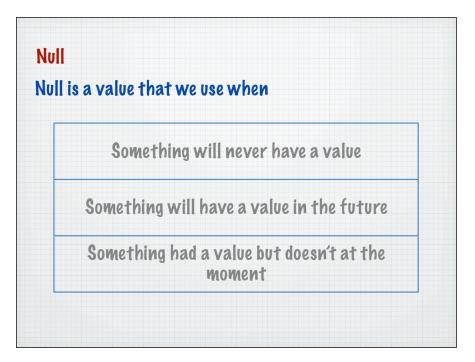
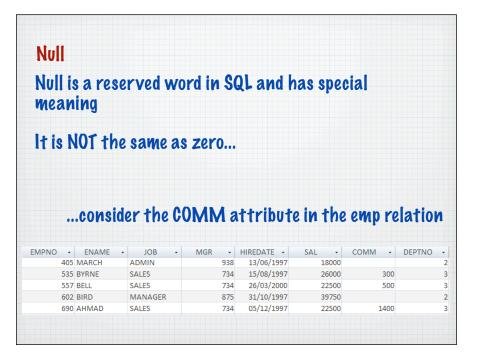
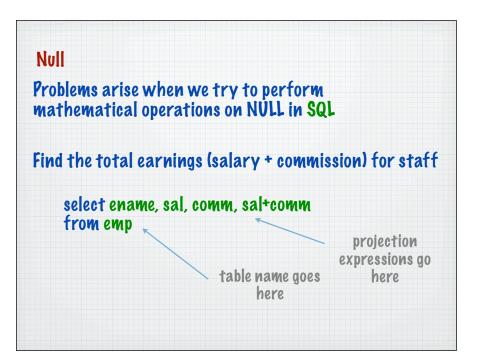
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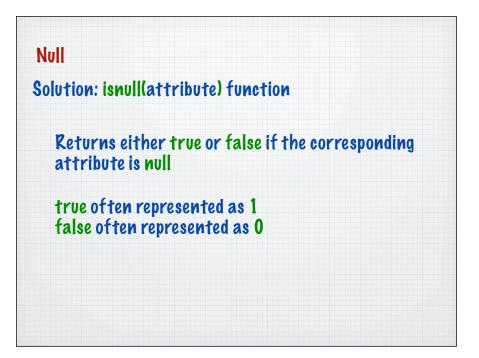


ess u	ses	a blar	ık	cell	to i	ndicate	e a NV	IL			
- ENA	ME •	JOB	*	MGF	2 -	HIREDATE 👻	SAL	*	COMM -	DEPTNO	
05 MARC	н	ADMIN			938	13/06/1997	1	8000			2
35 BYRNE		SALES			734	15/08/1997	2	5000	300		3
57 BELL		SALES			734	26/03/2000	2	2500	500		3
02 BIRD		MANAGER			875	31/10/1997	3	9750			2
90 AHMA	D	SALES			734	05/12/1997	2	2500	1400		3
34 COX		MANAGER			875	11/06/2002	3	8500			3
18 POLLA	RD	MANAGER			875	14/05/2000	34	4500			1
24 REES		ANALYST			602			0000			2
75 PARKE	R	PRESIDEN	Г			09/07/2002	6	0000			_1
		SALES			734				0		
		ADMIN			824						2
		ADMIN			734						3
38 GIBSO	N	ANALYST			602	05/12/1997	4	0000			2
	 ENA MARC BURN BELL BIRD AHMA COX POLLA RES PARKE TURN HAYES CASSY 	 ENAME MARCH BYRNE BYRNE BYRNE BYRNE BYRNE AHMAD COX POLLARD ARKER DULNRER TARKER TURNER TAKES CASSY GIBSON 	ENAME - JOB MARCH ADMIN SALES SYRNE SALES SALES SALES AMANAGER AMANAGER AMAA ADMIN ANAGER ANALYST	ENAME JOB JOB ADMIN ADMIN SALES SALES SALES SALES SALES AMANAGER AMANAGER AMANAGER AMANAGER AMANAGER ANALYST ADMIN SALES AMANAGER ANALYST	ENAME - JOB - MGF OS MARCH ADMIN S5 BYRNE SALES S7 BELL SALES OZ BIRD MANAGER OZ BIRD MANAGER OAHMAD SALES ACCX MANAGER ANALYST FARKER PRESIDENT S0 TURNER SALES T HAYES ADMIN S6 CASSY ADMIN S8 GIBSON ANALYST	 ENAME - JOB - MGR - SMARCH ADMIN 938 BYRNE SALES 734 BYRNE SALES 734 FBELL SALES 734 CALES 734 AMANAGER 875 AHMAD SALES 734 COX MANAGER 875 AHMAD SALES 734 COX MANAGER 875 POLLARD MANAGER 875 POLLARD MANAGER 875 POLLARD MANAGER 875 PARKER PRESIDENT	• ENAME JOB MGR • HIREDATE 05 MARCH ADMIN 938 13/06/1997 35 BYRNE SALES 734 15/08/1997 35 BYRNE SALES 734 26/03/2000 02 BIRD MANAGER 875 31/10/1997 02 BIRD MANAGER 875 31/10/1997 03 ACOX MANAGER 875 11/06/2002 18 POLLARD MANAGER 875 14/05/2000 24 RES ANALYST 602 05/03/2000 05 TURNER SALES 734 04/06/2001 12 HAYES ADMIN 824 04/06/2001 12 HAYES ADMIN 734 23/07/2002 36 GASSY ADMIN 602 05/12/1997	ENAME JOB MGR HIREDATE SAL 05 MARCH ADMIN 938 13/06/1997 14 35 BYRNE SALES 734 15/08/1997 24 