVERY PARAGRAPH IX
/:  TITLE      &SADR-ANRED&
/:  NAME       &SADR-NAME1&, &SADR-NAME2&, &SADR-NAME3&,
/:             &SADR-NAME4&
/:  STREET     &SADR-STRAS&
/:  POBOX      &SADR-PFACH& CODE &SADR-PSTL2&
/:  CITY       &SADR-ORT01&, &SADR-ORT02&
/:  POSTCODE   &SADR-PSTLZ&
/:  COUNTRY    &SADR-LAND1&
/:  REGION     &SADR-REGIO&
/:  FROMCOUNTRY &T001-LAND1&
/:  ENDADDRESS
/*  -- Conditions (Document)-----
----- BE_MEDRUCK ----- Lines 84 - 108 / 224 -----

```

- Text Element always starts with the line /E and continues to the next text element (/E).
- It is the output program ( not the layout set) that controls whether or not to print a text element (i.e. block of texts surrounded by /E) and the order in which they are printed.
- ‘,,’ Tabs in a paragraph
- ‘&&’ Variables.

Windows Page windows Paragraph formats Character formats

Pages

Page	Meaning	NextPage	Mode	No.type
FIRST	First page	NEXT	START	ARABIC
NEXT	Subsequent page	NEXT	INC	ARABIC

Page 1 of 2

Standard attributes

Page FIRST Description First page

Next page NEXT

Page counter

Mode START

Numbering type ARABIC

Output length 00

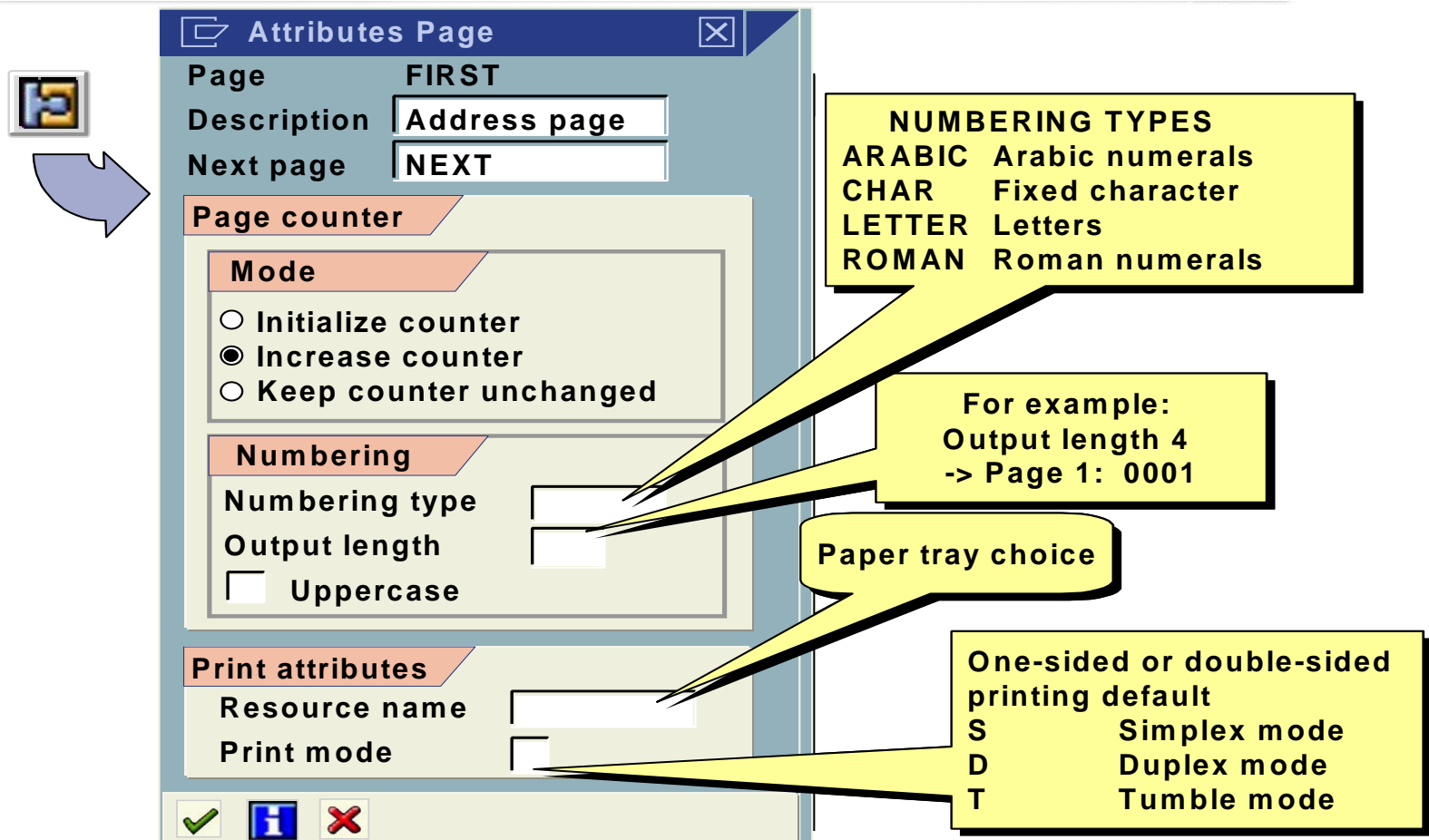
☐ Uppercase

Print attributes

Resource name

Print mode

- Shows the page flow information
- Must define at least two pages.
- The first page specifies the next page.
- The last page recursively defines the next page as itself.



**Attributes Page**

Page: FIRST

Description: Address page

Next page: NEXT

**Page counter**

**Mode**

- ☐ Initialize counter
- ☒ Increase counter
- ☐ Keep counter unchanged

**Numbering**

Numbering type: [ ]

Output length: [ ]

☐ Uppercase

**Print attributes**

Resource name: [ ]

Print mode: [ ]

**NUMBERING TYPES**

ARABIC	Arabic numerals
CHAR	Fixed character
LETTER	Letters
ROMAN	Roman numerals

