create user jdbctest identified by jdbctest;
grant connect, resource to jdbctest;

start c:/unico/data.sql

select * from emp;

	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7839	KING	PRESIDENT	(null)	81/11/17	5000	(null)	10
2	7698	BLAKE	MANAGER	7839	81/05/01	2850	(null)	30
3	7782	CLARK	MANAGER	7839	81/05/09	2450	(null)	10
4	7566	JONES	MANAGER	7839	81/04/01	2975	(null)	20
5	7654	MARTIN	SALESMAN	7698	81/09/10	1250	1400	30
6	7499	ALLEN	SALESMAN	7698	81/02/11	1600	300	30
7	7844	TURNER	SALESMAN	7698	81/08/21	1500	0	30
8	7900	JAMES	CLERK	7698	81/12/11	950	(null)	30
9	7521	WARD	SALESMAN	7698	81/02/23	1250	500	30
10	7902	FORD	ANALYST	7566	81/12/11	3000	(null)	20
11	7369	SMITH	CLERK	7902	80/12/11	800	(null)	20
12	7788	SCOTT	ANALYST	7566	82/12/22	3000	(null)	20
13	7876	ADAMS	CLERK	7788	83/01/15	1100	(null)	20
14	7934	MILLER	CLERK	7782	82/01/11	1300	(null)	10

SELECT ename, REGEXP_REPLACE(sal, '[0-3]', '*') as SALARY
FROM emp;

	ENAME	SALARY
1	KING	5***
2	BLAKE	*85*
3	CLARK	*45*
4	JONES	*975
5	MARTIN	**5*
6	ALLEN	*6**
7	TURNER	*5**
8	JAMES	95*
9	WARD	**5*
10	FORD	****
11	SMITH	8**
12	SCOTT	****
13	ADAMS	****
14	MILLER	****

SELECT ename, job, sal, RANK() over (ORDER BY sal DESC) 순위

FROM emp
WHERE job in ('ANALYST','MANAGER');

	ENAME	JOB	SAL	순위
1	KING	PRESIDENT	5000	1
2	SCOTT	ANALYST	3000	2
3	FORD	ANALYST	3000	2
4	JONES	MANAGER	2975	4
5	BLAKE	MANAGER	2850	5
6	CLARK	MANAGER	2450	6
7	ALLEN	SALESMAN	1600	7
8	TURNER	SALESMAN	1500	8
9	MILLER	CLERK	1300	9
10	WARD	SALESMAN	1250	10
11	MARTIN	SALESMAN	1250	10
12	ADAMS	CLERK	1100	12
13	JAMES	CLERK	950	13
14	SMITH	CLERK	800	14

SELECT ename, job, sal, RANK() over (ORDER BY sal DESC) 순위
FROM emp
WHERE job in ('ANALYST','MANAGER');

	ENAME	JOB	SAL	순위
1	FORD	ANALYST	3000	1
2	SCOTT	ANALYST	3000	1
3	JONES	MANAGER	2975	3
4	BLAKE	MANAGER	2850	4
5	CLARK	MANAGER	2450	5

SELECT ename, sal, job, RANK() over (PARTITION BY job
ORDER BY sal DESC) as 순위

FROM emp;

	ENAME	SAL	JOB	순위
1	SCOTT	3000	ANALYST	1
2	FORD	3000	ANALYST	1
3	MILLER	1300	CLERK	1
4	ADAMS	1100	CLERK	2
5	JAMES	950	CLERK	3
6	SMITH	800	CLERK	4
7	JONES	2975	MANAGER	1
8	BLAKE	2850	MANAGER	2
9	CLARK	2450	MANAGER	3
10	KING	5000	PRESIDENT	1
11	ALLEN	1600	SALESMAN	1
12	TURNER	1500	SALESMAN	2
13	MARTIN	1250	SALESMAN	3
14	WARD	1250	SALESMAN	3

SELECT job, ename, sal, DENSE_RANK() OVER (PARTITION BY job ORDER BY sal DESC) 순위

FROM emp

WHERE hiredate BETWEEN to_date('1981/01/01','RRRR/MM/DD')

AND to_date('1981/12/31','RRRR/MM/DD');