57 BELL SALES 734 26/03/2000 22 57 BELL SALES 734 26/03/2000 22 02 BIRD MANAGER 875 31/10/1997 23 90 AHMAD SALES 734 05/12/1997 22 34 COX MANAGER 875 11/06/2002 33 18 POLLARD MANAGER 875 14/05/2000 34 75 PARKER PRESIDENT 09/07/2002 66 80 TURNER SALES 734 04/06/2001 22 12 HAYES ADMIN 824 04/06/2001 22 36 CASSY ADMIN 734 23/07/2002 11 38 GIBSON ANALYST	MARCH ADMIN 938 13/06/1997 18000 35 BYRNE SALES 734 15/08/1997 26000 57 BELL SALES 734 26/03/2000 22500 02 BIRD MANAGER 875 31/10/1997 39750 90 AHMAD SALES 734 05/12/1997 22500 34 COX MANAGER 875 11/06/2002 38500 34 COX MANAGER 875 14/05/2000 34500 24 RES ANALYST 602 05/03/2000 40000 75 PARER PRESIDENT 09/07/2002 60000 80 TURNER SALES 734 04/06/2001 21000 12 HAYES ADMIN 824 04/06/2001 21000 36 GISSON ANALYST 602 05/12/1997 40000	ENAME JOB MGR HIREDATE SAL COMM 05 MARCH ADMIN 938 13/06/1997 18000 35 BYRNE SALES 734 15/08/1997 26000 300 57 BELL SALES 734 26/03/2000 22500 300 57 BELL SALES 734 26/03/2000 22500 500 02 BIRD MANAGER 875 31/10/1997 39750 1400 34 COX MANAGER 875 11/06/2002 38500 1400 34 COX MANAGER 875 14/05/2000 34500 1400 34 POLLARD MANAGER 875 14/05/2000 40000 1400 35 PRESIDENT 09/07/2002 60000 010 12 4475 602 05/03/200 00 01 36 TURNER SALES 734 04/06/2001 21000 12 12 14	• ENAME JOB • MGR • HIREDATE SAL • COMM DEPTNO 05 MARCH ADMIN 938 13/06/1997 18000 - DEPTNO 35 BYRNE SALES 734 15/08/1997 26000 300 57 BELL SALES 734 26/03/2000 22500 500 02 BIRD MANAGER 875 31/10/1997 39750 - 90 AHMAD SALES 734 05/12/1997 22500 1400 34 COX MANAGER 875 11/06/2002 38500 - 18 POLLARD MANAGER 875 14/05/2000 34500 - 73 PARKER PRESIDENT - 09/07/2002 60000 - 74 PAKER 734 04/06/2001 25000 0 - 74 PAKER PRESIDENT - 09/07/2002 60000 -

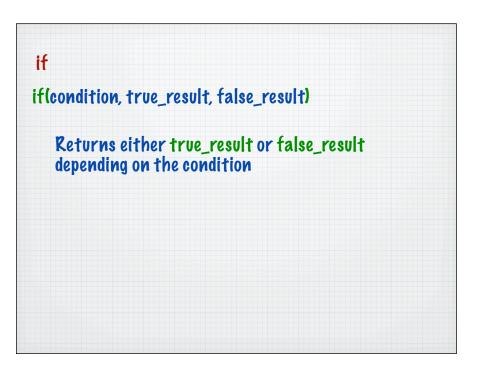
Note how Turner is allowed to earn commission, but hasn't yet



Null				
Find the total earnings (s	alary +	r con	ımiss	ion) for
select ename, sal, com	n, sal+c	omm		
from emp				
	ename	sal	comm	sal+comm
	BYRNE	26000	300	26300
	BELL	22500	500	23000
	BIRD	39750	NULL	NULL
	AHMAD	22500 38500	1400 NULL	23900 NULL
	POLLARD	34500	NULL	NULL
	REES	40000	NULL	NULL
roblem:	PARKER	60000	NULL	NULL
I UNICAL.	TURNER	25000	0	25000
any value + null returns nu		21000	NULL	NULL