**For example:**  
Output length 4  
-> Page 1: 0001

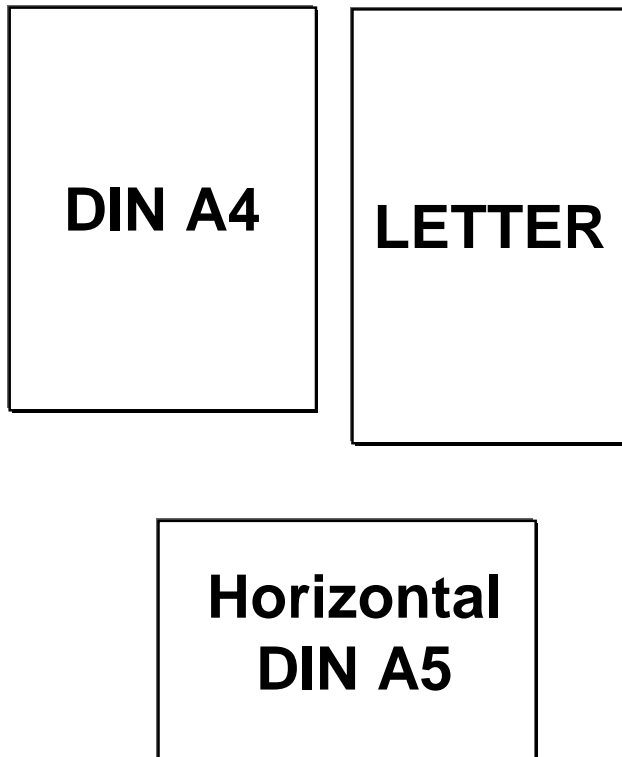
**Paper tray choice**

**One-sided or double-sided printing default**

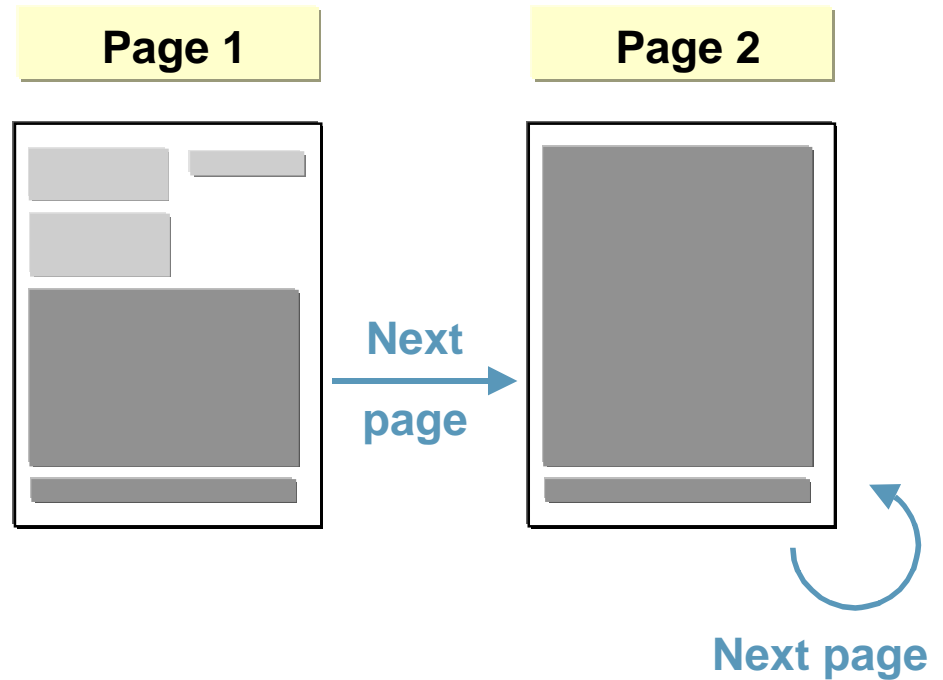
S	Simplex mode
D	Duplex mode
T	Tumble mode

# Forms - Pages

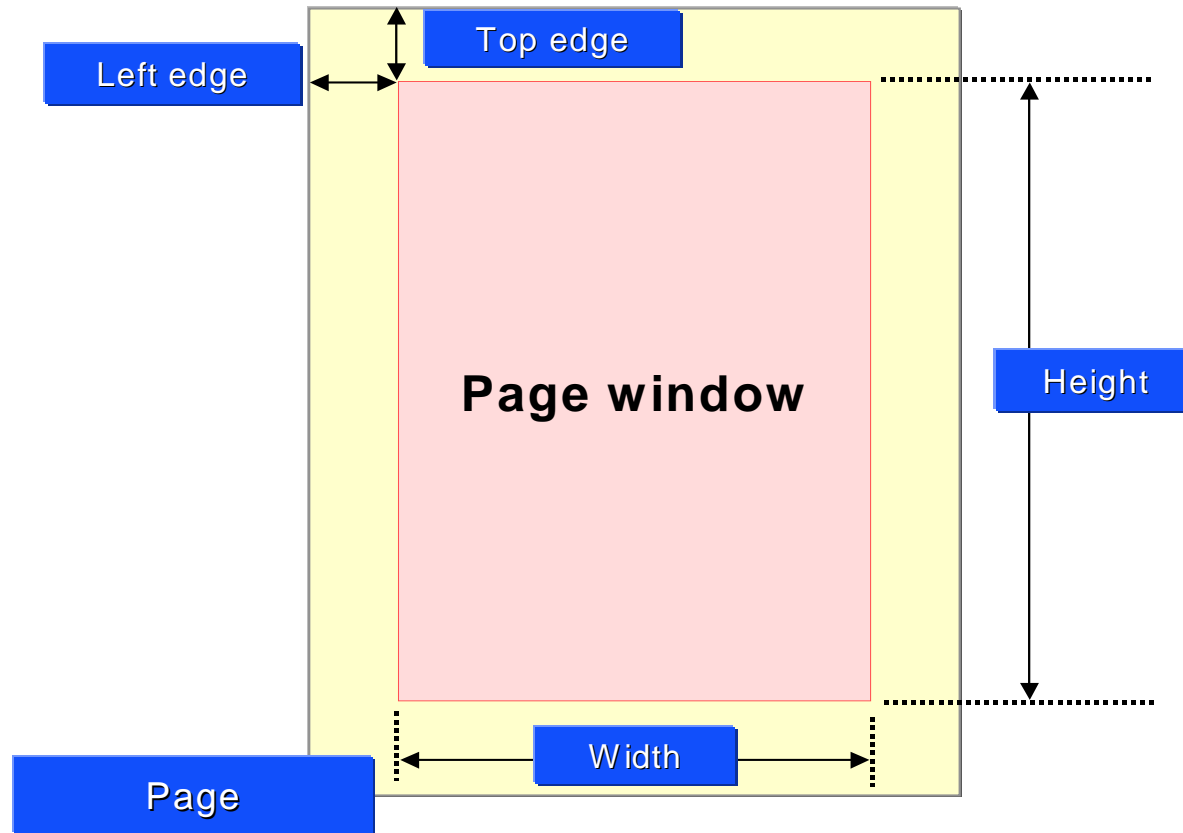
## Page format






## Static page sequence





# Defining Page Windows





Pages Windows Page windows Character formats 

Paragraph formats Character formats (Shift+F5)

Parag.	Meaning	Alignment	Left marg.	Right marg.
A1		LEFT	0,00 CM	0,00 CM
A2		LEFT	6,00 CH	0,00 CM
B	Paragraph blocked	BLOCK	0,00 CM	0,00 CM
CN	Conditions	LEFT	6,00 CH	0,00 CM
CU		LEFT	6,00 CH	0,00 CM
D1		LEFT	6,00 CH	0,00 CM
FT	Bottom line	CENTER	0,00 CM	0,00 CM
HT	Header text	LEFT	0,00 CM	0,00 CM
I1		LEFT	0,00 CM	0,00 CM
I2	Second item line	LEFT	6,00 CH	0,00 CM
IT	Delivery date, item	LEFT	6,00 CH	0,00 CM
L	Paragraph left-justified	LEFT	0,00 CM	0,00 CM
L1		LEFT	6,00 CH	0,00 CM

Parag. 1 of 21  

Standard attributes

Paragraph **A1** Descript.

☐ No blank lines

☒ Page protection

☒ Next paragraph same page

Standard  
 Font  
 Tabs  
 Outline

- Contains all information needed to format a paragraph of text
- Font
- Tabs.

Pages Windows Page windows Character formats

Paragraph formats

Parag.	Meaning	Number of tabs
A1		4
A2		3
B	Paragraph blocked	
CN	Conditions	3
CU		5
D1		6
FT	Bottom line	
HT	Header text	4
I1		4
I2	Second item line	4
IT	Delivery date, item	1
L	Paragraph left-justified	
L1		7

Parag. 1 of 21

Tabs

Paragraph **A1** Descript.

Number	Tab position	Alignment
1	6,00 CH	RIGHT
2	25,00 CH	LEFT
3	40,00 CH	LEFT

Standard  
Font  
Tabs  
Outline

- Specifies tabs to create columns for line items

Standard attributes			
Paragraph	HD	Description	Header 1
Left margin	1.00	CM	Alignment LEFT