	JOB	ENAME	SAL	순위
1	ANALYST	FORD	3000	1
2	CLERK	JAMES	950	1
3	MANAGER	JONES	2975	1
4	MANAGER	BLAKE	2850	2
5	MANAGER	CLARK	2450	3
6	PRESIDENT	KING	5000	1
7	SALESMAN	ALLEN	1600	1
8	SALESMAN	TURNER	1500	2
9	SALESMAN	WARD	1250	3
10	SALESMAN	MARTIN	1250	3

SELECT ename, job, sal, RANK() over (ORDER BY sal DESC) AS RANK, DENSE_RANK() over (ORDER BY sal DESC) AS DENSE_RANK

FROM emp

WHERE job in ('ANALYST','MANAGER');

	ENAME	JOB	SAL	RANK	DENSE_RANK
1	FORD	ANALYST	3000	1	1
2	SCOTT	ANALYST	3000	1	1
3	JONES	MANAGER	2975	3	2
4	BLAKE	MANAGER	2850	4	3
5	CLARK	MANAGER	2450	5	4

SELECT DENSE_RANK(2975) within group (ORDER BY sal DESC) 순위

FROM emp;

dense_rank   2975   ..

orderby

	순위
1	3

SELECT DENSE_RANK('81/11/17') within group (ORDER BY hiredate ASC) 순위

FROM emp;

	순위
1	9

SELECT ename as 이름, EXTRACT(year from hiredate) as 년도,
EXTRACT(MONTH from hiredate) as 달,
EXTRACT(day from hiredate) as 요일

FROM emp;

	이름	년도	달	요일
1	KING	1981	11	17
2	BLAKE	1981	5	1
3	CLARK	1981	5	9
4	JONES	1981	4	1
5	MARTIN	1981	9	10
6	ALLEN	1981	2	11
7	TURNER	1981	8	21
8	JAMES	1981	12	11
9	WARD	1981	2	23
10	FORD	1981	12	11
11	SMITH	1980	12	11
12	SCOTT	1982	12	22
13	ADAMS	1983	1	15
14	MILLER	1982	1	11

SELECT ename, sal, RANK() over (order by sal desc) as RANK ,
DENSE_RANK() over (order by sal desc) as DENSE_RANK,
CUME_DIST()   over (order by sal desc) as CUM_DIST

FROM emp;

	ENAME	SAL	RANK	DENSE_RANK	CUM_DIST
1	KING	5000	1	1	0.0714285714285714285714285714285714
2	SCOTT	3000	2	2	0.214285714285714285714285714285714
3	FORD	3000	2	2	0.214285714285714285714285714285714
4	JONES	2975	4	3	0.285714285714285714285714285714285
5	BLAKE	2850	5	4	0.357142857142857142857142857142857
6	CLARK	2450	6	5	0.428571428571428571428571428571429
7	ALLEN	1600	7	6	0.5
8	TURNER	1500	8	7	0.571428571428571428571428571428571
9	MILLER	1300	9	8	0.642857142857142857142857142857143
10	WARD	1250	10	9	0.785714285714285714285714285714286
11	MARTIN	1250	10	9	0.785714285714285714285714285714286
12	ADAMS	1100	12	10	0.857142857142857142857142857142857
13	JAMES	950	13	11	0.928571428571428571428571428571429
14	SMITH	800	14	12	1

SELECT job, ename, sal, RANK() over (partition by job
order by sal desc) as RANK ,
CUME_DIST() over (partition by job
order by sal desc) as CUM_DIST

FROM emp;

	JOB	ENAME	SAL	RANK	CUM_DIST
1	ANALYST	SCOTT	3000	1	1
2	ANALYST	FORD	3000	1	1
3	CLERK	MILLER	1300	1	0.25
4	CLERK	ADAMS	1100	2	0.5
5	CLERK	JAMES	950	3	0.75
6	CLERK	SMITH	800	4	1
7	MANAGER	JONES	2975	1	0.333333333333333333333333333333333333
8	MANAGER	BLAKE	2850	2	0.666666666666666666666666666666666667
9	MANAGER	CLARK	2450	3	1
10	PRESIDENT	KING	5000	1	1
11	SALESMAN	ALLEN	1600	1	0.25
12	SALESMAN	TURNER	1500	2	0.5
13	SALESMAN	MARTIN	1250	3	1
14	SALESMAN	WARD	1250	3	1

SELECT deptno, LISTAGG(ename,',') within group (order by ename) as
EMPLOYEE
FROM emp
GROUP BY deptno;

