

ONF: Service (TicketNo, ServiceBegin, ServiceEnd, Tech, BeginTime, EndTime, CustLast, CustFirst, CustAddress, CustCity, CustState, CustZip, LocDesc, LocAddress, LocCity, LocState, LocZip, (MachineSerial, CustComments, TechComments, (TaskNum, TaskName, Parts, Time, LaborCost, EquipmentCost)))

INF: Service (TicketNo, ServiceBegin, ServiceEnd, Tech, BeginTime, EndTime, [CustLast, CustFirst, CustAddress, CustCity, CustState, CustZip], [LocDesc, LocAddress, LocCity, LocState, LocZip])

Service Repair (TicketNo, MachineSerial, CustComments, TechComments)

RepairTask (MachineSerial, TaskNum, TaskName, Parts, Time, LaborCost, EquipmentCost)

2NF: Service - Same as INF

Service Repair - Same as INF

RepairTask (MachineSerial, TaskNum, Parts, Time, LaborCost, EquipmentCost)

Task (TaskNum, TaskName)

3NF: Service (TicketNo, ServiceBegin, ServiceEnd, TechID, BeginTime, EndTime, CustID, LocID)

Technician (TechID, Last, First)

Customer (CustID, Last, First, Address, City, State, Zip)

The form is for a Service Request. A technician fills out the form to begin the service ticket. Notice that a customer may have service tickets for different offices (locations), but there would need to be a separate ticket created for each location. The service ticket for a location would describe the list of tasks to be performed on machine(s) at that location. The tasks and equipment are predefined. Labor charges are predefined by the task. Create the set of normalized tables to support this form.

## Acme Computing Services

### Service Request

<b>Service Ticket No.:</b> 03170301		<b>Technician:</b> Mike Green		<b>Begin Time:</b> 13:30	
<b>Service Begin Date:</b> 01-16-10				<b>End Time:</b> 10:00	
<b>Service End Date:</b> 01-18-10					
<b>Customer Information</b>				<b>Location</b>	
<b>Name:</b> Timken Enterprises				<b>Description:</b> Office #12	
<b>Address:</b> 117 N. Elm				<b>Address:</b> 1310 S. Howard Dr.	
<b>City, State, Zip:</b> Wichita, KS 67206				Wichita, KS 67311	
<b>Repair Tasks</b>			<b>Machine Serial#:</b> 122WQP3650 Diff.		
<b>Customer Comments:</b> Customer stated that the hard drive made a "clunking" noise and the machine will no longer boot.					
<b>Technician Comments:</b> The hard drive was replaced. All data from the original drive was transferred to the new drive. The fan in the power supply was faulty. The power supply was replaced.					
Task	Parts	Time(hours)	Labor Cost	Equipment Cost	
Diagnostics	None	.5	\$40	\$0	
Hardware Installation	300W Power Supply	.25	\$10	\$45	
Hardware Installation	320G WD hard drive	.25	\$10	\$120	
Data Transfer	None	1.0	\$65	\$0	
<b>Machine Totals:</b>		<del>2.0</del>	<del>\$125</del>	<del>165</del>	
<b>Repair Tasks</b>			<b>Machine Serial#:</b> 125XPP3650 Diff.		
<b>Customer Comments:</b> Customer stated that the machine will not boot. Upon power up, the machine beeps three times and freezes.					
<b>Technician Comments:</b> The video card was defective. A new video card was installed and configured.					
Task	Parts	Time(hours)	Labor Cost	Equipment Cost	
Diagnostics	None	.5	\$40	\$0	
Hardware Installation	NVIDIA 3345 AGP	.25	\$10	\$119	
Device configuration	None	.25	\$10	\$0	
<b>Machine Totals:</b>		<del>1.0</del>	<del>\$60</del>	<del>\$119</del>	

Add  
Task  
Numbers

Never design from a blank form.