Right margin	1.50	CM	Line spacing 1.00 LN
Indent 1st line	2.00	CM	<input type="checkbox"/> No blank lines
Space before	1.50	CM	<input type="checkbox"/> Page protection
Space after			<input type="checkbox"/> Next paragraph same page

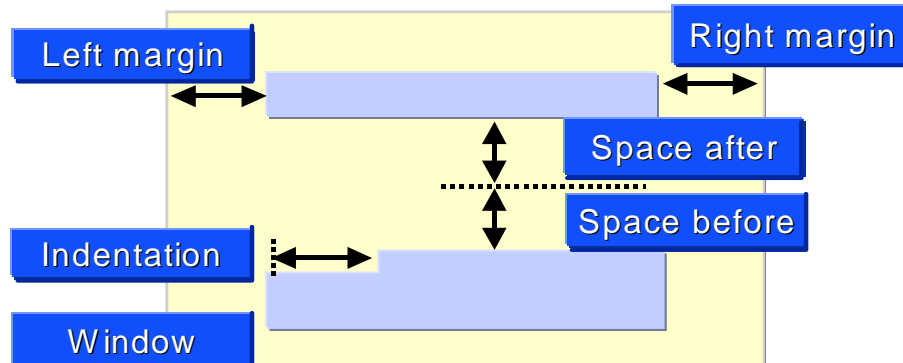
## Alignment:

BLOCK justified  
 CENTER centered  
 LEFT aligned left  
 RIGHT aligned right

## Units of

### measurement:

LN Lines  
 CM Centimeters  
 MM Millimeters  
 IN Inches  
 PT Points  
 TW Twips





Paragraph formats

Parag.	Meaning	Family	Size	Bold	Italic	Undl
A1						
A2						
B	Paragraph blocked					
CN	Conditions					
CU						
D1						
FT	Bottom line	HELVE	08,0			
HT	Header text					
I1						
I2	Second item line					
IT	Delivery date, item					
L	Paragraph left-justified					
L1						

Para. 1 of 21

Font attributes

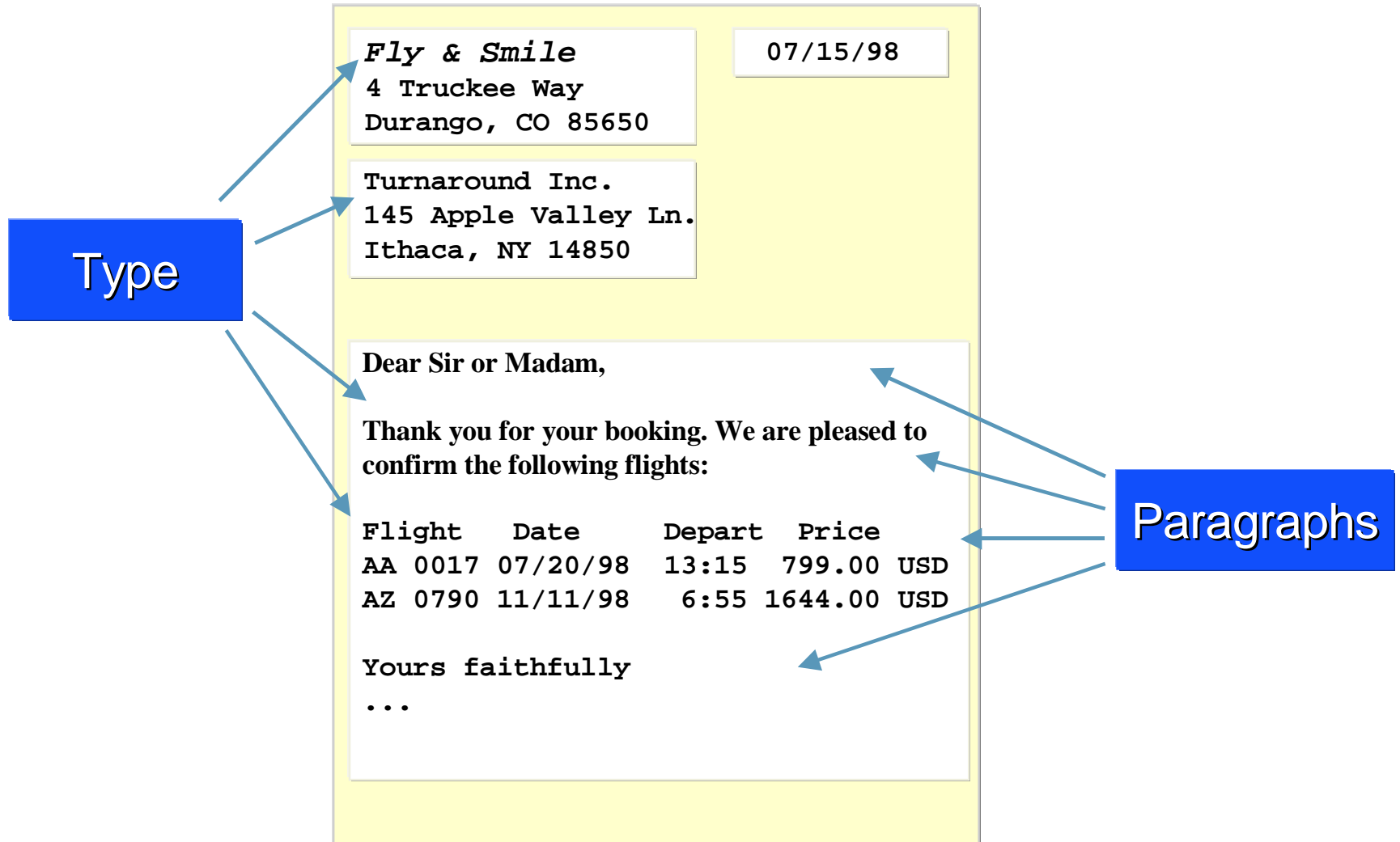
Paragraph **A1** Descript.

	On	Off	Retain
Family <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Font size <input type="text"/> 0,0 pt	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Bold	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Italic	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Underlined	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Standard  
Font  
Tabs  
Outline

- If no font is specified, default font from the layout set set header will be used.

# Elements for Structuring Texts



# Layout Set Elements

## Character Strings

Pages Windows Page windows Paragraph formats

Character formats

String	Description	Mark.	Prot.	Hidd.	Sup.	Sub.
B	Bold	Off				
I	Italics	Off				
U	Underlined	Off				

String 1 of 3

Standard attributes

Char. format **B** Descript. **Bold**

☐ Selection

Bar code

	On	Off	Retain
