**SQL PROCEDURE EXAMPLES**

**proc** **sql**;

create table paylist

(

IdNum char(**4**),

Gender char(**1**),

Jobcode char(**3**),

Salary num,

Birth num informat=date7.

format=date7.,

Hired num informat=date7.

format=date7.

);

**quit**;

**proc** **sql**;

Describe table paylist;

**quit**;

**proc** **sql**;

select \* from paylist;

**quit**;

**proc** **sql**;

insert into paylist

values('1639','F','TA1',**42260**,**'26JUN70'd**,**'28JAN91'd**)

values('1065','M','ME3',**38090**,**'26JAN54'd**,**'07JAN92'd**)

values('1400','M','ME1',**29769.'05NOV67'd**,**'16OCT90'd**)

values('1561','M',null,**36514**,**'30NOV63'd**,**'07OCT87'd**)

values('1221','F','FA3',**.**,**'22SEP63'd**,**'04OCT94'd**);

**quit**;

**data** Employees;

input IdNum $4. +**2** LName $11. FName $11. JobCode $3.

+**1** Salary **5.** +**1** Phone $12.;

datalines;

1876 CHIN JACK TA1 42400 212/588-5634

1114 GREENWALD JANICE ME3 38000 212/588-1092

1556 PENNINGTON MICHAEL ME1 29860 718/383-5681

1354 PARKER MARY FA3 65800 914/455-2337

1130 WOOD DEBORAH PT2 36514 212/587-0013

WOOD DEBORAK PT2 36514 212/587-0014

;

**proc** **sql**;

select \* from employees;

**quit**;

**proc** **sql**;

select fname,lname from employees;

**quit**;

**proc** **sql**;

create table new as

select \* from employees;

**quit**;

**proc** **sql**;

select fname as efname,lname as elname from employees;

**quit**;

**proc** **sql**;

select \* from Employees

where salary>**30000**;

**quit**;

**proc** **sql**;

create table new1 as

select \* from Employees

where salary>**30000**;

**quit**;

**proc** **sql**;

select \* from Employees

where salary=**42400**;

**quit**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*below Not equal to will not work\*\*\*\*\*\*\*\*\*\*\*\*/

**proc** **sql**;

select \* from Employees

where salary!=**42400**;

**quit**;

**proc** **sql**;

select \* from Employees

where salary<>**42400**;

**quit**;

**proc** **sql**;

select \* from Employees

where salary>=**42400**;

**quit**;

**proc** **sql**;

select \* from Employees

where salary>**30000** and salary<**50000**;

**quit**;

**proc** **sql**;

select \* from Employees

where jobcode='TA1' and salary<=**40000**;

**quit**;

**proc** **sql**;

select \* from Employees

where jobcode='TA1' or salary<=**40000**;

**quit**;

**proc** **sql**;

select \* from Employees

where jobcode is not null;

**quit**;

**proc** **sql**;

select \* from Employees

where lname like '%D';

**quit**;

**proc** **sql**;

select \* from Employees

where lname like 'P%';

**quit**;

**proc** **sql**;

select \* from Employees

where lname like '%A%';

**quit**;

**proc** **sql**;

select \* from Employees

where jobcode in ('TA1','FA3');

**quit**;

**proc** **sql**;

select \* from Employees

where jobcode not in ('TA1','FA3');

**quit**;

**proc** **sql**;

select \* from Employees

where salary between **30000** and **39000**;

**quit**;

**proc** **sql**;

title 'Employees Table';

update employees

set salary=salary\***2**;

select \* from employees;

**quit**;

**proc** **sql**;

create table aa as

select case when lname='CHIN' then salary\***1.04**

else **1.025**

end as sal1

from employees;

**quit**;

**proc** **sql**;

create table kk as

select \*,case when lname='JIM' then 'TOM'

when lname='WOOD' then 'ARUL'

else 'OTHER'

end as lname1

from test;

**quit**;

**proc** **sql**;

select \*,case when lname='JIM' then 'TOM'

when lname='WOOD' then 'ARUL'

else 'OTHER'

end as lname1

from test;

**quit**;

**proc** **sql**;

title 'Employees Table';

update employees

set salary=salary\*

case when jobcode like '\_\_1' then **1.04**

else **1.025**

end;

select \* from employees;

**quit**;

**proc** **sql**;

title 'Employees Table alter';

alter table employees

modify salary num format=dollar8.

