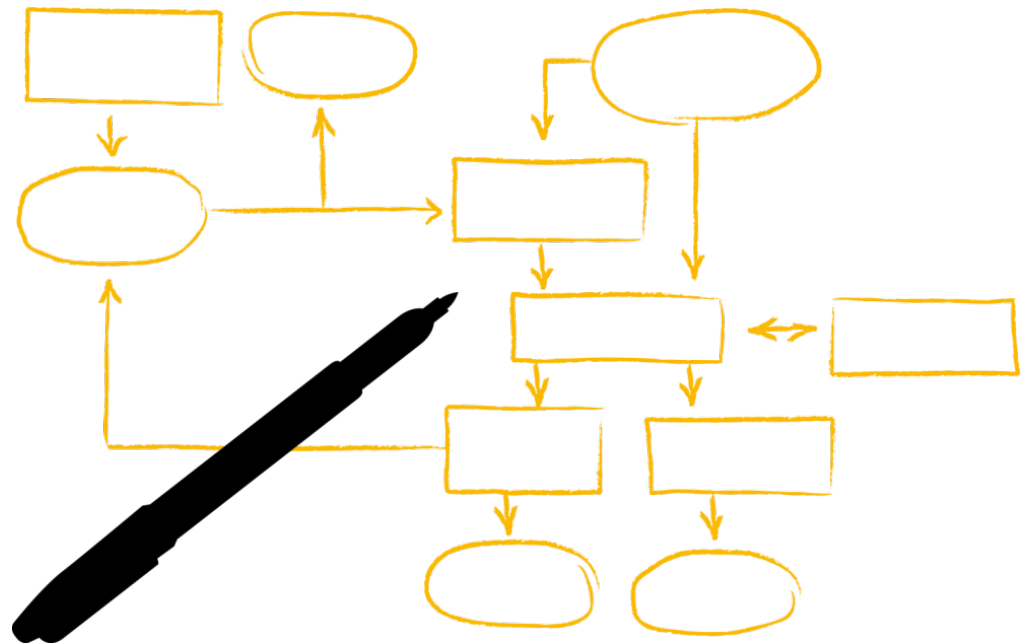


From MPIA to SAP

Carolin Hormuth,
June 02, 2015

Public



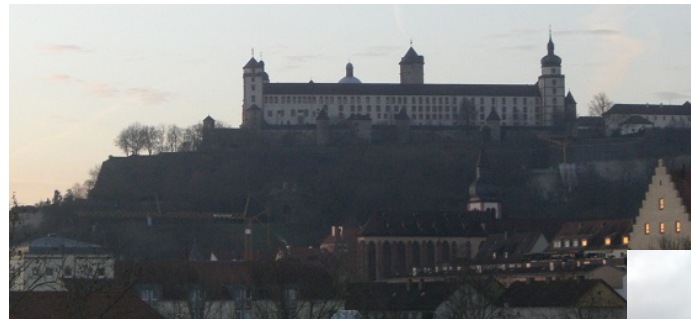


Agenda

- About me
- General information about SAP
- My current job
- Application process
- Other example areas to work

About me

- Studied Physics in Würzburg (2004-2010)
- Erasmus student in Madrid (2008)
- Diploma thesis at MPIA, title: 'Stellar and substellar companions around extra-solar planet host stars' (2009-2010)
- Developer at SAP (since 2010)