Protected	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Hidden	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Superscript	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Subscript	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Standard

Font

Form BE\_MEDRUCK, language EN, from client 000 is displayed

- A default character style is specified at the paragraph level.
- Can be used within paragraph to override the default settings for a few words within the paragraph.


**Standard attributes**

String	BF	Description	Boldface		
			On	Off	Retain
<input type="checkbox"/> Marker		Protected	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
		Hidden	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
		Superscript	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Bar code <input type="text"/>		Subscript	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

**Symbolic name of a bar code from SAPscript font maintenance**

**Override header data or paragraph format settings**

**Adopt header data or paragraph format settings**

Pages Windows Page windows Paragraph formats Character formats 

Administrative data Basic settings

Administration information

Form

Description

Status

Classification

Development class  Vendor-Material Relationships and Conditions

Client number

Created on   by  Release:

Changed on   by  Release


Language attributes

Language key


Original language

Translate

☒ to all languages

☐ to individual languages 





☐ do not translate




 Form BE\_MEDRUCK, language EN, from client 000 is displayed

- **Administrative info**
- **Default settings**
- **Page format: different for different countries/applications**
- **Never change 'Lines per inch' & 'character/inch'**

**Page**

FIRST Address page

**Window** **Graphic**

Window ADDRESS

Description Address

☐ Main window







Default paragraph




Left margin 1,60 CM