drop phone

add gender char(**5**);

select \* from employees;

**quit**;

**proc** **sql**;

title 'Employees Table';

update employees

set gender='m' ;

select \* from employees;

**quit**;

**proc** **sql**;

title 'Employees Table';

update employees

set gender='f' where idnum in ('1876','1114');

select \* from employees;

**quit**;

**proc** **sql**;

select \* from employees order by IdNum ;

**quit**;

**proc** **sql**;

select \* from employees order by IdNum desc;

**quit**;

**proc** **sql**;

select count(\*) as total\_cnt from employees ;

**quit**;

**proc** **sql**;

select count(jobcode) as job\_cnt from employees ;

**quit**;

**proc** **sql**;

select count(distinct jobcode) as job\_cnt from employees1 ;

**quit**;

**proc** **sql**;

select \* from employees;

**quit**;

**proc** **sql**;

select gender,sum(salary) as total\_sal from employees ;

**quit**;

**proc** **sql**;

select gender,sum(salary) as total\_sal from employees group by gender;

**quit**;

**proc** **sql**;

select gender,sum(salary) as total\_sal from employees

group by gender

having total\_sal > **200000**;

**quit**;

**proc** **sql**;

select gender,sum(salary) as total\_sal from employees

group by gender

having sum(salary) > **200000**;

**quit**;

**proc** **sql**;

select gender,sum(salary) as total\_sal from employees

group by gender

having salary > **200000**;

**quit**;

**proc** **sql**;

select gender,sum(salary) as total\_sal from employees

group by gender

where salary > **200000**;

**quit**;

**proc** **sql**;

select \* from employees;

**quit**;

**proc** **sql**;

delete from employees;

**quit**;

**data** Employees1;

input IdNum $4. +**2** LName $11. FName $11. JobCode $3.

+**1** Salary **5.** +**1** Phone $12.;

datalines;

1876 CHIN JACK TA1 42400 212/588-5633

1876 CHIN JACK TA1 42400 212/588-5634

1114 GREENWALD JANICE ME3 38000 212/588-1092

1556 PENNINGTON MICHAEL ME1 29860 718/383-5681

1354 PARKER MARY FA3 65800 914/455-2337

1130 WOOD DEBORAH PT2 36514 212/587-0013

;

**proc** **sql**;

select distinct \* from employees1;

**quit**;

**proc** **sql**;

select distinct(idnum) from employees1;

**quit**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*FUNCTIONS\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

**proc** **sql**;

select LOWcase(LName) as lownm from employees;

**quit**;

**proc** **sql**;

select upcase(LName) as lownm from employees;

**quit**;

**proc** **sql**;

select propcase(LName) as lownm from employees;

**quit**;

**proc** **sql**;

select length(LName) as lennm from employees;

**quit**;

**proc** **sql**;

select substr(LName,**2**,**4**) as subnm from employees;

**quit**;

**proc** **sql**;

select tranwrd(LName,'CHIN','CHINA') as replacenm from employees;

**quit**;

**proc** **sql**;

select translate(IdNum, "0", " ") as blankid from employees;

**quit**;

**proc** **sql**;

select trim(LName) as trimnm from employees;

**quit**;

**proc** **sql**;

select trim(LName) as trimnm from employees;

**quit**;

**data** emp;

input age;

cards;

-4.5

;

**run**;

**proc** **sql**;

select ceil(age) from emp;

**quit**;

**proc** **sql**;

select floor(age) from emp;

**quit**;

**proc** **sql**;

create table paylist

(IdNum char(**4**),

Gender char(**1**),

Jobcode char(**3**),

Salary num,

Birth num informat=date7.

format=date7.,

Hired num informat=date7.

format=date7.);

insert into paylist

values('1639','F','TA1',**42260**,**'26JUN70'd**,**'28JAN91'd**)

values('1065','M','ME3',**38090**,**'26JAN54'd**,**'07JAN92'd**)

values('1400','M','ME1',**29769.'05NOV67'd**,**'16OCT90'd**)

values('1561','M',null,**36514**,**'30NOV63'd**,**'07OCT87'd**)

values('1221','F','FA3',**.**,**'22SEP63'd**,**'04OCT94'd**);

title 'PROCLIB.PAYLIST Table';

select \*

from paylist;

**quit**;

**proc** **sql**;

select today() as todaydt format=date7. from paylist;

