CHAPTER 1

Introduction to Sales and Distribution



elcome to the world of SAP Sales and Distribution!

In this chapter, we will start with the basics about the SAP ERP system. We will discuss the various application areas and how they are structured. You will see that there are different menus offered to end users (who have to run transactions) and administrators (who configure or set up the system). We will introduce some basic transactions that you will need to know before you proceed with the rest of the book.

Sales and Distribution (SD) is one of the most important application areas in the SAP ERP system. In this chapter, we will explain how a general sales cycle is carried out in SAP. We will also give you an idea of how this book is structured.

Introduction to SAP

SAP is one of the most popular enterprise resource planning (ERP) solutions in the world. It offers an integrated system that supports major business functions such as sales, production, and financial accounting. Over the years, SAP has been enhanced, and new versions have been released. The older SAP R/3 has now developed into the SAP ERP system on which we have based this book.

The latest version of SAP ERP at this time is ERP Central Component, Release 6.0, often referred to as ECC 6.0. It consists of several application components closely integrated with one another. SD is one of these application components.

When any organization looks to implement SAP ERP, it first studies its business processes and decides on the ones that are to be mapped in SAP. Based on this, it can select the application components that are relevant. For example, a manufacturing organization may require a different set of applications than a service provider or a trading company.

The Sales and Distribution application caters to the business processes associated with customer order fulfillment. SD has several components offering diverse functionality. For example, there are components for pricing (which control how prices and costs are determined in a sales transaction), availability check (that control how product stocks are allocated to orders from various customers), and credit management (that check the credit worthiness of the customer before a transaction is permitted). Again, you have to select which processes are applicable to you.

In an integrated system, each application has to mesh with other related applications to ensure continuity and consistency. This is one of the strong points of the SD application. Next we'll cover the first steps in accessing SAP. As we go through the application in this book, we will discuss each step in further detail.

First Steps in SAP

We'll now discuss some of the basic menus, screens, and transactions that you need to know when you log on to SAP. As we go along, we will also discuss the various features and applications that appear on each screen and how they relate to each other. This will help you understand the concepts better.

Easy Access Menu

After you log on to SAP, the first screen that greets you is the SAP Easy Access menu (Figure 1.1).

FIGURE 1.1 SAP Easy Access menu



You can customize this menu based on your role in the organization. Specifically, you can arrange processes and transactions that you require for easy access and you can omit other transactions that you never use from the list.

Users can access transactions and run reports from this menu. However, they cannot carry out administrative functions from here. Those functions will be covered in the Customizing menu that we will discuss soon. SAP ERP offers several business applications. As you can see, the major application areas in this menu are Accounting, Human Resources, and Logistics:

Accounting If you drill down this menu, you will find diverse applications listed. Some of them are for financial accounting/controlling (FI/CO), financial supply chain management, and Project Systems (PS).

Human Resources All the applications related to human resources management are grouped here. For example, you will find applications for personnel management, time management, payroll, and travel management.

Logistics All the applications related to logistics functions are contained in this menu. Materials Management (MM), Production (PP), and Plant Maintenance (PM) are some of the applications listed here. The focus of this book—Sales and Distribution—is an application that falls under the Logistics menu. Logistics Execution (LE) is another application that is relevant here, because it covers the product delivery processes.

The Customizing Menu

You can configure and customize the SAP system to meet the specific requirements of your organization. The Sales and Distribution module has been developed with several business processes and various industries in mind. Some of these processes may not be relevant to your business. On the other hand, there could be some specific requirements that you will need to map in SAP through configuration.

During configuration, you can carry out various settings that control the process setup, such as the following:

- Activating or deactivating a certain process for your organization
- Configuring the look and feel of a transaction screen for a user
- Controlling which fields on the screen can be accessed, changed, or displayed
- Setting up a smooth flow of data from one document to another to ensure consistency and avoid the duplication of manual effort

You can access the Customizing menu in SAP using the following path: SAP Easy Access Menu > Tools > Customizing > IMG > Execute Project (transaction code SPRO).



NOTE A *transaction code* is a shortcut to a specific transaction in SAP. The menu path described would also lead you to the same destination. Whenever a transaction code is available, we will mention it alongside the path. You will also find a list of important transaction codes in the appendix.

This transaction code leads you to the Display IMG screen, as shown in Figure 1.2. You will find a menu with the various applications listed. It is called SAP Customizing Implementation Guide (or IMG for short). All the customizationrelated steps will be launched from this menu. If you click any application, you will find another menu that leads you to various submodules. Based on the exact path listed in the book, you can reach the specific transaction in the menu where the customization setting is to be carried out.