	CASSY	19500	NULL	NULL
8000 + null returns null	GIBSON	40000	NULL	NULL
	BLACK	23000	NULL	NULL
	MARCH	18000	NULL	NULL



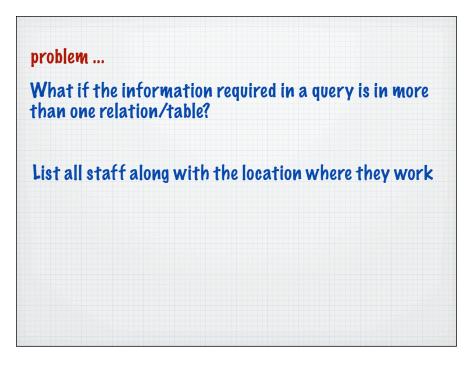
snull		
	comm	isnull(comm)
SELECT comm, isnull(comm)	300	0
	500	0
FROM emp	NULL	1
	1400	0
	NULL	1
	0	0
	NULL	1



Null				
ind the tota	l earning	js (sa	lary	+ commission) for staft
select ename	e, sal, con	nm, s	al+ it	f(isnull(comm), 0,comm)
from emp				
	ename	sal	comm	sal+ if(isnull(comm), 0,comm)
	BYRNE	26000	300	26300
	BELL	22500	500	23000
	BIRD	39750	NULL	39750
	AHMAD	22500	1400	23900
	COX	38500	NULL	38500
	POLLARD	34500	NULL	34500
	REES	40000	NULL	40000
	PARKER	60000	NULL	60000
	TURNER	25000	0	25000
	HAYES	21000	NULL	21000
	CASSY	19500	NULL	19500
	GIBSON	40000	NULL	40000
				00000
	BLACK	23000	NULL	23000

Selection	σ	
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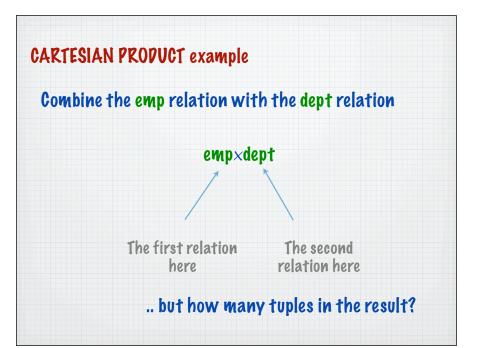


Requires information in two relations tables to be combined

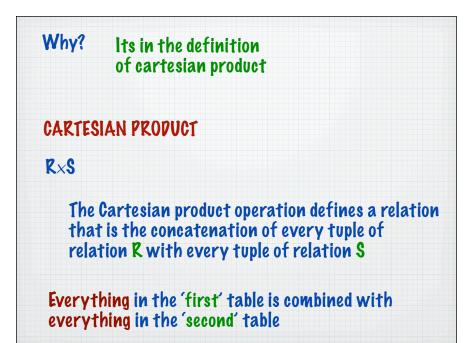
EMPNO -	ENAME	- JOB	✓ MGR ✓	HIREDATE -	SAL - C	OMM - DEI	PTNO
403	MARCH	ADMIN	938	13/06/1997	18000		
533	BYRNE	SALES	734	15/08/1997	26000	300	
55	7 BELL	SALES	734	26/03/2000	22500	500	
602	BIRD	MANAGER	875	31/10/1997	39750		
690	AHMAD	SALES	734	05/12/1997	22500	1400	
734	COX	MANAGER	875	11/06/2002	38500		
818	POLLARD	MANAGER	875	14/05/2000	34500		
824	REES	ANALYST	602	05/03/2000	40000		
875	PARKER	PRESIDENT		09/07/2002	60000		
880	TURNER	SALES	734	04/06/2001	25000	0	
912	HAYES	ADMIN	824	04/06/2001	21000		
936	CASSY	ADMIN	734	23/07/2002	19500		
938	GIBSON	ANALYST	602	05/12/1007	40000	100	
970	BLACK	ADMIN	818	DEPTNO	✓ DNAME	200	•
			Jan h hahla		1 ACCOUNTING		
			dept table		2 RESEARCH	YORK	_
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					4 OPERATIONS	LEEDS	

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MPNO •	ENAME	- JOB -	MGR ·	HIREDATE -	SAL -	COMM •	emp.DEPTN -	dept.DEPTN •	DNAME -	LOC
405	MARCH	ADMIN	93	8 13/06/1997	18000		. 2	. 1	ACCOUNTING	LONDON
405	MARCH	ADMIN	93		18000		2	2	RESEARCH	YORK
405	MARCH	ADMIN	93		18000		2	3	SALES	BIRMINGHAM
405	MARCH	ADMIN	93		18000		2	4	OPERATIONS	LEEDS
535	BYRNE	SALES	73	4 15/08/1997	26000	300	3	1	ACCOUNTING	LONDON