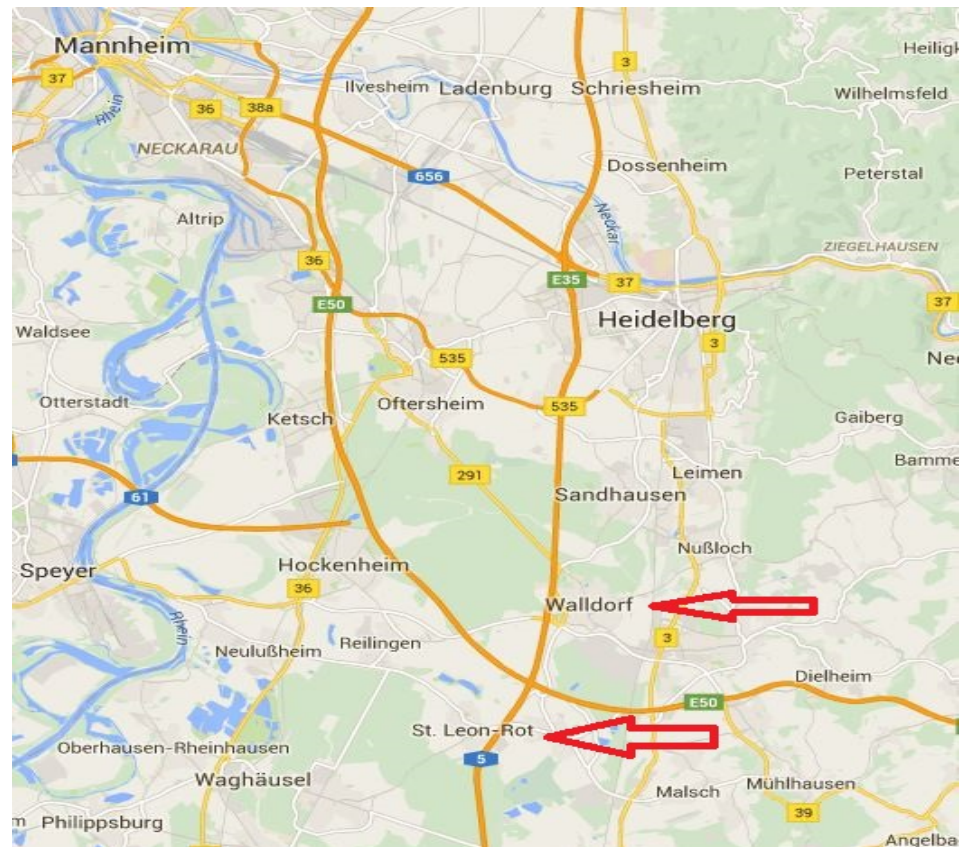


What is SAP?

- Founded in 1972 by: Hasso Plattner, Klaus Tschira, Claus Wellenreuther, Dietmar Hopp, Hans-Werner Hektor
- Multinational software corporation which is market leader in enterprise applications and software
 - Example product SAP ERP, consists of modules like SD (Sales and distribution), LE (Logistics execution), MM (Materials Management), FI (Financial accounting)
 - Other products for example CRM, SCM, PLM, SRM
- SAP HANA is the market-leading platform for real-time computing
- Locations in more than 130 countries
- 291,000 customers around the world
- Nearly 75,000 employees around the world

SAP Headquarters location

- Headquarters in Walldorf
- I am located in St Leon-Rot, 7 km from Walldorf
- About 13,000 people work there



Walldorf and Rot

Headquarters in Walldorf



Building in St Leon-Rot



My job

- Work area: Installed Base Maintenance & Support ERP SD Sales
- Position: Senior Developer
- Tasks
 - Support customers with deep product knowledge
 - Analysis of complex software issues, reported by customers (a lot of debugging)
 - Creation of coding corrections
 - Creation of documentation for complex system behavior
 - Development projects
 - Examples: Participate in new product development, implementation of legal requirements, optimization of existing coding
 - Provide knowledge transfer to colleagues (sometimes in other locations like Canada)

SAP SD

- Sales and distribution (SD) is part of SAP's main product ERP
- Exists for more than 20 years
- Still up to date with lots of new innovations
 - With the launch of SAP's in-memory platform HANA performance optimizations performed
 - S/4HANA available since this year, offers new Fiori UIs

The screenshot displays the SAP SD 'Change Standard Order 2033: Overview' interface. The window title is 'Change Standard Order 2033: Overview'. The main content area is divided into several sections:

- Header Section:** Contains fields for 'Standard Order' (2033), 'Net value' (9,00 EUR), 'Sold-To Party' (276 Carolin / Postfach 5 64 / 67895 Heidelberg), 'Ship-To Party' (276 Carolin / Postfach 5 64 / 67895 Heidelberg), and 'PO Number' (Demo).
- Navigation Tabs:** Includes 'Sales', 'Item overview', 'Item detail', 'Ordering party', 'Procurement', 'Shipping', 'Configuration', and 'Reas...'. The 'Sales' tab is currently active.
- Sales Data Section:** Contains fields for 'Sales Doc. Type' (OR), 'Req. deliv.date' (D 08.03.2015), 'Deliver.Plant', 'Complete div.' (checkbox), 'Total Weight' (0,000 KG), 'Volume' (1 CD3), 'Billing block', 'Pricing date' (16.02.2015), 'Payment card', 'Exp.date', 'Card Verif.Code', and 'Payment terms' (0001 Pay immediately w/... Incoterms CFR Hamburg).
- All Items Table:** A table with columns: Item, Material, Order Quantity, Un, S, Description, and Customer Material No. The first row shows '10 HANTASCHKE' with a quantity of 1 PC and description 'Ledertasche aus Krokodilleder'.

SD Sales Order

SAP GUI

Change Standard Order 2033: Overview

Web Dynpro

Change Standard Order 2033: Overview

Standard Order: 2033, Net value: []

Sold-To Party: 276 Carolin / Postfach 5 64 / 67895 Heidelberg

Ship-To Party: 276 Carolin / Postfach 5 64 / 67895 Heidelberg

PO Number: Demo, PO_date: []

Sales Doc. Type: OR, Standard Or... (selected), YE - S...

Req. deliv.date: D 08.03.2015, Deliver.Plant: []

Complete div.: [], Total Weight: []

Delivery block: [], Volume: []

Billing block: [], Pricing date: 16.02.

Payment card: [], Exp.date: []

Card Verif.Code: []

Payment terms: 0001 Pay immediately w/... Incoterms CFR Ha

All items

Item	Material	Order Quantity	Un	S	Description
10	HANDTASCHE	1	PC		Ledertasche aus Krok

Item Overview

Item	Material	Order Quantity	Sales Unit	Del.Blckd.	Rejected	Description
10	HANDTASCHE	1	PC			Ledertasche aus Krok

FIORI

Customer%20ABC Sales Orders

Standard Order: 2033

Search

SO	Value	Status
SO 39156	23,16 EUR	Not Shipped
SO 38630	15,97 EUR	Not Shipped
SO 38575	0,00 EUR	Not Relevant
SO 38570	399,00 EUR	Not Relevant