FIGURE 1.2 Customization menu

Imple	ementatio	on Guide Edit Goto Additional Information Utilities System Help
0		0 () 0 0 0
Dis	play I	MG
8		Existing BC Sets & BC Sets for Activity & Activated BC Sets for Activity Release Notes
Stru	cture	
~ 3	, s	AP Customizing Implementation Guide
	B¢⊅	Activate Business Functions
Þ	-	SAP NetWeaver
Þ	<u>s</u>	Enterprise Structure
D	2	Cross-Application Components
D		Auto-ID Infrastructure
Þ	_	SAP xApp Resource and Portfolio Management (SAP xRPM)
Þ	-2g	Financial Accounting
D		Financial Accounting (New)
D		Financial Supply Chain Management
D		Strategic Enterprise Management/Business Analytics
D	B,	Controlling
D	B,	Investment Management
D	B	Enterprise Controlling
₽	B,	Real Estate
D		Flexible Real Estate Management (RE-FX)
D	B,	Logistics - General
D	B	Environment, Health and Safety
₽	r an	Sales and Distribution
₽	B,	Materials Management
D	B	Logistics Execution
D	D:	Quality Management
₽	r an	Plant Maintenance and Customer Service
₽	B,	Customer Service
₽	B	Production
₽	B	Production Planning for Process Industries

In this book, we also refer to the Display IMG screen as the Customizing menu or just IMG while explaining menu paths.

The focus of this book is the Sales and Distribution application. However, to complete the configuration steps, we will also touch upon some of the other topics, listed in IMG, under the nodes:

- Enterprise Structure
- Logistics General
- Logistics Execution

In this book, we cover all the important settings that an SD expert should know. However, in an integrated system, a business process usually spans more than one application. You will need to work with experts in other areas (such as MM, FI/CO, WM, and so on) to complete the end-to-end process setup.

The Basic Sales Cycle

We'll now discuss the basic set of transactions that are most important in the SD area. The term *sales cycle* refers to the creation of a sales order document followed by delivery and a billing document. As we go along, we will tell you the transaction codes at each step. We will also point out how this book is structured to help you understand each area and functionality in the sales cycle.

Create a Sales Order

To create a sales order, follow the menu path SAP Menu > Logistics > Sales And Distribution > Sales > Order > Create (VA01). Again, note that the transaction code mentioned in parentheses after the path will lead you to the same screen.

Figure 1.3 shows the sales order creation screen. Before you create a sales order, you must enter the organizational data such as sales organization, distribution channel, division, sales office, and sales group. This maps the organizational entities in your company.

To learn about how to set up the organizational structure in SAP, refer to Chapter 2, "Enterprise Structure." That chapter will explain how to configure SAP so the organizational entities are created and assigned to one another.

You must also specify the type of order document being created. After entering this information, you can proceed to the next screen, the Overview screen (Figure 1.4).

FIGURE 1.3 Creating a sales order

Create Sales O	rder: I	nitial Screen
Create with Referenc	e 🔔 Sale	es 🔔 Item overview 🔔 Ordering party
Order Type	ZGRO	Rush Order
Organizational Data		
Sales Organization	9090	Galaxy Musicals USA
Distribution Channel	97	Reseller
Division	99	Default
Sales Office		

FIGURE 1.4 Create Standard Order: Overview screen

Sales document Edit Goto Extras Environment System Help						
ସେ ସାହନ୍ତି ଭାଇମାର ସେମ୍ବର ଓ ସେ						
Create Standard Order: Overview						
원 ([요 🏟 (신)) 🎹 Orders 🗵						
Standard Order Net value 854.05 USD						
Sold-to party 10828 Music Shoppe // Phoenix AZ						
Ship-to party 10828 Music Shoppe // Phoenix AZ						
PO Number 132319561 PO date 29/29/2009						
Stat Term evenuew Kern detail Ordering party Mocurement Shipping Configuration Reason for rejection Reg. delucate 0 0/24/28/2 Deliver Plant -						
All Items Millerins Order Guanity SU Description S Pint Route Customer Material Numb	HCa	D., HgLv	It C First date	Batch	Cn.	Ar
101628 1 EA Acoustic Guitar EX43 🗹 9001	TAN		009/24/2009		PR80	
201625 1EA Drums 123 🗹 9001	TAN		009/24/2009		PR80	_
			009/24/2009			
			009/24/2009			
						< F
dri de prin dri s						

The sales document consists of header, item, and schedule line data. At the header level, you specify the details that are applicable to the entire document, such as the customer number (sold-to party) and the purchase order reference number. At the item level, you enter the products ordered. Details such as the material number, quantity, and item price, and so on, will be different on each line. The schedule line data pertains to delivery-related details such as delivery dates and delivery quantities.

You'll use master data at every step of the transaction. Data about your regular customers or the products and services offered are examples of master data. You have to maintain the repository of master data before using it in transactions. To learn more about master data setup, refer to Chapter 3, "Master Data in SD."

From the overview screen of a sales order, you can branch out to different screens to get into various aspects of the process such as pricing and availability dates. To navigate between screens, you can click the tabs that appear on the page. An alternative way is to use the Goto menu at the top of the screen. It lists all the detail tabs at the header and item levels.

For example, if you want to know all the partner functions associated with the sales transaction, you can select Goto > Header > Partner. As shown in Figure 1.5, this tab lists all the partners such as the sold-to party, ship-to party, bill-to party, and payer for this order. If you have different partners at each line item level, you can specify them on the Partners tab (which you can reach by selecting Goto > Item > Partner).