535	BYRNE	SALES	73	4 15/08/1997	26000	300	3	2	RESEARCH	YORK
535	BYRNE	SALES	73	4 15/08/1997	26000	300	3	3	SALES	BIRMINGHAM
535	BYRNE	SALES	73	4 15/08/1997	26000	300	3	4	OPERATIONS	LEEDS
557	BELL	SALES	73	4 26/03/2000	22500	500	3	1	ACCOUNTING	LONDON
557	BELL	SALES	73	4 26/03/2000	22500	500	3	2	RESEARCH	YORK
557	BELL	SALES	73	4 26/03/2000	22500	500	3	3	SALES	BIRMINGHAM
557	BELL	SALES	73	4 26/03/2000	22500	500	3	4	OPERATIONS	LEEDS
602	BIRD	MANAGER	87	5 31/10/1997	39750		2	1	ACCOUNTING	LONDON
602	BIRD	MANAGER	87	5 31/10/1997	39750		2	2	RESEARCH	YORK
602	BIRD	MANAGER	87	5 31/10/1997	39750		2	3	SALES	BIRMINGHAM
602	BIRD	MANAGER	87	5 31/10/1997	39750		2	4	OPERATIONS	LEEDS
690	AHMAD	SALES	73	4 05/12/1997	22500	1400	3	1	ACCOUNTING	LONDON
690	AHMAD	SALES	73	4 05/12/1997	22500	1400	3	2	RESEARCH	YORK
690	AHMAD	SALES	73	4 05/12/1997	22500	1400	3	3	SALES	BIRMINGHAM
690	AHMAD	SALES	73	4 05/12/1997	22500	1400	3	4	OPERATIONS	LEEDS
734	COX	MANAGER	87	5 11/06/2002	38500		3	1	ACCOUNTING	LONDON
734	COX	MANAGER	87	5 11/06/2002	38500		3	2	RESEARCH	YORK
734	COX	MANAGER	87	5 11/06/2002	38500		3	3	SALES	BIRMINGHAM
734	COX	MANAGER	87	5 11/06/2002	38500		3	4	OPERATIONS	LEEDS
818	POLLARD	MANAGER		th ma						



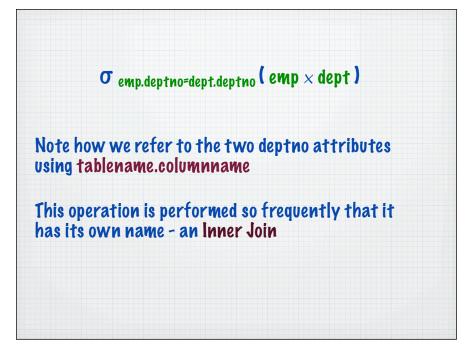
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	405	MARCH		ADMIN		938	13/06/1997		18000					
	535	BYRNE		SALES		734	15/08/1997		26000			300		
	557	BELL		SALES		734	26/03/2000		22500			500		
	602	BIRD		MANAGER		875	31/10/1997		39750					
	690	AHMAD		SALES		734	05/12/1997		22500		1	400		
	734	COX		MANAGER		875	11/06/2002		38500					
	818	POLLARD		MANAGER		875	14/05/2000		34500					
	824	REES		ANALYST		602	05/03/2000		40000					
	875	PARKER		PRESIDENT			09/07/2002		60000					
	880	TURNER		SALES		734	04/06/2001		25000			0		
	912	HAYES		ADMIN		824	04/06/2001		21000					
	936	CASSY		ADMIN		734	23/07/2002		19500					
	938	GIBSON		ANALYST		602	05/10/1007	-	40000	_			_	
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					aep	t table			RESEARCH		YOR		_	
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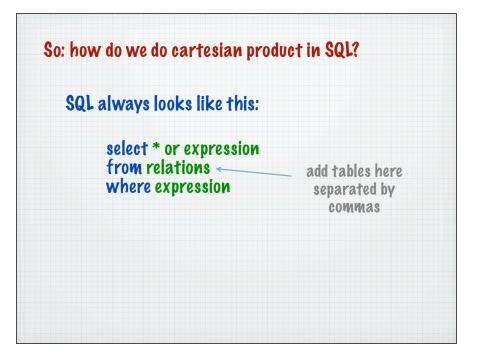
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MPNO • ENAME	• JOB •	MGR •	HIREDATE -	SAL -	сомм	emp.DEPTN + dept.D	COTN	DNAME •	LOC