Sales Order 38502: 5 988,77 EUR

PO: Computers-23890, Order Total: 6 946,97 EUR

Ordered: October 14, 2014, Overall Status: In Process

Requested: October 14, 2014, Delivery Status: Not Shipped

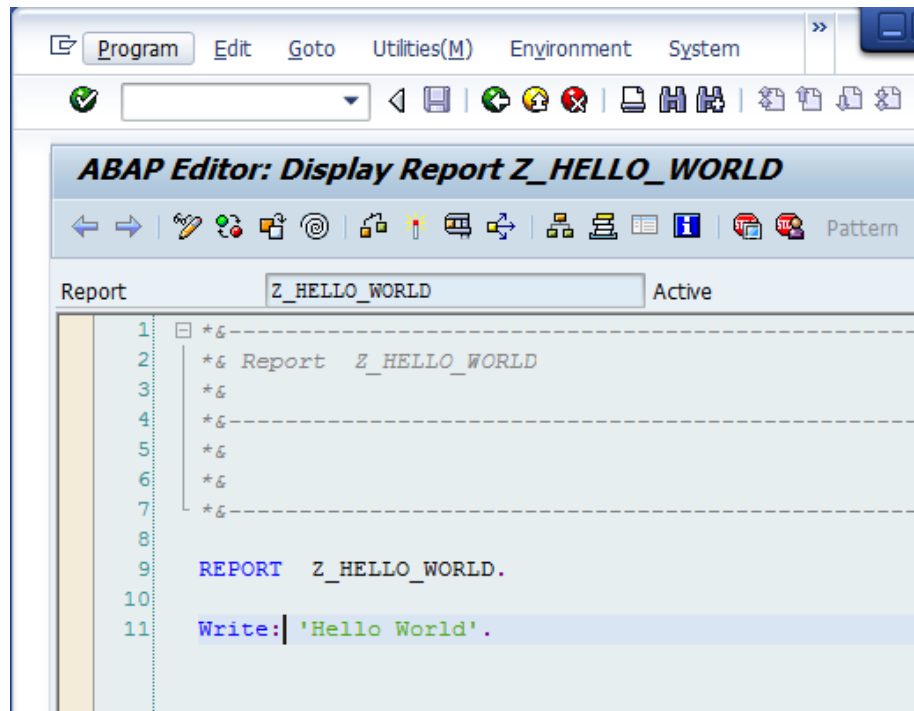
Ship To: SAP Demo Customer

5 Items

Description	Ordered	Price	Net Amount	Status Su...	Shipped
10 Oplex AIR Laptop - Scholastic Kit	4 EA	0,00 EUR	0,00 EUR	Partially Shipped	0 EA
11 Oplex AIR	4 EA	1 064,00...	4 256,00...	In Process	0 EA

ABAP – SAP's programming language

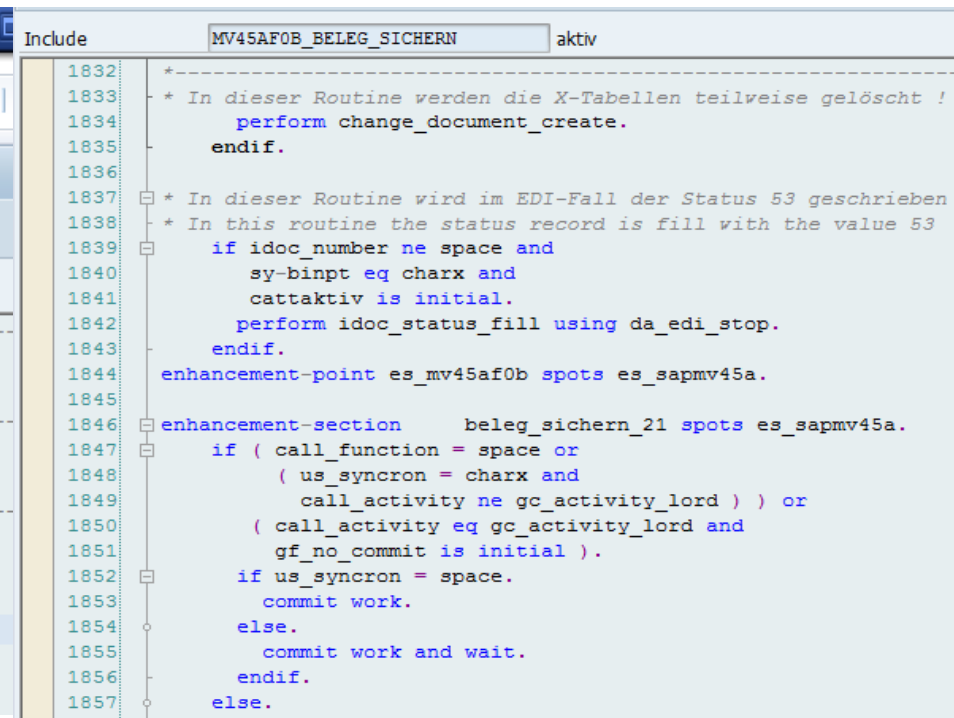
Hello World program



The screenshot shows the ABAP Editor interface. The title bar reads "ABAP Editor: Display Report Z_HELLO_WORLD". The main window displays the following code:

```
1  *&-----
2  *& Report  Z_HELLO_WORLD
3  *&
4  *&-----
5  *&
6  *&
7  *&-----
8
9  REPORT  Z_HELLO_WORLD.
10
11  Write: 'Hello World'.
```