FIGURE 1.5 Sales order: Header Data, Partners tab

Sal	les document Edit O	Goto Extras I	Environment System	Help					
\odot		- (1 🔲	© @ @ 🖹 M	២ ខេមភេខ 6	D				
Cr	eate Standar	d Order: I	Header Data						
8	6								
Stan Sold	nderd Order d-to party	10028	Purchase order no. Music Shoppe / / Pho	senk AZ					
Di	splay Range PARAL	L All partners	Billing Document	Payment cards / Accoun	ting C	onditions Account	t assignment Partners	Texts Order Data	
E	Partn.Funct.	Partner	Name	Street	Postal c.	Cty	Partner Definitin		
Ш	AG Sold-to Party	10028	Music Shoppe			Phoenix			
Ш	RE Bill-to party	10027	Music Store			Trenton		•	
Ш	RG Payer	10028	Music Shoppe			Phoenix			
Ш	WE Ship-to party	10028	Music Shoppe			Phoenix			
Ш		ē							
Ш		ē							
Н		0							
Н		0							
H								_	
IН		<u>u</u>						_	
H		2							
ſΗ		8							
H		3							
Н		8						-	
					_				
P		1000							
			9 <u>1</u>						

Another screen is the Texts tab, which appears at the header and item levels. The menu path is either Goto >> Header >> Text or Goto >> Item >> Text. Here you store all the text messages and instructions (as shown in Figure 1.6) that you want to flow with the order.

FIGURE 1.6 Sales order: Header Data, Texts tab

000	M2E (1) (800)	
Sales document Edit Goto Extr	tras Environment System Help	
Ø 4 (
Create Standard Orde	ler: Header Data	
8		
Standard Order Seld-to party 10028	Purchase order no. 132319561 Music Shoppe // Phoenix AZ	
Sales Contract data Ship;	pping Billing Document Payment cards Accounting Conditions Account assignment Partners Texts Order Data	
Txt ty Fem Header Header note 1 Header note 2 Header note 3 Header note 3 Header note 4 Term supplement text Term of delivery Shoping instructions Term of delivery Contract riders (clauser Generally for header of c Customer request Customer request Katernal Bales Note		
		▶ VA01 🖼

You can customize the setup for partners, texts, and outputs as per your requirements.

In partner determination, you can control which partner functions are of importance to you and make them mandatory. Text determination helps you set up how the texts are copied from one document to another. Output determination lets you customize the outputs from sales documents and transmit them to the business partners. For example, you can use it to send out a copy of an order confirmation document to the customer in print or by email or EDI.

Chapter 4, "Partner, Text, and Output Determination," will discuss how to maintain settings related to partners, outputs, and texts.

One of the most important parts of a sales transaction is the price that the customer has to pay. The price can be entered manually in the sales order. However, if your product prices are going to be stable for certain duration, you can maintain price records and set up automatic price determination to avoid manual entry. To see how the exact price has been computed for a sales item, select Goto > Item > Conditions. As shown in Figure 1.7, the pricing schema gives you the details of the various pricing *conditions* in it. Pricing conditions are things such as base prices, discounts, freight conditions, or taxes. Certain pricing conditions can apply to the entire order (such as total freight charges). These are listed in the Header conditions tab.

To learn how to customize pricing, visit Chapter 5, "Pricing and Tax Determination."

F۱	G١	U	R	E '	1.	.7	Sales order: Item Data, Conditions	tab
----	----	---	---	-----	----	----	------------------------------------	-----

4 F FI	1 4 6	26 B 🗐 🖓									
es Document	titem 10	item (category	/ TAN	Standard Item						
torial	1628	- Acous	tic Guita	ar EX43							
Sales A	Sales B Contract da	ata Shipping Billi	ng Docu	iment Co	nditions Account a	issignn	Schedule lie	Partner	s Texts Order Da	nta Status	
		1 24 14-1	_		1 172 20 1150						
tγ		1 EA Net			1,172.30 050						
		Tax			0.00						
Pricing Ele	ments										
N CnTy	Name	Amount	Crcy	per U.,	Condition value	Curr.	Statu, NumC. O.	CCon. Un	Condition value	CdC. St.	
CPR00	Price	1,234.00	USD	1 EA	1,234.00	USD	1 EA	1 EA	0.00		ĺ
	Gross Value	1,234.00	USD	1EA	1,234.00	USD	1EA	1EA	0.00		
ZGN1	Customer/Material	5.000	%		61.70-	USD	0	0	0.00		
	Discount Amount	61.70	-USD	1EA	61.70-	USD	1EA	1EA	0.00		
	Rebate Basis	1,172.30	USD	1EA	1,172.30	USD	1 EA	1 EA	0.00		
	Net Value for Item	1,172.30	USD	1 EA	1,172.30	USD	1 EA	1 EA	0.00		
		1,172.30	USD	1EA	1,172.30	USD	1 EA	1EA	0.00		
	Net Value 2	1,172.30	USD	1EA	1,172.30	USD	1EA	1EA	0.00		
	Net Value 3	1,172.30	USD	1EA	1,172.30	USD	1EA	1EA	0.00		
AZWR	Down Pay /Settlement	0.00	USD		0.00	USD	0	0	0.00		
MWST	Output Tax	0.000	96		0.00	USD	0	0	0.00		
	Total	1,172.30	USD	1EA	1,172.30	USD	1EA	1EA	0.00		
	Cash Discount	3.000	-%		35.17-	USD	0	0	0.00	V	
☐SKT0											

Availability check controls how product availability is checked and the date on which you can commit the delivery to the customer. As shown in Figure 1.8, as soon as you enter a material in the sales order, the system can be configured to carry out an availability check and display the earliest date on which this product can be delivered.