405 MARCH	ADMIN	938	13/06/1997	18000	COMIN	2			
405 MARCH	ADMIN	938	13/06/1997	18000		2	21		YORK
405 MARCH	ADMIN	938	13/06/1997	18000		2	3 5		BIRMING
405 MARCH	ADMIN	938	13/06/1997	18000		2		PERATIONS	LEEDS
535 BYRNE	SALES	734	15/08/1997	26000	800	3	1		LONDON
535 BYRNE	SALES	734	15/08/1997	26000	800	3		RISEARCH	YORK
535 BYRNE	SALES	734	15/08/1997	26000	800	3	3		BIRMING
535 BYRNE	SALES	734	15/08/1997	26000	800	3	4 (PERATIONS	LEEDS
557 BELL	SALES	734	26/03/2000	22500	500	3	1		LONDON
557 BELL	SALES	734	26/03/2000	22500	500	3	21	RESEARCH	YORK
557 BELL	SALES	734	26/03/2000	22500	500	3	3 5		BIRMING
557 BELL	SALES	734	26/03/2000	22500	500	3		PERATIONS	LEEDS
602 BIRD	MANAGER	875	31/10/1997	39750		2	1 /		LONDON
602 BIRD	MANAGER	875	31/10/1997	39750		2	21	RESEARCH	YORK
602 BIRD	MANAGER	875	31/10/1997	39750		2	3 5	ALES	BIRMING
602 BIRD	MANAGER	875	31/10/1997	39750		2	4 (PERATIONS	LEEDS
690 AHMAD	SALES	734	05/12/1997	22500	1400	3	1 /		LONDON
690 AHMAD	SALES	734	05/12/1997	22500	1400	3	21	RESEARCH	YORK
690 AHMAD	SALES	734	05/12/1997	22500	1400	3	3 5	ALES	BIRMING
690 AHMAD	SALES	734	05/12/1997	22500	1400	3	4 (PERATIONS	LEEDS
734 COX	MANAGER	875	11/06/2002	38500		3	1 /	COUNTING	LONDON
734 COX	MANAGER	875	11/06/2002	38500		3	21	RESEARCH	YORK
734 COX	MANAGER	875	11/06/2002	38500		3	3 5	ALES	BIRMING
734 COX	MANAGER	875	11/06/2002	38500		3	4 (PERATIONS	LEEDS
818 POLLARD	MANAGER	875	14/05/2000	34500		1	1/	COUNTING	LONDON
818 POLLARD	MANAGER	875	14/05/2000	34500		1	21	RESEARCH	YORK

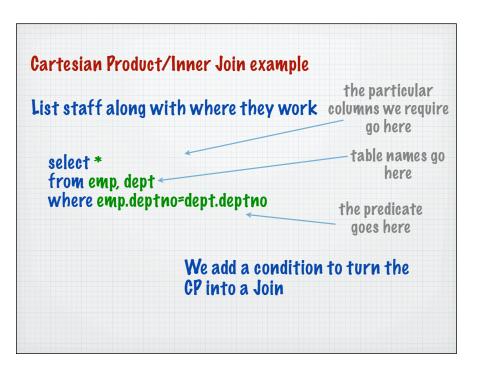
Joining tables			
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aquaidar tha	300	3	1 AC
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in the result set	500	3	1 AC
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We only want to include resul	te wi	noro tho		
leptno is the same in both rel				
ichter is the same in noth ter	a 1 10 1	ist lantes		
	1 -	emp.DEPTNO 👻	dept.DEPTNO 👻	
		2	-	AC
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selection	500	2		AC
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Ad	Add an appropriate condition $\sigma_{\text{predicate}}$ (emp \times dept											
				σ	em	p.dept	no=dept.d	leptno (e	emp × 0	dept)		