Excerpt from our application coding



The screenshot shows an include file named "MV45AF0B_BELEG_SICHERN" which is active. The code is as follows:

```
1832  *-----
1833  * In dieser Routine werden die X-Tabellen teilweise gelöscht !
1834  perform change_document_create.
1835  endif.
1836
1837  * In dieser Routine wird im EDI-Fall der Status 53 geschrieben
1838  * In this routine the status record is fill with the value 53
1839  if idoc_number ne space and
1840  sy-binct eq charx and
1841  cattaktiv is initial.
1842  perform idoc_status_fill using da_edi_stop.
1843  endif.
1844  enhancement-point es_mv45af0b spots es_sapmv45a.
1845
1846  enhancement-section  beleg_sichern_21 spots es_sapmv45a.
1847  if ( call_function = space or
1848  ( us_synchron = charx and
1849  call_activity ne gc_activity_lord ) ) or
1850  ( call_activity eq gc_activity_lord and
1851  gf_no_commit is initial ).
1852  if us_synchron = space.
1853  commit work.
1854  else.
1855  commit work and wait.
1856  endif.
1857  else.
```

ABAP debugger

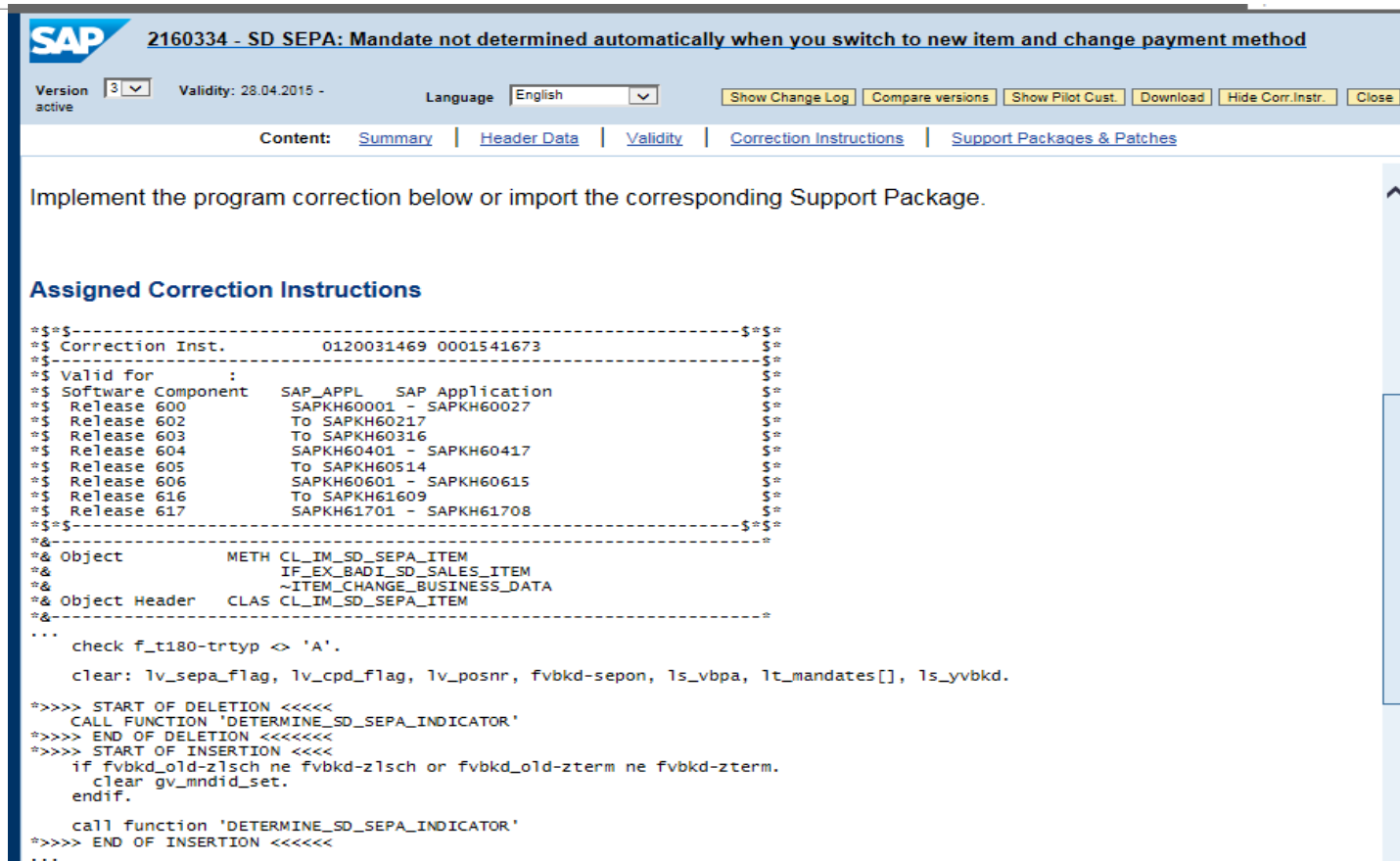
The screenshot displays the ABAP Debugger (Exclusive) for session y57tdc00_Y57_50. The main window shows the source code for program SAPMV45A, form BELEG_SICHERN, at line 111. The code includes data declarations, comments, and logic for handling EDL delivery plans. The 'ABAP and Screen Stack' window on the right shows the current call stack, with the current event being a FORM event for BELEG_SICHERN. The 'Variables' window at the bottom shows the current values of variables: VBAK-VBELN (0000014236), VBAK-ERDAT (20150526), VBAP-POSNR (000000), and VBAP-MATNR (highlighted).

```
83 data: ls_message type bapiret2,  
84       lt_message type bapirettab,  
85       lv_message type string.  
86  
87 enhancement-point beleg_sichern_04 spots es_sapmv45a s  