In a sales order, you can always check the schedule lines by selecting Goto > Item > Schedule Lines. As shown in Figure 1.9, you can check the dates on which the quantity can be confirmed.

Chapter 6, "Availability Check, Transfer of Requirements, and Backorders," will cover this topic in greater detail.

FIGURE 1.8 Availability Control

Standard C	order: Availability	Control			
Complete dlv. D	elivery proposal Continue	ATP quantities	Scope of check	Other plants	
ltem Material	10 Schd. Line 1628 Acoustic Guitar EX43	1			
Plant	9001				
Req.deliv.date	09/24/2009	Open Qua	ntity		1 EA
End lead time Fix qty/date	10/01/2009	Max.Part.I	Deliveries	9	
One_time del on	an del dte : not nossible /				
Dely/Conf.Date	09/24/2009 / 09/24/20	09 Confirmed	d Quantity		0
Complete delivery	/				
Dely/Conf.Date	09/28/2009 / 09/24/20	09			V
Dely proposal					
Dely/Conf.Date	09/28/2009 / 09/24/20	09 Confirmed	qty		1

FIGURE 1.9 Sales order: Schedule Lines tab

Create Standard C	rder: Item Da	ata							
HAPH	61 26 66 66 1	61							
Sales Document Item 10 Material 162	8	Item category T Acoustic Guitar EX43	AN Standard Hem						
Sales A Sales B Cont	ract data Shipping	Billing Document	Conditions Ac	count assignmen	schedule lines	Partners Texts	Order Data	Status	
Fixed date and qty		Order Quantity		1 EA					
Quantities/Dates		benvered ety							
F Delivery Date Ord	er quantity Ro	unded qty Co	onfirmed Qty S.	Delivery block	Delivered qty	Committed qty	Sch. Purcha	ise R., Requisn I.,	
D09/24/2009	1	1	@EA	5			CP	0	
D09/28/2009	0	0	1 EA	2			CP	0	-
D				5				0	

We have now covered some of the major screens in a sales order. Other sales documents may also need to be configured to meet different business processes. For example, you may have separate sales documents for returns or for presales such as inquiries and quotations.

Chapter 7, "Sales," will discuss the setup of sales documents for various business scenarios.

Creating a Delivery

To create a delivery, use the menu path SAP Menu > Logistics > Logistics Execution > Outbound Process > Goods Issue For Outbound Delivery > Outbound Delivery > Create > Single Document > With Reference to Sales Order (VL01N).

On this screen, you specify the shipping point (which is another organizational unit related to your plant), as shown in Figure 1.10.

Delivery with Order Reference
W/o Order Reference 🕞 🧟 🖶 🕼 🐌 🛒 🌧 🖽 Post Goods Issue
9001 💌
09/24/2009
12348

FIGURE 1.10 Creating an outbound delivery

On the delivery overview screen, the relevant data has been copied over from the reference sales order. Product details and delivery quantity are the key fields here (refer to Figure 1.11).

From this step onward, the logistics processes of picking, packing, transportation planning and execution, and goods issue are carried out. The process extends all the way up to the goods leaving your premises and traveling to the customer's location.

The process is so vast that it has been placed under a separate application named Logistics Execution. In the customization menu, you have to refer to this node to maintain settings for deliveries.

To study the process in detail, refer to Chapter 8, "Shipping and Transportation."

FIGURE 1.11 Delivery Overview screen

0	C G Q = H H 2 2 5 5	16	2					
Delivery 800152	84 Display: Overview							
(791) F.4 (5)2	Post Goods Issue							
Outbound deliv. 80015284 Ship-to party 10031 Item Overview Picking Load Pick Date/Time 09/22/2009	Document Date 09/17/2009 Jazz Retailers // San Francisco CA ing Transport Status Overview Goods 00:00 OvrilPickStatus C	Move	emeni ully pi	t Data				
All Items	OverallWMStatus	N	o WM	trnsf ord rec	łd			
Itm Material	Description	Pint	SLo.	Deliv. Qty	U.	Picked	U.,	Batch
10 1628	Acoustic Guitar EX43	9001	0001	1	EA	1	EA	
	-				-			

Creating a Billing Document

The last step in the sales cycle is to bill the customer for the goods delivered or the service rendered. To create a billing document, the path is as follows: SAP Menu > Logistics > Sales And Distribution > Billing > Billing Document > Create (VF01).

A billing document is created with reference to either a sales order or a delivery. A correction document such as a credit or debit note can also be set up from this transaction. Enter the documents that are to be billed, and click Execute (Figure 1.12).

FIGURE 1.12 Creating a Billing Document

Billing document	Edit Got	to Settings System Help				
Ø		4 🛛 🗘 🎯 🕲 🗎 🖡		9		
Create Billi	ng Do	cument				
0 60 🧟 Billing	due list 🛓	🤮 Billing document overview 匪	Selection list 🕀 🛃			
Default data Billing Type Billing Date	Z2	Galaxy Invoice 🗈 S	ierv.rendered			
Document	Item	SD document categ.	Processing status	Bili	Cancild bill	M
80015289						

Again, you will observe that all the critical data is copied over from the reference document.