Upper margin 1,60 CM

Window width 9,00 CM

Window height 6,00 CM

Design / Text Options

Administrative window

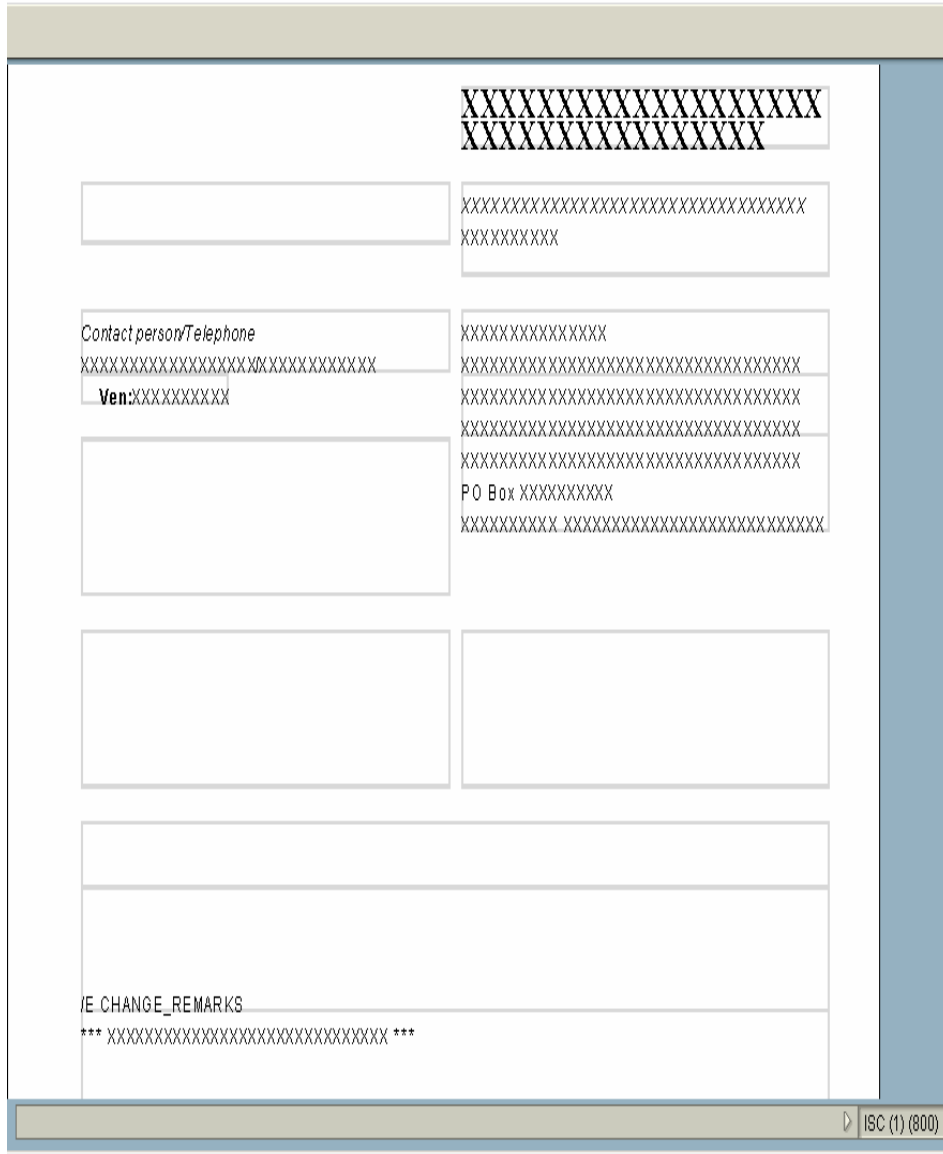
Design window

Form ...

WINDOW1\*

WINDOW2\*

MAIN\*



XXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXX

Contact person/Telephone  
XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
Ven:XXXXXXXXXXXX

XXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
PO Box XXXXXXXXXX  
XXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXX

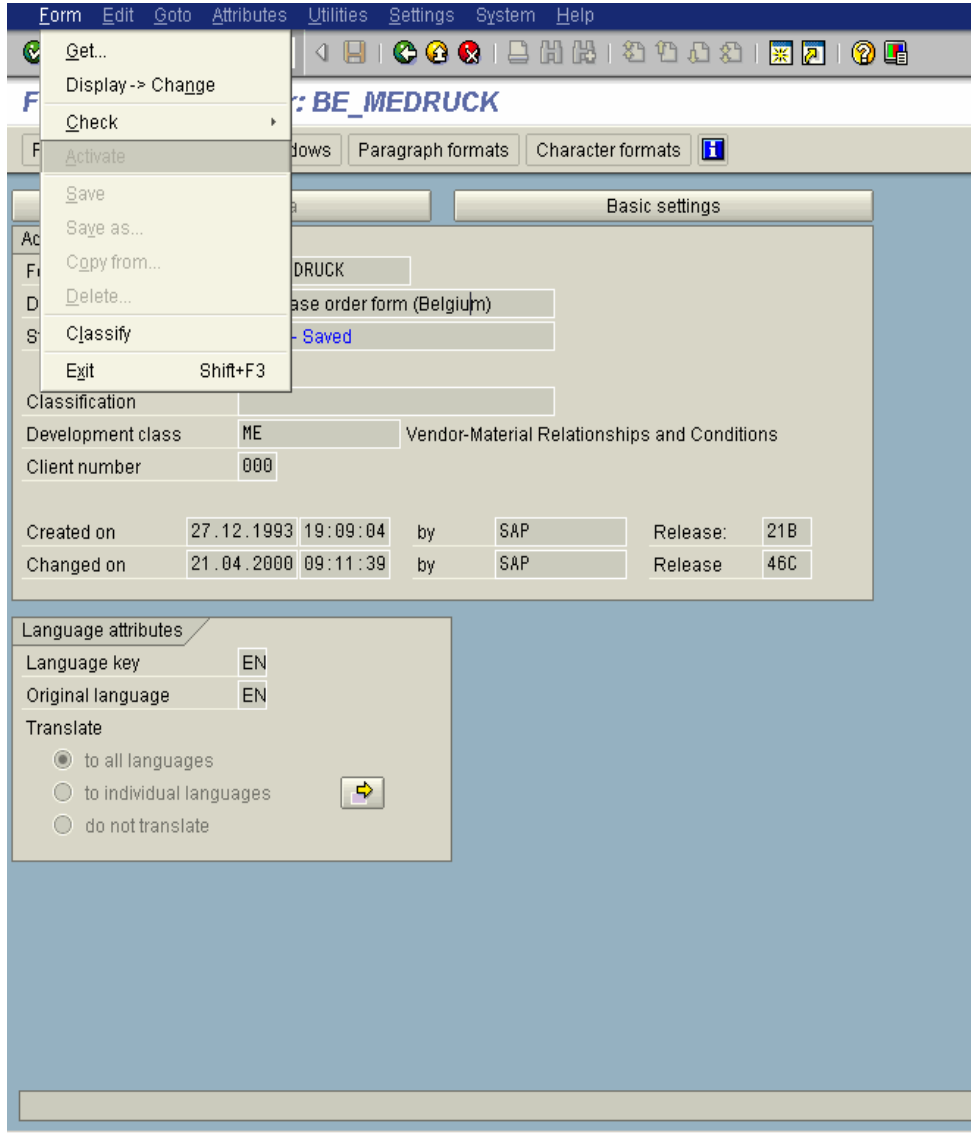
VE CHANGE\_REMARKS  
\*\*\* XXXXXXXXXXXXXXXXXXXXXXXXXX \*\*\*

ISC (1) (800)

- Menu :Utility>Test print
- Shows the layout design of the layout set.
- Test printing does not trigger the output program to interface with the layout set.
- It simply shows the maximum length of each of the fields being printed.

# Layout Set

## Activating Layout set



The screenshot shows the SAP Form Designer interface. The menu bar includes Form, Edit, Goto, Attributes, Utilities, Settings, System, and Help. The 'Form' menu is open, showing options: Get..., Display-> Change, Check, Activate, Save, Save as..., Copy from..., Delete..., Classify, and Exit (Shift+F3). The 'Activate' option is highlighted. The main workspace displays a form titled 'BE\_MEDRUCK' with various fields and a 'Basic settings' tab. The 'Language attributes' tab is also visible, showing 'Language key' and 'Original language' both set to 'EN', and 'Translate' options.

- **Must activate the layout set any time a change has been made.**

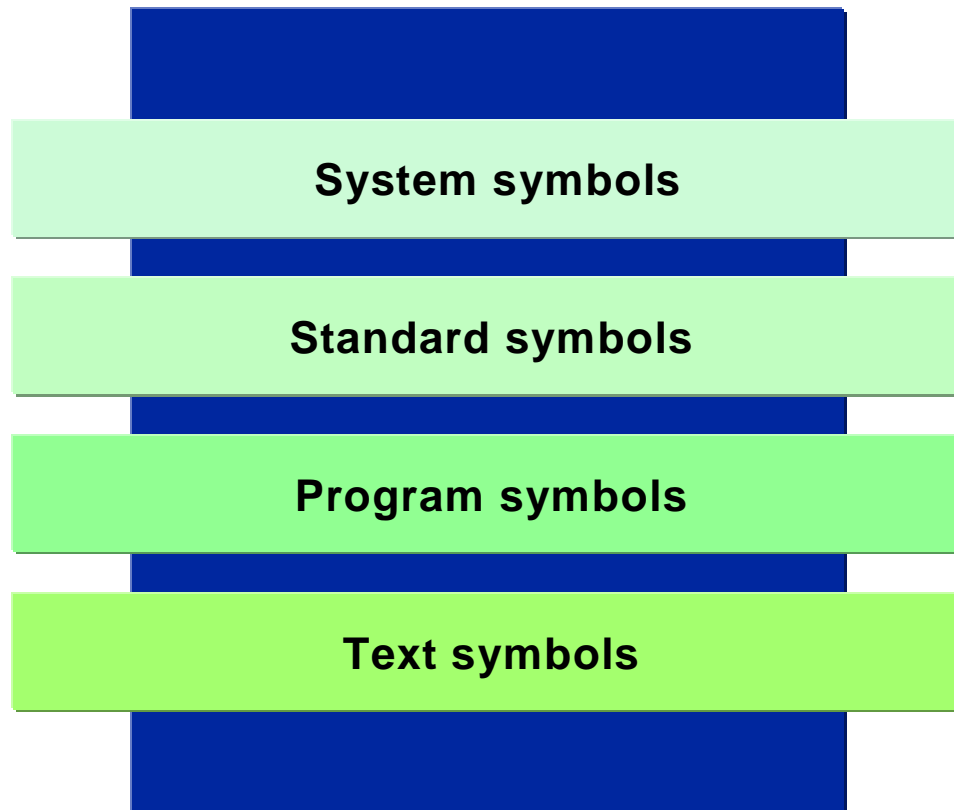


- Symbols are placeholders for values during print formatting.
- Symbols are identified by a name which is included in ' & ' characters.

Example: &VBAK-VBELN&.

Symbols are case sensitive.