88 * damit beim Unvollständigkeitsdialog die VBLB-Daten e  
89 * und nicht vom unten folgenden CLEAR VBLB gelöscht we  
90 * wurde eingebaut wegen Verbuchungsabbrüchen bei Anleg  
91 * Liefersperre in der Position  
92 LOCAL: vblb,  
93       svblb_subrc,  
94       svblb_tabix.  
95 local: gv_msr_error.  
96  
97 IF vbak-abdis NE space.  
98   CALL FUNCTION 'SD_XVBLB_YVBLB_GET_FOR_UPDATE'  
99     TABLES  
100       fxvblb = xvblb  
101       fyvblb = yvblb  
102     EXCEPTIONS  
103       OTHERS = 0.  
104  
105 * Wenn es sich um einen EDL-Lieferplan mit Feinabrufere  
106 * der Feinabrufhorizont hier geprüft werden, da er zw  
107 * definiert, auf dem Einteilungsbild aber nicht vorhan  
108 * deswegen ungefüllt sein kann.  
109 IF vbak-abdis NE chare AND  
110   ( vbak-vbtyp EQ vbtyp_lp_edl OR  
111     vbak-vhkl1 EQ vhkl1_lp_edl ).
```

St...	Sta...	S.. Event Type	Event	Program
9		FORM	BELEG_SICHERN	SAPMV45A
8		FORM	FCODE_SICH	SAPMV45A
7		FORM	FCODE_BEARBEITEN	SAPLV00F
6		FUNCTION	SCREEN_SEQUENCE_CO...	SAPLV00F
5		FORM	FCODE_BEARBEITEN	SAPMV45A
4		MODULE (PAI)	FCODE_BEARBEITEN	SAPMV45A
3		PAI MODULE	FCODE_BEARBEITEN	SAPMV45A
2		PAI SCREEN	4001	SAPMV45A
1		TRANSACTION	VA02(VA02)	

S...	Variable	V...	Val.	C...
	VBAK-VBELN		0000014236	3
	VBAK-ERDAT		20150526	3
	VBAP-POSNR		000000	3
	VBAP-MATNR			2

Example coding correction – SAP note



SAP 2160334 - SD SEPA: Mandate not determined automatically when you switch to new item and change payment method

Version active: 3 | Validity: 28.04.2015 - | Language: English | Show Change Log | Compare versions | Show Pilot Cust. | Download | Hide Corr.Instr. | Close

Content: [Summary](#) | [Header Data](#) | [Validity](#) | [Correction Instructions](#) | [Support Packages & Patches](#)

Implement the program correction below or import the corresponding Support Package.