**quit**;

**proc** **sql**;

select day(Birth) as Birthdt from paylist;

**quit**;

**proc** **sql**;

select year(Birth) as Birthyear from paylist;

**quit**;

**proc** **sql**;

select month(Birth) as Birthmonth from paylist;

**quit**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*JOINS\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

**data** payroll;

input IdNum $**1**-**4** Gender $**9**-**10** Jobcode $**11**-**13** Salary **15**-**19** @**22** Birth date7. @**31** Hired date7.;

format Birth date7. Hired date7.;

cards;

1919 M TA2 34376 12SEP60 04JUN87

1653 F ME2 35108 15OCT64 09AUG90

1400 M ME1 29769 05NOV67 16OCT90

1350 F FA3 32886 31AUG65 29JUL90

1401 M TA3 38822 13DEC50 17NOV85

1499 M ME3 43025 26APR54 07JUN80

1101 M SCP 18723 06JUN62 01OCT90

1333 M PT2 88606 30MAR61 10FEB81

1402 M TA2 32615 17JAN63 02DEC90

1479 F TA3 38785 22DEC68 05OCT89

;

**run**;

**data** payroll2;

input IdNum $**1**-**4** sex $**7**-**8** Jobcode $**12**-**14** Salary **24**-**28** @**31** Birth date7. @**40** Hired date7.;

format Birth date7. Hired date7.;

cards;

1036 F TA3 42465 19MAY65 23OCT84

1065 M ME3 38090 26JAN44 07JAN87

1076 M PT1 69742 14OCT55 03OCT91

1106 M PT3 94039 06NOV57 16AUG84

1129 F ME3 36758 08DEC61 17AUG91

1221 F FA3 29896 22SEP67 04OCT91

1350 F FA3 36098 31AUG65 29JUL90

1369 M TA3 36598 28DEC61 13MAR87

1447 F FA1 22123 07AUG72 29OCT92

1561 M TA3 36514 30NOV63 07OCT87

1639 F TA3 42260 26JUN57 28JAN84

1998 M SCP 23100 10SEP70 02NOV92

;

**run**;

**proc** **sql** ;

select \* from payroll as p, payroll2 as p2

where p.IdNum=p2.idnum;

**quit**;

**proc** **sql** ;

select p.\* from payroll as p

inner join payroll2 as p2

on p.IdNum=p2.idnum;

**quit**;

**proc** **sql** ;

select p2.\* from payroll as p

inner join payroll2 as p2

on p.IdNum=p2.idnum;

**quit**;

**proc** **sql** ;

select p.\*,p2.\* from payroll as p

inner join payroll2 as p2

on p.IdNum=p2.idnum;

**quit**;

**proc** **sql** outobs=**2**;

select p.IdNum, p.Jobcode, p.Salary,

p2.jobcode label='New Jobcode',

p2.salary label='New Salary' format=dollar8.

from payroll as p full join payroll2 as p2

on p.IdNum=p2.idnum;

**quit**;

**proc** **sql** ;

select \* from payroll as p

full join payroll2 as p2

on p.IdNum=p2.idnum;

**quit**;

**proc** **sql** ;

select \* from payroll as p

left join payroll2 as p2

on p.IdNum=p2.idnum;

**quit**;

**proc** **sql** ;

select \* from payroll as p

right join payroll2 as p2

on p.IdNum=p2.idnum;

**quit**;

**proc** **sql** ;

select \* from payroll as p

left outer join payroll2 as p2

on p.IdNum=p2.idnum;

**quit**;

**proc** **sql** ;

select \* from payroll as p

right outer join payroll2 as p2

on p.IdNum=p2.idnum;

**quit**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*View\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

**proc** **sql**;

create view jobs as

select \* from payroll;

select \* from jobs;

**quit**;

**proc** **sql**;

select \* from jobs;

**quit**;

/\*\*\*\*\*\*\*\*\*\*\*Simple Index\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

**proc** **sql**;

CREATE INDEX jobcode

ON payroll(jobcode);

**quit**;

/\*\*\*\*\*\*\*\*\*\*\* Composite Index\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

**proc** **sql**;

CREATE INDEX pay1

ON payroll(jobcode,idnum);

**quit**;

**proc** **sql**;

describe table payroll;

**quit**;

**proc** **contents** data=payroll;

**run**;

**proc** **sql**;

drop index pay1 from payroll;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Subquery\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