Depending on the source, the value of a symbol comes from, they can be categorized as below.



# Layout Set Symbols

- **SYSTEM symbols are supplied by SAP scripts. They can be used in all texts. Following are list of frequently used system symbols.**

**&DATE& = Current date**

**&DAY& = Day**

**&MONTH& =Month**

**&YEAR& = Year**

**&TIME& = Time of day**

**& HOURS& =Hours**

**&MINUTES& = Minutes**

**&SECONDS& = Seconds**

**&PAGE& = Page**

**&NEXTPAGE& = Page number of next page**

**&SPACE& = Blanks**

**&ULINE& = Underline**

**&VLINE& = Vertical line**

**& NAME\_OF\_MONTH& = Name of month**

# Layout Set Symbols

- STANDARD symbols are maintained centrally in one table (TTDTG) for all SAP script users.
- PROGRAM symbols are place holders for values which come from the program that calls the layout set. The symbol has to be defined in the Data dictionary and filled with values by the output program.  
Example: &kna1-name1& in the layout set will output the customer's name.
- Values of TEXT symbol are created by assignment via define statement.  
Example: /: DEFINE &CASENUM& ='1234'.

## Layout Set Symbols

- FORMATTING of the symbol can be done in following different ways:

& SYMBOL+4& = Offset

&SYMBOL(5)& = Length

& SYMBOL(I)& = If the symbol is initial , output nothing

& SYMBOL(Z)& = Suppress leading zeros.

&SYMBOL(C)& = Compress blanks

&SYMBOL(R)& = Right –justified output

& SYMBOL(S)& = suppress +/- sign

&SYMBOL(5,2)& = Decimal place formatting

&SYMBOL(E3)& = Exponential notation

&'text1' SYMBOL'text2& =Concatenation of symbol and text

Examples:

&vbdpr-matnr+2(4)&

&vbdkl-brgew(I13)&

& 'currency:' vbdka-waerk&

&'Case# &PREFIX&'VBDPR-BSTNK+2(8)'00'&

- **IF..ELSE..ENDIF** can be used within the layout set to control the flow of logic.

- **Example:**