IPNO -	ENAME -	JOB 🔸	MGR 🗸	HIREDATE -	SAL -	COMM -	emp.DEPTNO -	dept.DEPTNO	DNAME -	LOC		
	ENAME - MARCH	JOB + ADMIN	MGR + 938	HIREDATE • 13/06/1997	SAL - 18000				DNAME + 2 RESEARCH	LOC YORK		
405								2		YORK		
405 535	MARCH	ADMIN	938	13/06/1997	18000	300		3	2 RESEARCH	YORK BIRMINGHA		
405 535 557	MARCH BYRNE	ADMIN SALES	938 734	13/06/1997 15/08/1997	18000 26000	300 500		- 2 3	2 RESEARCH 3 SALES	YORK BIRMINGHA		
405 535 557 602	MARCH BYRNE BELL	ADMIN SALES SALES	938 734 734	13/06/1997 15/08/1997 26/03/2000 31/10/1997 05/12/1997	18000 26000 22500	300 500		- 2 3 3 2	2 RESEARCH 3 SALES 3 SALES	YORK BIRMINGHA BIRMINGHA YORK		
405 535 557 602 690	MARCH BYRNE BELL BIRD	ADMIN SALES SALES MANAGER	938 734 734 875	13/06/1997 15/08/1997 26/03/2000 31/10/1997	18000 26000 22500 39750	300 500		* 2 3 3 2 3	2 RESEARCH 3 SALES 3 SALES 2 RESEARCH	YORK BIRMINGHA BIRMINGHA YORK BIRMINGHA		
405 535 557 602 690 734	MARCH BYRNE BELL BIRD AHMAD	ADMIN SALES SALES MANAGER SALES	938 734 734 875 734	13/06/1997 15/08/1997 26/03/2000 31/10/1997 05/12/1997 11/06/2002 14/05/2000	18000 26000 22500 39750 22500	300 500 1400		2 3 3 2 3 3	2 RESEARCH 3 SALES 3 SALES 2 RESEARCH 3 SALES	YORK BIRMINGHA BIRMINGHA YORK BIRMINGHA		
405 535 557 602 690 734 818 824	MARCH BYRNE BELL BIRD AHMAD COX POLLARD REES	ADMIN SALES SALES MANAGER SALES MANAGER	938 734 734 875 734 875	13/06/1997 15/08/1997 26/03/2000 31/10/1997 05/12/1997 11/06/2002 14/05/2000 05/03/2000	18000 26000 22500 39750 22500 38500 34500 40000	300 500 1400		· 3 3 2 3 3 3 3 4 2 2	2 RESEARCH 3 SALES 3 SALES 2 RESEARCH 3 SALES 3 SALES 1 ACCOUNTING 2 RESEARCH	YORK BIRMINGHA BIRMINGHA YORK BIRMINGHA LONDON YORK		
405 535 557 602 690 734 818 824	MARCH BYRNE BELL BIRD AHMAD COX POLLARD	ADMIN SALES SALES MANAGER SALES MANAGER MANAGER	938 734 734 875 734 875 875 875	13/06/1997 15/08/1997 26/03/2000 31/10/1997 05/12/1997 11/06/2002 14/05/2000 05/03/2000 09/07/2002	18000 26000 22500 39750 22500 38500 34500	300 500 1400		2 3 3 2 2 3 8 8 1 2 2 2	2 RESEARCH 3 SALES 3 SALES 2 RESEARCH 3 SALES 3 SALES 1 ACCOUNTING 2 RESEARCH	YORK BIRMINGHA BIRMINGHA BIRMINGHA BIRMINGHA LONDON		