	DEPTNO	EMPLOYEE
1	10	CLARK,KING,MILLER
2	20	ADAMS,FORD,JONES,SCOTT,SMITH
3	30	ALLEN,BLAKE,JAMES,MARTIN,TURNER,WARD

SELECT job, LISTAGG(ename,',') within group (ORDER BY ename desc) as
employee
FROM emp
GROUP BY job;

	JOB	EMPLOYEE
1	ANALYST	SCOTT,FORD
2	CLERK	SMITH,MILLER,JAMES,ADAMS
3	MANAGER	JONES,CLARK,BLAKE
4	PRESIDENT	KING
5	SALESMAN	WARD,TURNER,MARTIN,ALLEN

SELECT job,
       LISTAGG(ename||'('||sal||')',',') within group (ORDER BY ename asc) as
employee
FROM emp
GROUP BY job;

	JOB	EMPLOYEE
1	ANALYST	FORD(3000),SCOTT(3000)
2	CLERK	ADAMS(1100),JAMES(950),MILLER(1300),SMITH(800)
3	MANAGER	BLAKE(2850),CLARK(2450),JONES(2975)
4	PRESIDENT	KING(5000)
5	SALESMAN	ALLEN(1600),MARTIN(1250),TURNER(1500),WARD(1250)

SELECT empno, ename, sal,
       LAG(sal,1) over (order by sal asc) "전 행의 sal값",
       LEAD(sal,1) over (order by sal asc) "다음 행의 sal값"
FROM emp;

	EMPNO	ENAME	SAL	전 행의 sal값	다음 행의 sal값
1	7369	SMITH	800	(null)	950
2	7900	JAMES	950	800	1100
3	7876	ADAMS	1100	950	1250
4	7521	WARD	1250	1100	1250
5	7654	MARTIN	1250	1250	1300
6	7934	MILLER	1300	1250	1500
7	7844	TURNER	1500	1300	1600
8	7499	ALLEN	1600	1500	2450
9	7782	CLARK	2450	1600	2850
10	7698	BLAKE	2850	2450	2975
11	7566	JONES	2975	2850	3000
12	7902	FORD	3000	2975	3000
13	7788	SCOTT	3000	3000	5000
14	7839	KING	5000	3000	(null)

SELECT empno, ename, hiredate,
        LAG(hiredate,1) over (order by hiredate asc) "전 행의 sal값",
        LEAD(hiredate,1) over (order by hiredate asc) "다음 행의 sal값"
FROM emp;

	EMPNO	ENAME	HIREDATE	전 행의 sal값	다음 행의 sal값
1	7369	SMITH	80/12/11	(null)	81/02/11
2	7499	ALLEN	81/02/11	80/12/11	81/02/23
3	7521	WARD	81/02/23	81/02/11	81/04/01
4	7566	JONES	81/04/01	81/02/23	81/05/01
5	7698	BLAKE	81/05/01	81/04/01	81/05/09
6	7782	CLARK	81/05/09	81/05/01	81/08/21
7	7844	TURNER	81/08/21	81/05/09	81/09/10
8	7654	MARTIN	81/09/10	81/08/21	81/11/17
9	7839	KING	81/11/17	81/09/10	81/12/11
10	7900	JAMES	81/12/11	81/11/17	81/12/11
11	7902	FORD	81/12/11	81/12/11	82/01/11
12	7934	MILLER	82/01/11	81/12/11	82/12/22
13	7788	SCOTT	82/12/22	82/01/11	83/01/15
14	7876	ADAMS	83/01/15	82/12/22	(null)

SELECT deptno, empno, ename, hiredate,
        LAG(hiredate,1) over (partition by deptno
                                order by hiredate asc) "전 행의 sal값",
        LEAD(hiredate,1) over (partition by deptno
                                order by hiredate asc) "다음 행의 sal값"
FROM emp;

	DEPTNO	EMPNO	ENAME	HIREDATE	전 행의 sal값	다음 행의 sal값
1	10	7782	CLARK	81/05/09	(null)	81/11/17
2	10	7839	KING	81/11/17	81/05/09	82/01/11
3	10	7934	MILLER	82/01/11	81/11/17	(null)
4	20	7369	SMITH	80/12/11	(null)	81/04/01
5	20	7566	JONES	81/04/01	80/12/11	81/12/11
6	20	7902	FORD	81/12/11	81/04/01	82/12/22
7	20	7788	SCOTT	82/12/22	81/12/11	83/01/15
8	20	7876	ADAMS	83/01/15	82/12/22	(null)
9	30	7499	ALLEN	81/02/11	(null)	81/02/23
10	30	7521	WARD	81/02/23	81/02/11	81/05/01
11	30	7698	BLAKE	81/05/01	81/02/23	81/08/21
12	30	7844	TURNER	81/08/21	81/05/01	81/09/10
13	30	7654	MARTIN	81/09/10	81/08/21	81/12/11
14	30	7900	JAMES	81/12/11	81/09/10	(null)