```
/: IF &VBRK-VKORG(2)& EQ 'HG'.
```

```
/: DEFINE &PREFIX& = 'Mr.'.
```

```
/: ELSE.
```

```
/: DEFINE &PREFIX& = 'Mrs.'.
```

```
/: ENDIF.
```

- **CASE..ENDCASE** command can also be used in the layout set to control the flow logic.

- **Example:**

```
/: CASE &VBDKL-VKORG(2)&  
/: WHEN 'HG'  
/: Case# &'934' vbdpl-sortkri&  
/: WHEN OTHERS  
/: Case # &'999' vbdpl-sortkri&  
/: ENDCASE
```

- Using the command **NEW-PAGE**, a page –break can be made in SAP script at any position before the end of the page defined in the layout set. The next page can be specified explicitly.

**syntax: /: NEW-PAGE[PAGE]**

- A page break within a paragraph can be prevented by using this command

**PROTECT..ENDPROTECT.**

**syntax: /: PROTECT**

**/: text text text**

**/: ENDPROTECT**



- The command **ADDRESS...ENDADDRESS** formats an address according to the postal standards of the country of destination which is defined in the parameter **COUNTRY**.
- **Syntax:**
- **/: ADDRESS DELIVERY PARAGRAPH paragraph**  
**[PRIORITY prio LINES lines]**  
**/:TITLE form of address**  
**/: NAME name1[,name2[,name3[,name4]]]**  
**/:STREET strno**  
**/:POBOX POBOX[CODE code]**  
**/:POSTCODE postal code**  
**/:CITY city1[,city2]**  
**/: REGION district**  
**/: country recipient country**  
**/: FORMCOUNTRY sender country**  
**/:ENDADDRESS**

- Parameter PRIORITY defines which address lines may be omitted, if necessary. The possible values are as follows:
  - A Form of Address
  - B Mandatory blank line 1
  - C Mandatory blank line 2
  - 2 Name 2
  - 3 Name 3
  - 4 Name 4
  - L country name
  - S Street line
  - O City line
- The parameter LINES are available for formatting the address. Possible values are from 1 to n. If it is not possible to format all address data due to a lack of lines, the data which is entered in the parameter PRIORITY is omitted.

- **BOTTOM** : Define footer text in a window
- For **MAIN**, determine the lines also known as footer texts, which are always automatically output at the bottom of that window.
- Syntax:
  - /:BOTTOM**
  - /:TEXT TEXT**
  - /:TEXT TEXT**
  - /:ENDBOTTOM.**

- **BOX, POSITION and SIZE :Boxes, lines ,shading**  
The BOX,POSITION and SIZE commands draw boxes, lines and shadows. Within Any particular layoutset ,these commands specify window or passage of window text can be output in a frame or with shadowing.

**Syntax:**

**1./: BOX[XPOS][YPOS][WIDTH][HEIGHT][FRAME][INTENSITY]**

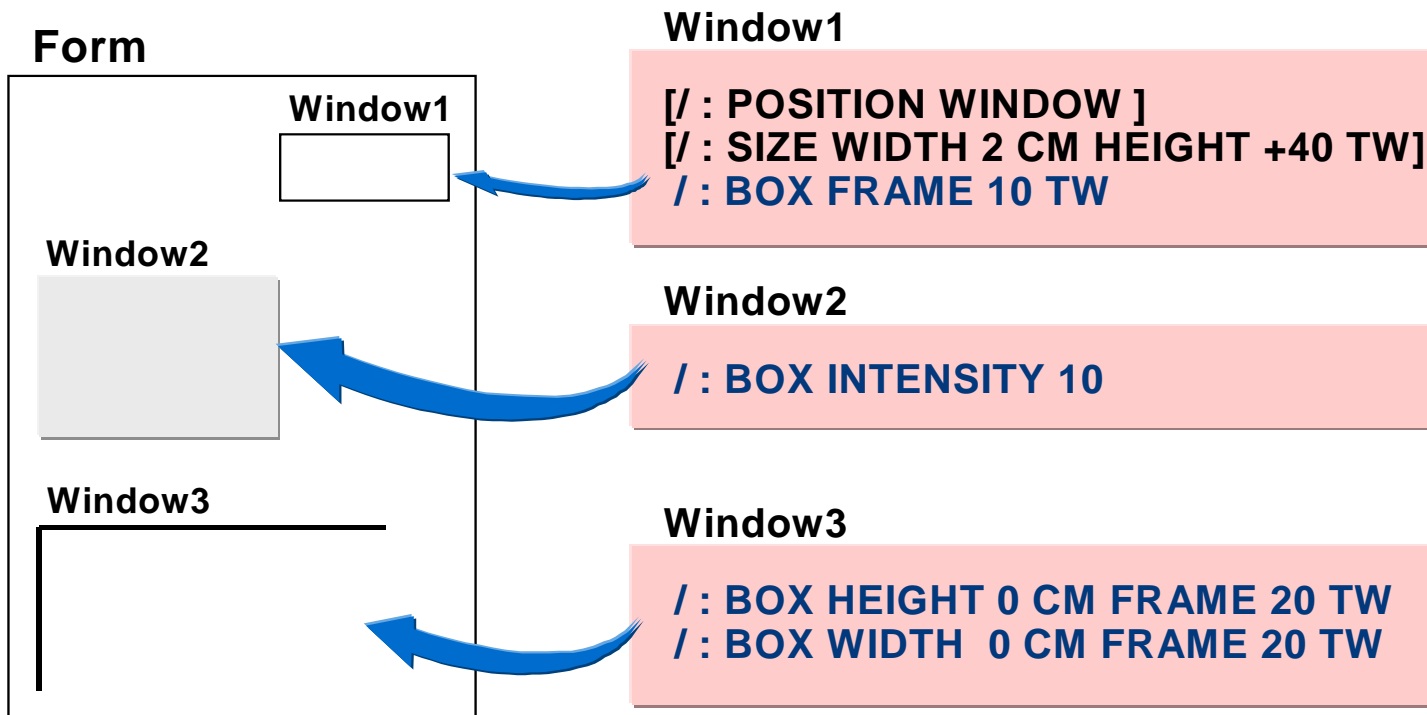
**2./: POSITION[XORIGIN][YORIGIN][WINDOW][PAGE]**

**3./:SIZE[WIDTH][HEIGHT][WINDOW][PAGE]**

**/:BOX[XPOS][YPOS][WIDTH][HEIGHT][FRAME][INTENSITY]**

This command draws a box of the specified size at the specified position. For each parameter(XPOS,YPOS,WIDTH,HEIGHT ,and FRAME), both a measurement and a unit of measure must be specified. The INTENSITY parameter should be entered as a percentage between 0 and 100. XPOS,YPOS specify the upper left corner of the box, relative to POSITION command values.

Default is the values specified in the POSITION command.



# Calling ABAP Subroutines

## Form

```

/: PERFORM <form> IN PROGRAM <prog>
/: USING &invar1&
/: USING &invar2&
.....
/: CHANGING &outvar1&
.....
/: ENDPERFORM
  
```

IN\_TAB  
structure ITCSY

NAME	VALUE
invar1	...
invar2	...

ABAP  
Dictionary

```

REPORT <prog>.
FORM <form> TABLES in_tab STRUCTURE itcsy
                   out_tab STRUCTURE itcsy.

. . .

ENDFORM.
  
```

ABAP  
report



# Layout Set Commands

- The date can be formatted using the command SET DATEMASK = '...'. After formatting all date fields are output as specified. The available formats for day, month and year are following.

DD	Day
MM	Month in figures
MMMM	Month in words
YY	Year (2 digits)
YYYY	Year(4 digits)

- Example: `/: SET DATE MASK = 'MM/DD/YYYY'`
- The formatting can be reset at any point of time by `/:SET DATE MASK = ''`.  
Formatting is then carried out as defined by the system.

- The time can be formatted using the command  
SETTIME MASK = '...'. After formatting all time fields are output as specified. The available formats for hours, minutes and seconds are following.  
HH Hours  
MM Minutes  
SS Seconds  
Example /: SET TIME MASK='HH:MM:SS'
- The formatting can be reset at any point of time by  
/:SET TIME MASK = "".  
Formatting is then carried out as defined by the system.



- In SAP Script ,any text can be included at a certain position in document using **INCLUDE** command.
- Syntax:  
INCLUDE name OBJECT object id identifier PARAGRAPH paragraph LANGUAGE language.

Example:

```
INCLUDE&VBDPL-TDNAME& OBJECT VBBP ID 0001
PARAGRAPH IT
```

```
INCLUDE 'SD_TEXT' OBJECT TEXT ID SDVD PARAGRAPH HT
```

- There are two different types of text handled in SAP script. One is **APPLICATION TEXT** and other one is **STANDARD TEXT**.

- The 'name ' in the Include command is always the document name for APPLICATION TEXT and the name of standard text for STANDARD TEXT.

Example: VBDKA-TDNAME,VBDKL-TDNAME,VBDKR-TDNAME.

- The text 'Object' specifies the environment to which a text belongs.

TEXT NAME	TEXT ORIGIN
VBBK	Sales document header text
KNVV	Customer Master SD Text
VBKA	Contacts General text.
VTTK	Shipment Header Text

The 'object' is always 'TEXT' for STANDARD TEXT.

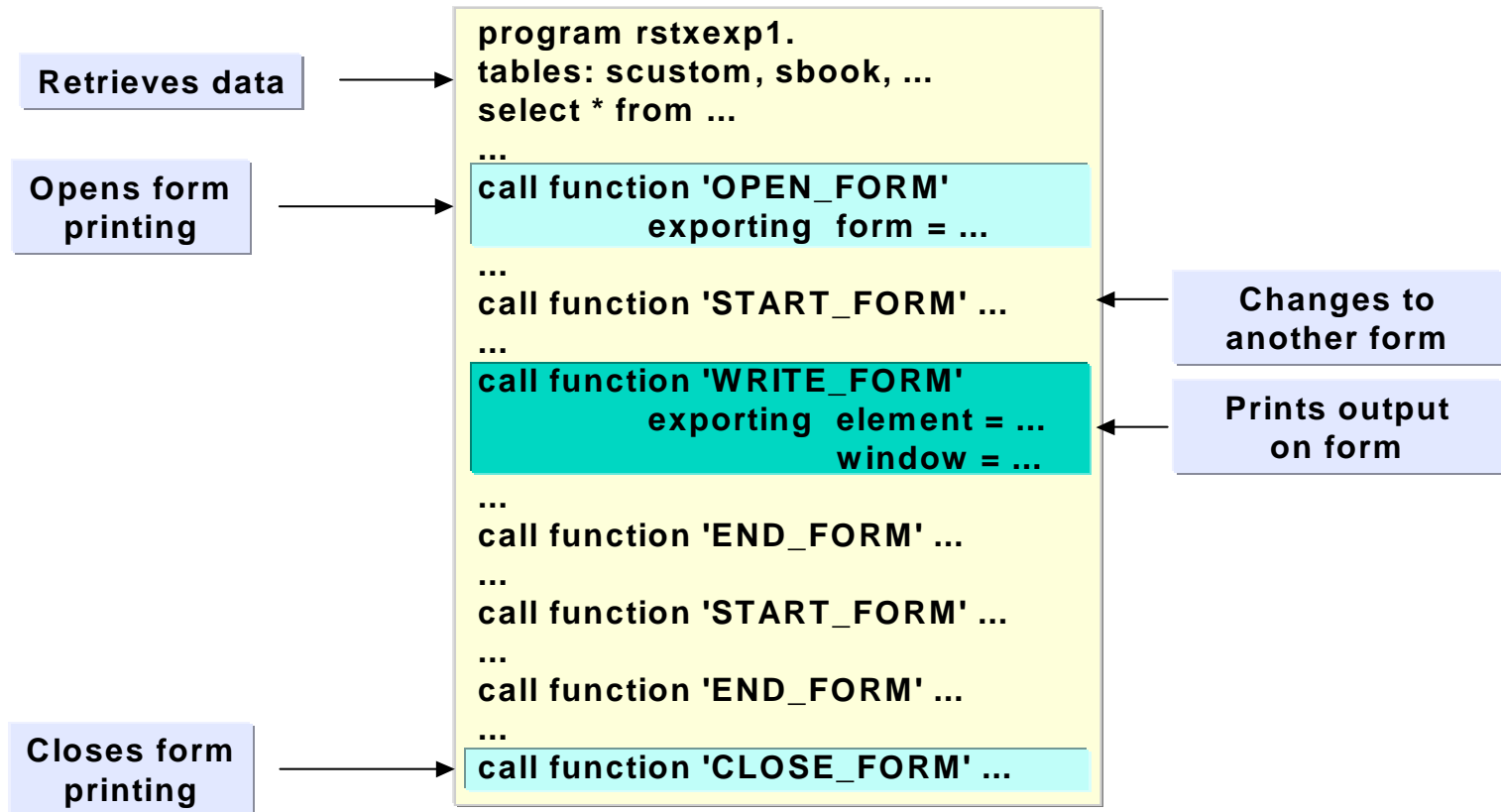
- Several different text IDs can belong to one object.
- TEXT ID
  - 0002 Sales document header note 1.
  - 0003 Sales document header note 2.

- Program retrieves the data to be printed in a Layout set.
- Structure of Programs
  - Stand alone
  - Transaction Triggered
- Communication in between program and layout set is done via execution of function calls and communication structures.
- Execution sequence of function calls
  - A layout set must be opened before being able to output data.
  - Data can be transfer as often as required.
  - At end layout set has to be closed.

## General Function calls:

- **CALL FUNCTION 'OPEN\_FORM'.**
- **CALL FUNCTION 'START\_FORM'.**
- **CALL FUNCTION 'WRITE\_FORM'.**
- **CALL FUNCTION 'END\_FORM'.**
- **CALL FUNCTION 'CLOSE\_FORM'.**

# The Structure of a Print Program



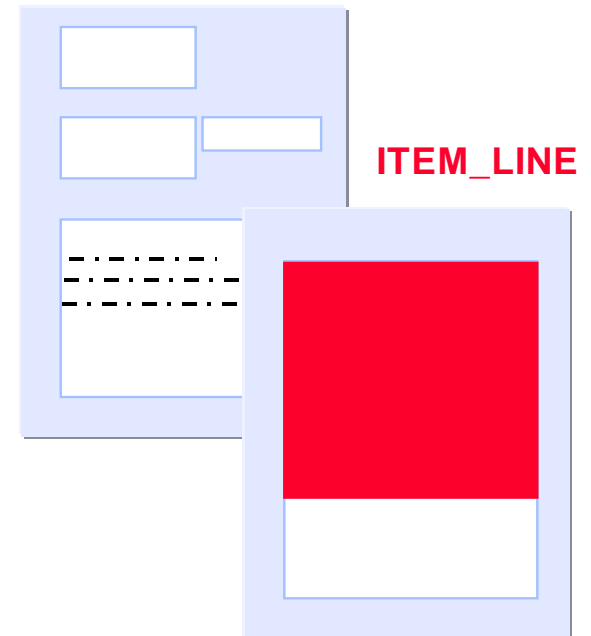
- **CALL FUNCTION 'CONTROL\_FORM'.**
- **CALL FUNCTION 'READ\_TEXT'.**

# Calling Command Using a Program

```
CALL FUNCTION 'CONTROL_FORM'
  EXPORTING
    COMMAND      = ...
  EXCEPTIONS ... = ...
```

ABAP  
program

```
. . .
CALL FUNCTION 'CONTROL_FORM'
  EXPORTING
    COMMAND = 'PROTECT'.
CALL FUNCTION 'WRITE_FORM'
  EXPORTING
    ELEMENT = 'ITEM_LINE'.
. . .
CALL FUNCTION 'CONTROL_FORM'
  EXPORTING
    COMMAND = 'ENDPROTECT'.
. . .
```





- To print barcode, follow the steps below:
- Select/Create a barcode font in SAP.
- Create a character string and include the barcode with it.
- The data need to printed as barcode should be attributed via the character string.  
e.g.    /: <BC> \*&VBAKA-WERKS&\*</>

- To print a Logo ,follow the steps below:
  1. Built a Logo. This file can be a bit map or windows meta file.
  2. Convert the Logo to a TIFF (extension TIF) file.
  3. Use program RSTXLDMC to convert the TIF file to a standard text.
  4. Print this statement text via SAP script INCLUDE command.  
e.g. /: INCLUDE ZHEX-IBMLOGO-PCL OBJECT TEXT ID ST