405 535 557 602 690 734 818 824 875	MARCH BYRNE BELL BIRD AHMAD COX POLLARD REES	ADMIN SALES SALES MANAGER SALES MANAGER MANAGER ANALYST	938 734 734 875 734 875 875 875	13/06/1997 15/08/1997 26/03/2000 31/10/1997 05/12/1997 11/06/2002 14/05/2000 05/03/2000 09/07/2002 04/06/2001	18000 26000 22500 39750 22500 38500 34500 40000	300 500 1400			2 RESEARCH 3 SALES 3 SALES 2 RESEARCH 3 SALES 3 SALES 1 ACCOUNTING 2 RESEARCH	YORK BIRMINGHA BIRMINGHA YORK BIRMINGHA BIRMINGHA LONDON YORK LONDON		
405 535 557 602 690 734 818 824 875 880	MARCH BYRNE BELL BIRD AHMAD COX POLLARD REES PARKER	ADMIN SALES SALES MANAGER SALES MANAGER MANAGER ANALYST PRESIDENT	938 734 734 875 734 875 875 602	13/06/1997 15/08/1997 26/03/2000 31/10/1997 05/12/1997 11/06/2002 14/05/2000 05/03/2000 09/07/2002 04/06/2001	18000 26000 22500 39750 22500 38500 38500 34500 40000 60000	300 500 1400			2 RESEARCH 3 SALES 3 SALES 2 RESEARCH 3 SALES 1 ACCOUNTING 2 RESEARCH 1 ACCOUNTING	YORK BIRMINGHA BIRMINGHA YORK BIRMINGHA BIRMINGHA LONDON YORK LONDON		
405 535 557 602 690 734 818 824 875 880 912	MARCH BYRNE BELL BIRD AHMAD COX POLLARD REES PARKER TURNER	ADMIN SALES SALES MANAGER SALES MANAGER MANAGER ANALYST PRESIDENT SALES	938 734 734 875 734 875 875 602 734	13/06/1997 15/08/1997 26/03/2000 31/10/1997 05/12/1997 11/06/2002 14/05/2000 05/03/2000 09/07/2002 04/06/2001	18000 26000 22500 39750 22500 38500 34500 40000 60000 25000	300 500 1400		2 3 3 2 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2	2 RESEARCH 3 SALES 3 SALES 2 RESEARCH 3 SALES 3 SALES 1 ACCOUNTING 2 RESEARCH 1 ACCOUNTING 3 SALES	YORK BIRMINGHA BIRMINGHA YORK BIRMINGHA BIRMINGHA LONDON YORK LONDON BIRMINGHA YORK		
405 535 557 602 690 734 818 824 875 880 912 936	MARCH BYRNE BELL BIRD AHMAD COX POLLARD REES PARKER TURNER HAYES	ADMIN SALES SALES MANAGER SALES MANAGER MANAGER ANALYST PRESIDENT SALES ADMIN	938 734 734 875 734 875 875 602 734 734 824	13/06/1997 15/08/1997 26/03/2000 31/10/1997 05/12/1997 11/06/2002 14/05/2000 05/03/2000 09/07/2002 04/06/2001	18000 26000 22500 39750 22500 38500 34500 40000 60000 25000 21000	300 500 1400 0		· · · · · · · · · · · · · ·	2 RESEARCH 3 SALES 3 SALES 2 RESEARCH 3 SALES 3 SALES 1 ACCOUNTING 2 RESEARCH 1 ACCOUNTING 3 SALES 2 RESEARCH	YORK BIRMINGHA BIRMINGHA YORK BIRMINGHA BIRMINGHA LONDON YORK LONDON BIRMINGHA		