**data** assignment;

informat from\_dt to\_dt date9.;

format from\_dt to\_dt date9.;

input carnumber from\_dt to\_dt contract $23. maint;

datalines;

1 01jan1990 04feb1991 0000-00-00-000-00-00-00 890

3 02mar1990 18apr1990 0001-00-09-001-11-98-00 34

13 05mar1990 19jun1991 2345-98-08-876-12-12-23 345

89 01apr1997 02may1998 1234-09-98-983-12-34-34 890

90 01jun1990 01dec1996 1234-01-89-987-12-23-34 112

90 01jan1997 01apr1998 2345-90-12-122-12-43-34 345

98 01mar1991 01jun1998 1090-09-98-871-12-34-54 67

1 01jun1991 09may1998 1111-00-00-000-00-00-00 19

100 01apr1996 19may1998 1090-11-11-111-11-11-11 123

;

**run**;

**data** contracts\_details;

length Customer Town $10.;

input contract $23. Customer $ Town $ Locations;

datalines;

0000-00-00-000-00-00-00 ABC Calcutta 10

0001-00-09-001-11-98-00 XYZ Bombay 11

2345-98-08-876-12-12-23 Tata Jamshedpur 90

1234-09-98-983-12-34-34 Toyota Lucknow 8

1090-11-11-111-11-11-11 Billa Chennai 89

9090-11-99-112-09-89-89 Ambuni Nagpur 78

8787-98-89-899-89-76-12 Calvin Madurai 7

1234-98-98-899-98-12-12 Hobbes Salem 10

;

**run**;

**proc** **sql**;

select Contract,town from contracts\_details

where town in ("Calcutta","Lucknow");

**quit**;

**proc** **sql**;

select \* from assignment

order by CarNumber;

**quit**;

**proc** **sql**;

create table test as

select \* from assignment

where contract in (select Contract from contracts\_details

where town in ("Calcutta","Lucknow"))

order by CarNumber;

**quit**;

**data** Emp;

input IdNum $ ename $ Job $ Salary Phone $12.;

datalines;

1876 JACK TA1 42400 212/588-5634

1114 JANICE ME3 38000 212/588-1092

1556 MICHAEL ME1 29860 718/383-5681

1354 MARY FA3 65800 914/455-2337

1130 DEBORAH PT2 36514 212/587-0013

1131 DEBORAK PT2 36514 212/587-0014

;

**SELECT \* FROM emp**

**WHERE job = (SELECT job FROM emp WHERE ename=’DEBORAH’) ;**

/\*\*\*\*\*\*\*\*\*\*\*\*\*Connect to orcle by sql pass through facility\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

**proc** **sql**;

connect to oracle (user=system password=system path='xe');

create table test as

select \*

from connection to oracle

(select \*

from ab.emp

);

disconnect from oracle;

**quit**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*Connect to orcle by libname \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

libname out oracle user=system password=system path='xe' schema=ab;

select \* from emp

/\*\*\*\*\*\*\*\*\*\*\*\*\*First. Variable \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

Data x;  
input a$ c;  
datalines;  
a 34  
a 5  
c 4  
c 7  
e 6  
;  
Run;  
Proc sql;  
create table y as select \*,monotonic () as s from  
x group by a having max(s)=s;  
quit;

data have;

input Account\_Id Dept Salary Emp\_Status $ Projects $ Rating;

cards;

111 123 7000 Perm A 5

111 123 7000 Perm B 4

111 123 7000 Perm C 5

222 124 6000 Perm A 5

333 125 7000 Perm B 4

333 125 7000 Perm C 5

;

run;

proc sql;

create table want as

select \*, monotonic() as row\_id from have

group by account\_id

having row\_id = max(row\_id);

quit;

data have;

input Account\_Id Dept Salary Emp\_Status $ Projects $ Rating;

datalines;

111 123 7000 Perm A 5

111 123 7000 Perm B 4

111 123 7000 Perm C 5

222 124 6000 Perm A 5

333 125 7000 Perm B 4

333 125 7000 Perm C 5

run;

proc sql;

\* standard sql query;

create table want as

select have.\*

from have

join (select account\_id, max(projects) as max\_projects from have group by account\_id) as matched

on matched.account\_id = have.account\_id

and matched.max\_projects = have.projects

;

\* SAS sql query that does magic auto remerge ;

create table want as

select have.\*

from have

group by account\_id

having projects = max(projects)

;