SELECT SUM(DECODE(deptno, 10, sal)) as "10",
SUM(DECODE(deptno, 20, sal)) as "20",
SUM(DECODE(deptno, 30, sal)) as "30"
FROM emp;

	10	20	30
1	8750	10875	9400

SELECT   SUM(DECODE(job,'ANALYST',sal)) as "ANALYST",
SUM(DECODE(job,'CLERK',sal))   as "CLERK",
SUM(DECODE(job,'MANAGER',sal)) as "MANAGER",
SUM(DECODE(job,'SALESMAN',sal)) as "SALESMAN"
FROM emp;

	ANALYST	CLERK	MANAGER	SALESMAN
1	6000	4150	8275	5600

SELECT job, sum(sal)
FROM emp
GROUP BY ROLLUP(job);

	JOB	SUM(SAL)
1	ANALYST	6000
2	CLERK	4150
3	MANAGER	8275
4	PRESIDENT	5000
5	SALESMAN	5600
6	(null)	29025

SELECT deptno, job, sum(sal)
FROM emp
GROUP BY ROLLUP(deptno, job);

	DEPTNO	JOB	SUM(SAL)
1	10	CLERK	1300
2	10	MANAGER	2450
3	10	PRESIDENT	5000
4	10	(null)	8750
5	20	CLERK	1900
6	20	ANALYST	6000
7	20	MANAGER	2975
8	20	(null)	10875
9	30	CLERK	950
10	30	MANAGER	2850
11	30	SALESMAN	5600
12	30	(null)	9400
13	(null)	(null)	29025

SELECT job, sum(sal)
FROM emp
GROUP BY CUBE(job);

	JOB	SUM(SAL)
1	(null)	29025
2	CLERK	4150
3	ANALYST	6000
4	MANAGER	8275
5	SALESMAN	5600
6	PRESIDENT	5000

SELECT deptno, job, sum(sal)
FROM emp
GROUP BY CUBE(deptno,job);

	DEPTNO	JOB	SUM(SAL)
1	(null)	(null)	29025
2	(null)	CLERK	4150
3	(null)	ANALYST	6000
4	(null)	MANAGER	8275
5	(null)	SALESMAN	5600
6	(null)	PRESIDENT	5000
7	10	(null)	8750
8	10	CLERK	1300
9	10	MANAGER	2450
10	10	PRESIDENT	5000
11	20	(null)	10875
12	20	CLERK	1900
13	20	ANALYST	6000
14	20	MANAGER	2975
15	30	(null)	9400
16	30	CLERK	950
17	30	MANAGER	2850
18	30	SALESMAN	5600

SELECT deptno, job, sum(sal)
FROM emp
GROUP BY GROUPING SETS(deptno, job);

	DEPTNO	JOB	SUM(SAL)
1	30	(null)	9400
2	20	(null)	10875
3	10	(null)	8750
4	(null)	SALESMAN	5600
5	(null)	CLERK	4150
6	(null)	PRESIDENT	5000
7	(null)	MANAGER	8275
8	(null)	ANALYST	6000

SELECT deptno, job, sum(sal)
FROM emp
GROUP BY GROUPING SETS(deptno, job, ());

	DEPTNO	JOB	SUM(SAL)
1	30	(null)	9400
2	20	(null)	10875
3	10	(null)	8750
4	(null)	ANALYST	6000
5	(null)	CLERK	4150
6	(null)	MANAGER	8275
7	(null)	PRESIDENT	5000
8	(null)	SALESMAN	5600
9	(null)	(null)	29025

SELECT deptno, job, sum(sal)
FROM emp
GROUP BY GROUPING SETS(deptno, job, (deptno, job), ());