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405	MARCH	ADMIN	938	13/06/1997	18000		2	2	RESEARCH	YORK
535	BYRNE	SALES	734	15/08/1997	26000	300	3	3	SALES	BIRMINGHAI
557	BELL	SALES	734	26/03/2000	22500	500	3	3	SALES	BIRMINGHAI
602	BIRD	MANAGER	875	31/10/1997	39750		2	2	RESEARCH	YORK
	BIRD AHMAD	MANAGER SALES	875 734	31/10/1997 05/12/1997		1400	2		RESEARCH SALES	
690					22500	1400		3		BIRMINGHAI
690 734	AHMAD	SALES	734	05/12/1997	22500 38500	1400	3	3	SALES	BIRMINGHAI
690 734 818	AHMAD COX	SALES MANAGER	734 875	05/12/1997 11/06/2002	22500 38500 34500	1400	3	3 3 1	SALES SALES	BIRMINGHAI
690 734 818 824	AHMAD COX POLLARD	SALES MANAGER MANAGER	734 875 875	05/12/1997 11/06/2002 14/05/2000	22500 38500 34500 40000	1400	3 3 1	3 3 1 2	SALES SALES ACCOUNTING	BIRMINGHAI BIRMINGHAI LONDON YORK
690 734 818 824 875	AHMAD COX POLLARD REES	SALES MANAGER MANAGER ANALYST	734 875 875	05/12/1997 11/06/2002 14/05/2000 05/03/2000	22500 38500 34500 40000	0	3 3 1 2	3 3 1 2 1	SALES SALES ACCOUNTING RESEARCH	BIRMINGHAI BIRMINGHAI LONDON YORK LONDON
690 734 818 824 875 880	AHMAD COX POLLARD REES PARKER	SALES MANAGER MANAGER ANALYST PRESIDENT	734 875 875 602	05/12/1997 11/06/2002 14/05/2000 05/03/2000 09/07/2002	22500 38500 34500 40000 60000 25000		3 3 1 2 1	3 3 1 2 1 3	SALES SALES ACCOUNTING RESEARCH ACCOUNTING	BIRMINGHAI BIRMINGHAI LONDON YORK LONDON
690 734 818 824 875 880 912	AHMAD COX POLLARD REES PARKER TURNER	SALES MANAGER MANAGER ANALYST PRESIDENT SALES	734 875 875 602 734	05/12/1997 11/06/2002 14/05/2000 05/03/2000 09/07/2002 04/06/2001	22500 38500 34500 40000 60000 25000 21000		3 3 1 2 1 3	3 3 1 2 1 3 3 2	SALES SALES ACCOUNTING RESEARCH ACCOUNTING SALES	BIRMINGHAI BIRMINGHAI LONDON YORK LONDON BIRMINGHAI
690 734 818 824 875 880 912 936	AHMAD COX POLLARD REES PARKER TURNER HAYES	SALES MANAGER MANAGER ANALYST PRESIDENT SALES ADMIN	734 875 602 734 824	05/12/1997 11/06/2002 14/05/2000 05/03/2000 09/07/2002 04/06/2001 04/06/2001	22500 38500 34500 40000 60000 25000 21000 19500		3 3 1 2 1 3 2	3 3 1 2 1 3 3 2 3	SALES SALES ACCOUNTING RESEARCH ACCOUNTING SALES RESEARCH	BIRMINGHAI BIRMINGHAI LONDON YORK LONDON BIRMINGHAI YORK