We mentioned the areas of pricing, outputs, and text in the context of sales documents. These also appear in the subsequent documents such as deliveries and billing documents. Chapter 9, "Billing," focuses exclusively on billing documents.

After a billing document is created, it is released to accounting. This updates all the relevant general ledger accounts with the transaction amounts. This is the interface between SAP's SD and FI/CO applications.

Some organizations require that billing the customer and updating the revenue books should occur at different times. The revenue recognition functionality helps you meet these requirements.

The settings for account assignment and revenue recognition are carried out within the SD module. Hence, it is important to know how they are controlled and determined. Chapter 10, "Account Assignment and Revenue Recognition," will help provide this perspective.

Credit management, material determination, serial numbers, and batch management are some of the other topics that are covered in Chapters 11 to 13.

The final chapter in this book is Chapter 14, "Advanced Techniques." It covers some of the more sophisticated tools and techniques offered by SAP.

This outline of a simple sales cycle should help you perceive the overall structure of the book. The actual processes can be very complex and diverse. In each chapter, we will cover the complex variations as well.

Getting Help

At this stage, we'll discuss the resources available to you if you are in the middle of a transaction and need to know more about any of the fields appearing on the screen.

From the transaction screen, you can get further details about a field by pressing the F1 key (the shortcut key for accessing Help) or by clicking the Help icon ③.

For example, in the sales order create transaction (VA01), if you need further information about the Net Worth field, you can access Help. As shown in Figure 1.13, the Help screen gives you more information about the field. In some cases, it also provides further links to learn more about some related important terms.

FIGURE 1.13 Using Help

○ ○ ○ M2E (1) (8	00)					
Sales document Edit Goto Extras Environment System Help						
Ø 4 目 6 G G 1 日 前 前 1 名 2 A 名 1 ③						
Display Standard Order 12369: Overview						
[· · · · · · · · · · · · · · · · · · ·						
Standard Order 12369 Net value 1,768.10 USD Sold=to.party 10828 Musis Shoppe // Proents AZ Imm						
Ship-to par O O Help - Display Standard Order 12369: Overview						
PO Number	000	Technical Information				
Sales Net Value of the Sales Order in Document Currency Req.del The total value of all items in the sales document, after any discounts and surcharges are taken into account. The value is expressed in the document currency. Delivery Billing b Payment Payment Order re All item 18 18	Screen Data Program Name Screen number OUI Data Program Name Status Field Data Table Name Field Name Data Bernent Det Supplement	SAPMV45A 4021 SAPMV458 U VBAK NTRR NTRR NTRR NTRR AK 0	Cn			
Application help Technical Information 22	Field Description fo Screen Field Program Name Screen Number	r Batch Input VEAK-NETWR SAPM/45A 4001				
	V Navigate 💥		D VAO3 P			

Clicking the Technical Information button at the bottom of the Help screen gives you more technical data about this field, such as the table name (VBAK) and field name (NETWR) where the data in this field is stored. We will discuss the technical topics such as database tables in the next section of this chapter.

SAP Help is also available on the Web at http://help.sap.com.

SAP also releases notes on its Online Service Marketplace website at https:// support.sap.com/support. You will need login information from SAP to access this website. In this book, we have provided reference to such notes (also called *OSS notes*) where applicable.

Database Tables

During the discussion on sales cycle, you saw several transaction screens. Users access and enter data in the system using transaction codes. In the background, all this data is stored in database tables. As you learn more about configuration, it will be very helpful to understand and know how to access records from the database tables.

The first step is to know the important table names—at least the names of the tables commonly used in the SD application. Table 1.1 lists some of the most important tables. Once again, for convenience of understanding, we have tried to arrange them according to the transactions in the basic sales cycle. The appendix contains a list of all the important tables related to SD.

At this stage, do not try to remember the table names. It is more important to understand the concepts. As you progress further, however, you should make yourself familiar with these names.

Transaction	Table Name	Description
Sales orders	VBAK	Order header
	VBAP	Order item
	VBEP	Order schedule lines
Delivery	LIKP	Delivery header
	LIPS	Delivery item
Billing	VBRK	Billing header
	VBRP	Billing item
General process information	VBFA	Document flow
	VBUK	Header status
	VBUP	Item status

TABLE 1.1 Database Tables in SD

We'll now discuss how to access database records and explore the structure of a table.

Data Browser

The *data browser* allows you to search database tables and fetch stored records. To access the data browser, use the path SAP Menu > Tools > ABAP Workbench > Overview > Data Browser (SE16), and enter the name of the table that you want to study.

The next screen contains selection parameters that can help you search for appropriate database records. Figure 1.14 shows the selection screen for order header table VBAK. If you know the sales order number, you can enter it in the Sales Document field on the selection screen. If, on the other hand, you do not know the order number, you

can carry out a search based on any of the parameters listed. For example, you may want to find all the sales orders created on a specific date.

