



Codes Used in SAS Hands-on Workshop at IIT Kharagpur

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```
libname IIT "D:\KGP_IIT\DATA";
run;
data IIT.Newdata;
infile "D:\KGP_IIT\DATA\Data1.csv" lrecl=10000 dsd misover firstobs = 2;
input id: $4. Name: $20. age:5.;
run;

/*syntax reading sas data set*/
data iit.class;
set sashelp.class;
run;
proc contents data =iit.class;
run;

/*NUMERIC FUNCTIONS*/

data iit.class;
set IIT.class;
log_age=log(age);
sqrt_ht=height**0.5;
sqr_age=age**2;
inv_wt=1/weight;
exp_age=exp(age);
var1=height+weight;
run;

/*STRING FUNCTIONS*/
data IIT.CLASS1;
set IIT.CLASS;

/*concatenation*/
NEWVAR = SEX||NAME;
NEWVAR1 = SEX||AGE;
```

```
newvar2 = compress(newvar1);
newvar3 = compbl(newvar1);
/*calculate length of a string*/
l = length(newvar);
str1 = substr(Name,2,3);
run;
```

/*DATE VARIABLES AND FORMAT*/

```
data iit.air;
set iit.air;
```

```
date1=date;
date2=date;
run;
```

/*date operations*/

```
data iit.air1;
set iit.air;
format date1 date2 date3 date4 ddmmyy10.;
format air dollar10.2;
m = month(date);
y = year(date);
d = day(date);
w = week(date);
wd = weekday(date);
date1 = date;
date2 = date1+7;
date3 = intnx('Months',date1,3);
date4 = intnx('Months',date1,-3);
dif = intck ('days',date1,date3);
run;
```

/*Keep drop rename label*/

```
data iit.class2;
set iit.class1;
drop newvar newvar1 newvar2 newvar3;
```

run;

```
/* Better way of Dropping Variable*/  
data class3(drop= name height);  
set iit.class;  
run;  
data iit.class3;  
set iit.class;  
keep name sex age;  
rename sex = gender;  
label name = "Name of Students";  
run;
```

/*Conditions*/

```
/*single condition single action*/  
data iit.class4;  
set iit.class;  
if sex="M" then age2=age*2;  
else if sex="F" then age2=age**2;  
run;
```

```
/*multiple condition single action*/  
data iit.class4;  
set iit.class;  
if age<13 then height1=height**2;  
else if age>=13 and age<=14 then height1=height*2;  
else if age>14 then height1=height**0.5;  
run;
```

```
/*Multiple condition multiple action*/  
data iit.class4;  
set iit.class;  
if age<13 then do;  
height2=height**3;  
weight1=weight**2;  
end;  
else if age>=13 and age<=14 then do;  
height2=height*2;
```

```
weight1=weight*3;  
end;  
else do;  
height2=height*0.5;  
weight1=weight*100;  
end;  
run;
```

/*Contents*/

```
proc contents data = iit.class;  
run;
```

/*Printing the data*/

```
proc print data =iit.class;  
run;
```

/*start printing from row number 5*/

```
proc print data=iit.class(firstobs=5);  
run;
```

/*printing 10 obs from row number 5*/

```
proc print data=iit.class(firstobs=5 obs=14);  
run;
```

/*printing a part of the data*/

```
proc print data= iit.class(obs=10);  
run;
```

/*fragmenting printing using by statement*/

```
proc print data=iit.class;  
by sex;  
pageby sex;  
run;
```

/*printing some variables*/

```
proc print data = iit.class;  
var sex name height;  
run;
```

```
/*printing without obs*/  
proc print data=iit.class noobs;  
var sex name height;  
run;
```

```
/*Printing Title*/  
proc print data=iit.class noobs;  
title "SAS Printing Lesson";  
var sex name height;  
run;  
proc print data=iit.class noobs;  
var count name;  
run;
```

```
/*Sorting with multiple fields*/  
proc sort data=iit.class;  
by sex;  
run;
```

```
/*sorting with multiple fields descending key word to be used before variable to sort in  
descents*/  
proc sort data=iit.class;  
by sex descending age;  
run;
```

```
/*removing duplicates wrt the sorting variable*/  
proc sort data = iit.class out=iit.class99 nodupkey;  
by sex;  
run;
```

```
/*One dimensional freq*/  
proc freq data =iit.class;  
tables sex;  
run;  
proc freq data=iit.class;  
tables sex*age;  
run;
```

```
/* two dimensional freq without row col and total percent*/  
proc freq data=iit.class;  
tables sex*age/norow nocol nopercnt;  
run;  
  
/*test for independence of attributes*/  
proc freq data=iit.class;  
tables sex*age/all norow nocol nopercnt;  
run;  
  
/* Create a counter variable*/  
data class;  
set class;  
Count =_N_;  
run;  
  
/*Standard statistical parameters of all numeric variables*/  
proc means data = iit.class;  
run;  
  
/*standard statistical parameters of some numeric variables*/  
proc means data = iit.class;  
var height weight;  
run;  
  
/*chosen statistical parameters of some numeric variables*/  
proc means data = iit.class mean nmiss n std skew kurt;  
var height weight;  
run;  
  
/*Group wise chosen statistical parameters of some numeric variables*/  
proc means data = iit.class mean nmiss n std skew kurt;  
var height weight;  
class sex;  
run;
```

/*Univariate*/

```
proc univariate data = class;  
run;
```

/*univariate with normality*/

```
proc univariate data = class nextrobs = 7;  
var height;  
histogram age/normal;  
run;
```

/*Correlation*/

```
proc corr data = iit.class;  
run;
```

```
proc corr data = iit.class;  
var height weight;  
with age;  
run;
```