	DEPTNO	JOB	SUM(SAL)
1	10	CLERK	1300
2	20	CLERK	1900
3	30	CLERK	950
4	20	ANALYST	6000
5	10	MANAGER	2450
6	20	MANAGER	2975
7	30	MANAGER	2850
8	30	SALESMAN	5600
9	10	PRESIDENT	5000
10	(null)	CLERK	4150
11	(null)	ANALYST	6000
12	(null)	MANAGER	8275
13	(null)	SALESMAN	5600
14	(null)	PRESIDENT	5000
15	10	(null)	8750
16	20	(null)	10875
17	30	(null)	9400
18	(null)	(null)	29025

SELECT empno, ename, sal, RANK() OVER (ORDER BY sal DESC) RANK,
DENSE_RANK() OVER (ORDER BY sal DESC) DENSE_RANK,
ROW_NUMBER() OVER (ORDER BY sal DESC) 번호
FROM emp;

	EMPNO	ENAME	SAL	RANK	DENSE_RANK	번호
1	7839	KING	5000	1	1	1
2	7788	SCOTT	3000	2	2	2
3	7902	FORD	3000	2	2	3
4	7566	JONES	2975	4	3	4
5	7698	BLAKE	2850	5	4	5
6	7782	CLARK	2450	6	5	6
7	7499	ALLEN	1600	7	6	7
8	7844	TURNER	1500	8	7	8
9	7934	MILLER	1300	9	8	9
10	7521	WARD	1250	10	9	10
11	7654	MARTIN	1250	10	9	11
12	7876	ADAMS	1100	12	10	12
13	7900	JAMES	950	13	11	13
14	7369	SMITH	800	14	12	14

SELECT empno, ename, sal, ROW_NUMBER() OVER (ORDER BY sal DESC) 번호
FROM emp
WHERE deptno = 20;

	EMPNO	ENAME	SAL	번호
1	7902	FORD	3000	1
2	7788	SCOTT	3000	2
3	7566	JONES	2975	3
4	7876	ADAMS	1100	4
5	7369	SMITH	800	5

SELECT deptno, ename, sal, ROW_NUMBER() OVER(PARTITION BY deptno
ORDER BY sal DESC) 번호

FROM emp
WHERE deptno in (10,20);

	DEPTNO	ENAME	SAL	번호
1	10	KING	5000	1
2	10	CLARK	2450	2
3	10	MILLER	1300	3
4	20	FORD	3000	1
5	20	SCOTT	3000	2
6	20	JONES	2975	3
7	20	ADAMS	1100	4
8	20	SMITH	800	5

SELECT ROWNUM, empno, ename, job, sal
FROM emp
WHERE ROWNUM <= 5;

ROWNUM	EMPNO	ENAME	JOB	SAL
1	1	7839 KING	PRESIDENT	5000
2	2	7698 BLAKE	MANAGER	2850
3	3	7782 CLARK	MANAGER	2450
4	4	7566 JONES	MANAGER	2975
5	5	7654 MARTIN	SALESMAN	1250

SELECT ROWNUM, empno, ename, job, sal
FROM emp
WHERE ROWNUM <= 5
ORDER BY sal;

ROWNUM	EMPNO	ENAME	JOB	SAL
1	5	7654 MARTIN	SALESMAN	1250
2	3	7782 CLARK	MANAGER	2450
3	2	7698 BLAKE	MANAGER	2850
4	4	7566 JONES	MANAGER	2975
5	1	7839 KING	PRESIDENT	5000

WITH salemp AS(SELECT *
FROM emp
ORDER BY sal)
SELECT empno, ename, job, sal
FROM salemp
WHERE ROWNUM <= 5;

EMPNO	ENAME	JOB	SAL
1	7369 SMITH	CLERK	800
2	7900 JAMES	CLERK	950
3	7876 ADAMS	CLERK	1100
4	7654 MARTIN	SALESMAN	1250
5	7521 WARD	SALESMAN	1250

SELECT ROWNUM, empno, ename, job, sal
FROM emp
WHERE ROWNUM >= 3 AND ROWNUM <= 5
ORDER BY sal;

ROWNUM	EMPNO	ENAME	JOB	SAL

WITH salemp AS(SELECT rownum sortno, empno, ename, job, mgr, hiredate, sal, comm, deptno
      FROM (SELECT *
         FROM emp
         ORDER BY sal))
SELECT empno, ename, job, sal
  FROM salemp
WHERE sortno >= 3 AND sortno <= 5;