Created on Created on Created by Sales Doc. Type To Sales Doc. Type To Created by Sales Doc. Type To Sales Doc. Type To Created by Sales Org. To Doc. Currency Sales Org. Distr. Channel Doc. condition To Pric. procedure Sold-to party Vidth of Output List Z50 Maximum No. of Hits	Program Edit Goto Settings	System Help		
Data Browser: Table VBAK: Selection Screen Image: Selection of Entries Sales Document 12369 Created on to Created by to Sales Doc. Type to Doc. Currency to Distr. Channel to Division to Doc. condition to Pric. procedure to Sold-to party to Width of Output List 250 Maximum No. of Hits 200	0		8 2 2 2 2 2	
Sales Document 12369 to \$\$ Created on to \$\$ Created by to \$\$ Sales Doc. Type to \$\$ Net value to \$\$ Doc. Currency to \$\$ Sales Org. to \$\$ Distr. Channel to \$\$ Division to \$\$ Division to \$\$ Sold-to party to \$\$ Width of Output List 258 Z00 200	Data Browser: Table	VBAK: Selection S	creen	
Sales Document 12369 to Image: Constraint of the second sec	🕒 🚸 🔜 🛅 💁 Number of En	tries		
Created on to to Created by to to Sales Doc. Type to to Net value to to Doc. Currency to to Sales Org. to to Distr. Channel to to Division to to Doc. condition to to Pric. procedure to to Sold-to party to to Width of Output List 258 Maximum No. of Hits 200	Sales Document	12369 💌	to	\$
Created by to \$\$ Sales Doc. Type to \$\$ Net value to \$\$ Doc. Currency to \$\$ Sales Org. to \$\$ Distr. Channel to \$\$ Division to \$\$ Doc. condition to \$\$ Pric. procedure to \$\$ Sold-to party to \$\$ Width of Output List 250 Maximum No. of Hits 200	Created on		to	⇒
Sales Doc. Type to to Net value to to Doc. Currency to to Sales Org. to to Distr. Channel to to Division to to Doc. condition to to Pric. procedure to to Sold-to party to to Width of Output List 250 Maximum No. of Hits 200	Created by		to	
Net value to \$\$ Doc. Currency to \$\$ Sales Org. to \$\$ Dist. Channel to \$\$ Division to \$\$ Doc. condition to \$\$ Pric. procedure to \$\$ Sold-to party to \$\$ Width of Output List 250 Maximum No. of Hits 200	Sales Doc. Type		to	5
Doc. Currency to \$\$ Sales Org. to \$\$ Distr. Channel to \$\$ Division to \$\$ Doc. condition to \$\$ Pric. procedure to \$\$ Sold-to party to \$\$ Width of Output List 250 Maximum No. of Hits 200	Net value		to	4
Sales Org. to \$\$ Distr. Channel to \$\$ Division to \$\$ Doc. condition to \$\$ Pric. procedure to \$\$ Sold-to party to \$\$ Width of Output List 250 Maximum No. of Hits 200	Doc. Currency		to	\$
Distr. Channel to \$\$ Division to \$\$ Doc. condition to \$\$ Pric. procedure to \$\$ Sold-to party to \$\$ Width of Output List 258 Maximum No. of Hits 200	Sales Org.		to	4
Division to \$	Distr. Channel		to	4
Doc. condition to \$ Pric. procedure to \$ Sold-to party to \$ Width of Output List 250 Maximum No. of Hits 200	Division		to	4
Pric. procedure to\$ Sold-to party to\$ Width of Output List\$ Maximum No. of Hits200	Doc. condition		to	4
Sold-to party to Width of Output List 250 Maximum No. of Hits 200	Pric. procedure		to	\$
Width of Output List 250 Maximum No. of Hits 200	Sold-to party		to	Ŷ
Maximum No. of Hits 200	Width of Output List	250		
	Maximum No. of Hits	200		

FIGURE 1.14 Data Browser: Selection Screen

After entering the selection criteria, click the Execute button .

SAP will fetch the database record and display it on the screen. The details of the record (in our example, order details such as order type, sales organization, distribution channel, division, net value, and so on) will appear as shown in Figure 1.15.

Also note the Number Of Entries button on the selection screen. If you want to know how many records fit the selection criteria, click this button. It will give you the number of records found.

Another important field that controls the database search is Maximum Number Of Hits. If you enter a limiting value (say, 200) here, SAP will stop the search after finding the first 200 records. If the number of entries is high and you want to see all of them, make sure that your maximum number of hits is set to a higher number.

Table Entry Edit	Goto Settings Environment System Help	
0		1210
Table VBAK	Display	
Check Table		
Client		800
Sales Document		12369
Created on		09/24/2009
Time		18:33:27
Created by		STUDENT181
Valid from	(ANGDT)	
Valid to	(BNDDT)	
Document Date		09/24/2009
Document cat.		C
Transact.group		0
Sales Doc. Type		OR
Order reason		
Begin guarantee		
Collective no.		
Delivery block		
Billing block		
Net value		1,708.10
Doc. Currency		USD
Sales Org.		9090
Distr. Channel		97
Division		99
Sales Group		
Sales Office		
Business Area		
Business area		
Valid from	(GUEBG)	

FIGURE 1.15 Data Browser: record display

On the selection screen, you can change or add more selection parameters if the standard list does not meet your requirements. From the menu on the top of the screen, select Settings ➤ Fields For Selection. Then, from the list of fields, select the ones you need to be displayed as selection criteria.

You can use Settings > User Parameters to control the display (Figure 1.16). This lets you choose to view the results in a standard list format or an ALV grid format. Also note the Keyword tab. Each field in the database table has a field label (a meaningful description) and a field name (a technical name). You can choose either mode of display.