Assigned Correction Instructions

```

*$$$-----$*
*$ Correction Inst.      0120031469 0001541673          $*
*$-----$*
*$ Valid for          :                               $*
*$ Software Component  SAP_APPL  SAP Application     $*
*$ Release 600        SAPKH60001 - SAPKH60027         $*
*$ Release 602        To SAPKH60217                   $*
*$ Release 603        To SAPKH60316                   $*
*$ Release 604        SAPKH60401 - SAPKH60417         $*
*$ Release 605        To SAPKH60514                   $*
*$ Release 606        SAPKH60601 - SAPKH60615         $*
*$ Release 616        To SAPKH61609                   $*
*$ Release 617        SAPKH61701 - SAPKH61708         $*
*$-----$*
*&-----$*
*& Object              METH CL_IM_SD_SEPA_ITEM        $*
*&                     IF_EX_BADI_SD_SALES_ITEM     $*
*&                     ~ITEM_CHANGE_BUSINESS_DATA   $*
*& Object Header       CLAS CL_IM_SD_SEPA_ITEM        $*
*&-----$*
...
  check f_t180-trtyp <> 'A'.
  clear: lv_sepa_flag, lv_cpd_flag, lv_posnr, fvbkd-sepon, ls_vbpa, lt_mandates[], ls_yvbkd.

*>>>> START OF DELETION <<<<<<
  CALL FUNCTION 'DETERMINE_SD_SEPA_INDICATOR'
*>>>> END OF DELETION <<<<<<
*>>>> START OF INSERTION <<<<
  if fvbkd_old-zlsch ne fvbkd-zlsch or fvbkd_old-zterm ne fvbkd-zterm.
    clear gv_mndid_set.
  endif.

  call function 'DETERMINE_SD_SEPA_INDICATOR'
*>>>> END OF INSERTION <<<<<<
...

```

Required skills (from job announcement)

- University degree (Bachelor or Master) in Information Technology, Business Administration, Chemistry, Engineering, Physics or Mathematics
- Strong analytical skills
- Ability to adapt quickly to new situations and tasks
- High customer and service orientation with a strong focus on quality
- Good ABAP programming skills. Alternatively good programming skills in at least one common programming language. Additionally good web development skills using technologies like JavaScript, HTML5, Git
- Business & technical knowledge in SAP ERP SD is highly welcome but not mandatory
- You are a good team player and have the willingness to work in virtual and cultural diverse teams

Application process

- Find a job at www.sap.com/careers
- Apply via the online tool
- Generally one personal interview
- It's ok to apply again for a job at SAP if you get refused
- Many different teams and areas where one could work



What's working like when you start?

- You get a personal mentor who explains/shows you a lot in the beginning
- You receive several class room trainings in SAP's university
- In our team we sit in an open plan office
- Work closely together in the team
- After some time, you become an expert in one area



Other examples of areas to work

- **Product development**
- **Mobile applications**
- **New technologies like SAP HANA**
- **Customer Service and Support**
- **Consulting**
- **Data analysis**
- ...



Other example job from ex-MPIA colleague

- Work area: Customer Service and Support
- Position: Support Engineer
- Main focus: configuration and performance optimization for MS SQL, Sybase ASE and IQ databases.
- Everyday tasks:
 - Communication with customers about current issues and planning future activities
 - Providing support in critical situations, if necessary forwarding problem cases to the development
 - Analyzing configuration and performance of the customer systems, remote and on-site
 - Performing database query optimization
 - Taking part in the project planning (this helps to prevent problems in the future)
 - Performing knowledge transfer sessions for colleagues and customers



Thank you

Contact information:

Carolin Hormuth
carolin.hormuth@sap.com



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Headline area

White space

Drawing area