	EMPNO	ENAME	JOB	SAL
1	7876	ADAMS	CLERK	1100
2	7521	WARD	SALESMAN	1250
3	7654	MARTIN	SALESMAN	1250

SELECT empno, ename, job, sal
  FROM (SELECT rownum sortno, empno, ename,
      job, mgr, hiredate, sal, comm, deptno
    FROM (SELECT *
        FROM emp
        ORDER BY sal))
WHERE sortno >= 3 AND sortno <= 5

	EMPNO	ENAME	JOB	SAL
1	7876	ADAMS	CLERK	1100
2	7521	WARD	SALESMAN	1250
3	7654	MARTIN	SALESMAN	1250

SELECT rpad(' ', level*3) || ename as employee , level, sal, job
FROM emp
START WITH ename='KING'
CONNECT BY prior empno = mgr;

	EMPLOYEE	LEVEL	SAL	JOB
1	KING	1	5000	PRESIDENT
2	JONES	2	2975	MANAGER
3	SCOTT	3	3000	ANALYST
4	ADAMS	4	1100	CLERK
5	FORD	3	3000	ANALYST
6	SMITH	4	800	CLERK
7	BLAKE	2	2850	MANAGER
8	ALLEN	3	1600	SALESMAN
9	WARD	3	1250	SALESMAN
10	MARTIN	3	1250	SALESMAN
11	TURNER	3	1500	SALESMAN
12	JAMES	3	950	CLERK
13	CLARK	2	2450	MANAGER
14	MILLER	3	1300	CLERK

SELECT rpad(' ', level*3) II ename   as   employee , level, sal, job
FROM emp
START WITH ename='KING'
CONNECT BY prior empno = mgr AND ename != 'BLAKE';

	EMPLOYEE	LEVEL	SAL	JOB
1	KING	1	5000	PRESIDENT
2	JONES	2	2975	MANAGER
3	SCOTT	3	3000	ANALYST
4	ADAMS	4	1100	CLERK
5	FORD	3	3000	ANALYST
6	SMITH	4	800	CLERK
7	CLARK	2	2450	MANAGER
8	MILLER	3	1300	CLERK

SELECT rpad(' ', level*3) II ename   as   employee , level, sal, job
FROM emp
START WITH   ename='JONES'
CONNECT BY prior empno = mgr ;

	EMPLOYEE	LEVEL	SAL	JOB
1	JONES	1	2975	MANAGER
2	SCOTT	2	3000	ANALYST
3	ADAMS	3	1100	CLERK
4	FORD	2	3000	ANALYST
5	SMITH	3	800	CLERK

```sql
SELECT ename, SYS_CONNECT_BY_PATH(ename,'/')  as  path
FROM emp
START WITH ename='KING'
CONNECT BY prior empno = mgr;
```

	ENAME	PATH
1	KING	/KING
2	JONES	/KING/JONES
3	SCOTT	/KING/JONES/SCOTT
4	ADAMS	/KING/JONES/SCOTT/ADAMS
5	FORD	/KING/JONES/FORD
6	SMITH	/KING/JONES/FORD/SMITH
7	BLAKE	/KING/BLAKE
8	ALLEN	/KING/BLAKE/ALLEN
9	WARD	/KING/BLAKE/WARD
10	MARTIN	/KING/BLAKE/MARTIN
11	TURNER	/KING/BLAKE/TURNER
12	JAMES	/KING/BLAKE/JAMES
13	CLARK	/KING/CLARK
14	MILLER	/KING/CLARK/MILLER

```sql
SELECT ename, LTRIM(SYS_CONNECT_BY_PATH(ename,'/'), '/')  as  path
FROM emp
START WITH ename='KING'
CONNECT BY prior empno = mgr;
```

	ENAME	PATH
1	KING	KING
2	JONES	KING/JONES
3	SCOTT	KING/JONES/SCOTT
4	ADAMS	KING/JONES/SCOTT/ADAMS
5	FORD	KING/JONES/FORD
6	SMITH	KING/JONES/FORD/SMITH
7	BLAKE	KING/BLAKE
8	ALLEN	KING/BLAKE/ALLEN
9	WARD	KING/BLAKE/WARD
10	MARTIN	KING/BLAKE/MARTIN
11	TURNER	KING/BLAKE/TURNER
12	JAMES	KING/BLAKE/JAMES
13	CLARK	KING/CLARK
14	MILLER	KING/CLARK/MILLER