To understand the difference between a field label and a field name, compare Figure 1.15 with Figure 1.17. They both show records from table VBAK for the sales order 12369. In Figure 1.15, you can see field labels such as Net Worth (the value is 1708.10). In Figure 1.17, you see the field name NETWR. This is the technical name for the net worth. The contents of the field are the same in both views.

Data Browser Internet Transaction Server Bu	siness Server Pages
Output list	
Width of Output List 250	
Maximum No. of Hits 200	•
Display max.no.of hits possible	
O ALV Grid display	
O ALV list	
SE16 standard list	
Keyword	
O Field name	
Field Label	
Format	
Check conversion exits	

FIGURE 1.16 User-Specific Settings for the Data Browser

FIGURE 1.17 Data Browser: display showing field names

Table Entry Edit G	oto Settings Environment System Help
0	(1) (2) (2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4
Table VBAK I	Display
Check Table	
MANDT	800
VBELN	12369
ERDAT	09/24/2009
ERZET	18:33:27
ERNAM	STUDENT181
ANGDT	
BNDDT	
AUDAT	09/24/2009
VBTYP	C
TRVOG	0
AUART	OR
AUGRU	
GWLDT	
SUBMI	
LIFSK	
FAKSK	
NETWR	1,708.10
WAERK	USD
VKORG	9090
VTWEG	97
SPART	99
VKGRP	
VKBUR	
GSBER	
GSKST	
GUEBG	

You will need to be familiar with field names to communicate effectively with your technical team. Furthermore, as we will discuss in Chapter 14, if you ever need to create a custom enhancement in SAP, you will need all the technical information, such as table and field names.



TIP Note that there is new version of the standard data browser (SE16), called SE16N. It offers the same functionality of displaying database records, but it has some extra user-friendly features. As shown here, SE16N lets you see the field names *and* the technical names of the selection parameters. You can also choose the fields that you need in the output display.

Background	Numbe	r of Entries 🖳 🔒 🔒	All Entries 🛃	r≩		
Table		VBAK	Sa	les Docume	nt: Header	Data
Text table				No texts		
Layout						
Maximum no. of hit	s	500		Maintain e	ntries	
Selection Criteria	1					
Fld name	0	Fr.Value	To value	More	Output	Technical name
Client						MANDT
Sales Document	1	2369		s>	✓	VBELN
Created on				¢		ERDAT
Time				_ ⊆ >	✓	ERZET
Created by				4		ERNAM
Valid from	2			_ <td></td> <td>ANGDT</td>		ANGDT
Valid to				4	v	BNDDT
Document Date	3			s>	v	AUDAT
Document cat.				\$	✓	VBTYP
Transact.group				\$	•	TRVOG
Sales Doc. Type	2			4		AUART
Order reason				4	✓	AUGRU
Begin guarantee				_⊈>		GWLDT
Collective no.	2			\$		SUBMI
Delivery block	8			\$		LIFSK
Billing block	1			4		FAKSK
Net value	2			4		NETWR
Doc. Currency	2			4		WAERK
Sales Org.	8			4	V	VKORG
Distr. Channel				4		VTWEG
	52					

ABAP Dictionary

While we are on the subject of tables and fields, we'll talk about another transaction code that you should know about. It is technical in nature, but it will help you understand the underlying structure of the tables we discussed earlier.

To access this transaction, the path is as follows: SAP Menu \succ Tools \succ ABAP Workbench \succ Development \succ ABAP Dictionary (SE11).

Figure 1.18 shows the Dictionary: Display Table view for VBAK. As shown, it includes the details such as field names, data elements, data type, length of field, and other technical attributes.

FIGURE 1.18 Dictionary: Display Table view

Dictionary: Display Table					
(국) 양입면 과 문 문 문 문 문 문 문 문 문 문 문 문 문 문 문 문 문 문					
Transo Table VEAK Active					
Short Description	Sales Document: Heade	r Data			
Short Description					
Attributes Delive	ery and Maintenance	Fields Entry he	lp/checl	k Cui	rrency/Quantity Fields
XDBBB	3052	∠¶ Srch	Help	Prede	efined Type 1 / 1
Field	K. Initi Data ek	ement Data Ty	Length	Decim	Short Description
MANDT	MANDT	CLNT	3	0	Client
VBELN	VBELN_VA	CHAR	10	0	Sales Document
ERDAT	ERDAT	DATS	8	0	Date on Which Record Was Created
ERZET	ERZET	TIMS	6	0	Entry time
ERNAM	ERNAM	CHAR	12	0	Name of Person who Created the Object
ANGDT	ANGDT_V	DATS	8	0	Quotation/Inquiry is valid from
BNDDT	BNDDT	DATS	8	0	Date until which bid/quotation is binding (valid-to date)
AUDAT	AUDAT	DATS	8	0	Document Date (Date Received/Sent)
VBTYP	VBTYP	CHAR	1	0	SD document category
TRVOG	TRVOG	CHAR	1	0	Transaction group
AUART.	AUART	CHAR	4	0	Sales Document Type
AUGRU	AUGRU	CHAR	3	0	Order reason (reason for the business transaction)
GWLDT	GWLDT	DATS	8	0	Guarantee date
SUBMI	SUBMI_SD	CHAR	10	0	Collective number (SD)
LIFSK	LIFSK	CHAR	2	0	Delivery block (document header)
FAKSK		CHAR	2	0	Billing block in SD document
NETWR	NETWR_AK	CURR	15	2	Net Value of the Sales Order in Document Currency

Managing Customization Changes

Whenever you enter the Customizing menu and carry out any change in the system, the system tracks this change and records it. Every change has an impact on the way the system works. Hence, it is very important to understand the basic system landscape and the process of managing and transporting changes.

