

# LEARN AT HOME

## LEARN BASE SAS & ADVANCE SAS

Contact: 9878714767

Website: [www.clinexpertz.com](http://www.clinexpertz.com)

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### SAS- 9.3/9.4 (Banking/Finance/Healthcare/Retail & Telecom Domains) Sub Modules

#### Major topics:

Base SAS  
Advance SAS  
SAS Macros  
SAS SQL  
SAS/Certification classes

#### Additional:

Written tests  
Coding on real-time SAS project  
Resume preparation  
Interview questions  
Mock interviews

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### SAS/BASE

#### BASIC THEORY & RULES ETC

SAS WINDOWING ENVIRONMENT  
CREATION OF LIBRARIES  
SAS PROGRAMMING (BRIEFLY)  
- DATASTEP  
- PROC STEP  
WAYS TO READ DATA INTO SAS  
BACK END PROCESS OF DATASTEP  
INSTALLATION PROCESS

#### DATASTEP

DATA STATEMENT & DATASET OPTIONS  
INFILE STATEMENT & OPTIONS  
INPUT STATEMENT & STYLES & OPTIONS  
DATALINES STATEMENT

## ATTRIBUTES OF THE VARIABLES

LENGTH, LABEL STATEMENTS  
INFORMATS & FORMATS  
HOW DATES WORKS IN SAS

OTHER STATEMENTS  
SUM STATEMENT  
RETAIN STATEMENTS  
GOTO STATEMENT  
LINK STATEMENT  
RETURN STATEMENT  
KEEP STATEMENT  
DROP STATEMENT  
RENAME STATEMENT  
REPLACE STATEMENT  
RETURN STATEMENT  
OUTPUT STATEMENT  
DM STATEMENT

### **CONDITIONAL STATEMENTS & LOOPS**

IF, IF/THEN, IF/THEN/ELSE, IF/THEN OUTPUT, IF/THEN DELETE STATEMENTS  
WHERE STATEMENT & OPERATORS  
DO, DO ITERATIVE, DO UNTIL & DO WHILE STATEMENTS

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### **ADVANCE/SAS**

#### **ARRAYS**

COMBINING DATASETS  
CONCATENATION  
INTEREAVING  
MERGE  
UPDATE  
MODIFY

#### **FUNCTIONS**

CHARACTER FUNCTIONS  
NUMERIC FUNCTIONS  
DATE FUNCTIONS

OTHERS MISSING CONCEPTS  
REVIEW OF DATASTEP  
EXAM & DISCUSSION

**PROC STEP**

UTILITY PROCEDURES

PROC CONTENTS

PROC COPY

PROC SETINIT

PROC DELETE

PROC PWENCODE

PROC APPEND

PROC SORT

PROC DATASETS

PROC OPTIONS

PROC COMPARE

PROC TRANSPOSE

PROC RANK

PROC FORMAT

PROC IMPORT

PROC EXPORT

PROC CATALOG

PROC CPORT

PROC CIMPORT

PROC TEMPLATE

PROC MIGRATE

PROC FORMS

REVIEW OF UTILITY PROCEDURES

**SAS/ACCESS**

SQL PASS THRU QUERY (PROC SQL)

LIBNAME STATEMEN

PROC DBLOAD

PROC ACCESS

REVIEW OF ACCESS PROCEDURES

**REPORTING PROCEDURES**

PROC PRINT

PROC TABULATE

PROC REPORT

\_NULL\_ REPORT (Data step Reporting)

REVIEW OF REPORTING PROCEDURES

**SAS/STAT**

BASIC FUNCTIONAL CLASSES OF STATISTICS

STATISTICAL PROCEDURES

PROC MEANS

PROC SUMMARY

PROC UNIVARIATE

PROC FREQ

PROC CORR

PROC REG  
PROC ANOVA  
PROC GLM  
PROC TTEST  
PROC LIFE TEST  
PROC LIFEREG  
PROC LOGISTICS  
REVIEW OF STATS PROCEDURES