The System Landscape

The *system landscape* is the arrangement of the various servers. A generic system landscape consists of a production system (the one in which all the operations of the organization are carried out) plus other systems such as development and quality assurance systems. Although our focus is on the configuration of the SD application in this book, it is very important to understand the system landscape.

Figure 1.19 represents a typical SAP system landscape, consisting of a development system (DEV), quality assurance system (QAS), and production system (PRD). When any change is made during customization, it is essential to test it rigorously before it can be implemented in the production environment. To achieve this, you first make changes in the development system. At this stage, there is no impact on the production system at all. You can test the impact of the change locally and then choose to move it to the next level of testing in the quality assurance system.

This system usually has a large amount of test data. Often, it is a recent copy of the production environment so that the change can be tested in a real-life environment. It is also important to identify the system users who would be affected by this change and train them accordingly in this simulated environment.

Once the testing is complete, the change can move into production. Once this happens, the change is said to have "gone live."

Many organizations also have another system called a *sandbox*. It is an isolated system where you can carry out preliminary analysis and test new functionality and solution prototypes. Changes made in the sandbox never move to other systems in the landscape.

It is very important to record all the details of any change being made in SAP and transport it in steps through the system landscape. In the next section, we will cover the concept of transport request, which will help you understand how changes are recorded and tracked.

Transport Request

To capture the details of the change and manage its migration to production, SAP uses the concept of a *transport request*. When you make any changes to the Customizing menu, you will be required to create or choose a transport request number (Figure 1.20).

FIGURE 1.19 System landscape example



FIGURE 1.20 Transport request number

000	Prompt for Customizing request			
	Varkooace			
Request	M2EK902865	 Customizing request 		
Short Description	kaps			
V Own Reque	sts 🕱			
			11.	

The data related to the change is stored in the transport request. This helps in controlling and tracking the change. The transport request can be moved from one system to another so that the same change is carried out in other systems. Changes made in the customizing domain are captured in a separate class of transport requests called *customizing requests*. Changes to ABAP programs are stored in *workbench requests*.

As shown in Figure 1.21, you can drill down a transport request number to see the customizing tasks that you have performed and the tables that have been affected by the change.



Prompt for Customizing request	
You can include objects of this type in Customizing requests	▲ ▼
Modifiable	
- M2EK902866 STUDENT181 Customizing Task	
IMG Activity Use Sales Employee Without HR	
Table Contents	
T501T T502T	- 11
T503	
T516T	
	••
	11.

CASE STUDY OVERVIEW: GALAXY MUSICAL INSTRUMENTS

Throughout this book, we will use a case study of a fictitious company, called Galaxy Musical Instruments, which is a trading company that deals in musical instruments as well as related media and accessories.

Galaxy has operations in the United States and Mexico. Its main distribution center, located in California, caters to its wholesale and retail customers in the United States. Another plant in Baja California, Mexico, caters to all the customers there. In each chapter of this book, we will discuss how Galaxy uses SAP's SD application to map its business processes, and we will use graphics to depict how the settings were made.

We will consistently use the same product range, customers, and organizational units. This will help us present a cohesive picture and give you an idea of how an actual organization can use the SD application to map its business processes.

For instance, in Chapter 3, we will present Galaxy's master data requirements and how they were mapped in the system, including how the customer master data and hierarchical relationships were set up. Later, in Chapter 5, we will cover how the pricing procedure was set up for this customer. Later, in Chapter 8, we will cover how Galaxy set up routes to ship the products to the customer.

This end-to-end case study will ensure continuity and help you understand how to apply the functionalities in SD.

Once you have tested the change and are ready to move the changes to the quality assurance system, you have to release the transport request. Based on the process setup (which is not in our scope here), the change will be picked up for promotion to the next system. If you have transported the change to the quality assurance or production system and it is having an undesirable effect on the processes, you can reverse it at any time. This ensures that the production system remains safe from unwanted changes.

A useful transaction for checking and updating transport requests is SE10. The menu path is SAP Menu > Tools > Customizing > IMG > Transport Organizer (Extended View). As shown in Figure 1.22, you can enter the user ID and check all the transport requests created by that user. This transaction is also used to release the transport requests that are ready to be moved to other systems.

FIGURE 1.22 Transport Organizer screen

Transport Organizer	
User GALAXY1	
Request Type Customizing Requests Workbench Requests Transport of Copies Relocations Request Status Modifiable Released	Clobal Information

Summary

This chapter offered an overview of the SAP ERP system and the various applications contained in it. We covered the basic menu used to access transactions and the Customizing menu used to configure the system.

We also covered the basic sales cycle in SAP and other important transaction codes that will be needed throughout the SD application area.

We also touched upon the many functionalities in SD that will be covered in depth in the subsequent chapters of this book.

Thus, this chapter was a launching pad to start your journey in SAP SD. Good luck!