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## **SAS/MACROS**

### **INTRODUCTION TO THE MACRO FACILITY**

PURPOSE OF THE MACRO FACILITY  
PROGRAM FLOW

### **MACRO VARIABLES**

INTRODUCTION TO MACRO VARIABLES  
AUTOMATIC MACRO VARIABLES  
MACRO VARIABLE REFERENCES  
USER-DEFINED MACRO VARIABLES  
DELIMITING MACRO VARIABLE NAMES  
DELETING MACRO VARIABLES  
MACRO FUNCTIONS

### **MACRO DEFINITIONS**

DEFINING AND CALLING A MACRO  
MACRO PARAMETERS  
MACRO STORAGE

### **DATA STEP AND SQL INTERFACES-**

CREATING MACRO VARIABLES IN THE DATA STEP  
INDIRECT REFERENCES TO MACRO VARIABLES  
RETRIEVING MACRO VARIABLES IN THE DATA STEP  
CREATING MACRO VARIABLES IN SQL

### **MACRO PROGRAMS**

CONDITIONAL PROCESSING  
PARAMETER VALIDATION  
ITERATIVE PROCESSING  
GLOBAL AND LOCAL SYMBOL TABLES

### **FRAMEWORK FOR DEVELOPING MACRO APPLICATIONS**

DEBUGGING AND TROUBLESHOOTING  
GENERATING CUSTOM MESSAGES  
CREATING EFFICIENT MACROS  
REVIEW OF MACROS

**PERFORMANANCE TUNING CONCEPTS**

**TESTING/DEBUGGING TECHNIQUES**

**ERROR HANDLING**

**ADDITIONAL FEATURES BETWEEN SAS VERSIONS**  
**CERTIFICATION CLASSES**

**DOMAIN SPECIFIC PROJECT**

**PRACTICE**

**CODING ON REAL TIME DATA**

**INTERVIEW QUESTIONS**

**RESUME PREPARATION**

**WRITTEN TESTS**

**MOCK INTERVIEWS**

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## **SAS SQL**

**INTRODUCTION TO THE SQL PROCEDURE**

WHAT IS SQL?

WHAT IS THE SQL PROCEDURE?

TERMINOLOGY

COMPARING PROC SQL WITH THE SAS DATA STEP

**RETRIEVING DATA FROM A SINGLE TABLE**

OVERVIEW OF THE SELECT STATEMENT

SELECTING COLUMNS IN A TABLE

CREATING NEW COLUMNS

SORTING DATA

RETRIEVING ROWS THAT SATISFY A CONDITION

SUMMARIZING DATA

GROUPING DATA

FILTERING GROUPED DATA

VALIDATING A QUERY

**RETRIEVING DATA FROM MULTIPLE TABLES**

INTRODUCTION  
SELECTING DATA FROM MORE THAN ONE TABLE BY USING JOINS  
USING SUBQUERIES TO SELECT DATA  
WHEN TO USE JOINS AND SUBQUERIES  
COMBINING QUERIES WITH SET OPERATORS  
CREATING AND UPDATING TABLES AND VIEWS  
INTRODUCTION  
CREATING TABLES  
INSERTING ROWS INTO TABLES  
UPDATING DATA VALUES IN A TABLE  
DELETING ROWS  
ALTERING COLUMNS  
CREATING AN INDEX  
DELETING A TABLE  
USING SQL PROCEDURE TABLES IN SAS SOFTWARE  
CREATING AND USING INTEGRITY CONSTRAINTS IN A TABLE  
CREATING AND USING PROC SQL VIEWS

## **PROGRAMMING WITH THE SQL PROCEDURE**

INTRODUCTION  
USING PROC SQL OPTIONS TO CREATE AND DEBUG QUERIES  
IMPROVING QUERY PERFORMANCE  
ACCESSING SAS SYSTEM INFORMATION USING DICTIONARY TABLES  
USING PROC SQL WITH THE SAS MACRO FACILITY  
FORMATTING PROC SQL OUTPUT USING THE REPORT PROCEDURE  
ACCESSING A DBMS WITH SAS/ACCESS SOFTWARE  
USING THE OUTPUT DELIVERY SYSTEM (ODS) WITH PROC SQL

## **PRACTICAL PROBLEM-SOLVING WITH PROC SQL**

OVERVIEW  
COMPUTING A WEIGHTED AVERAGE  
COMPARING TABLES  
OVERLAYING MISSING DATA VALUES  
COMPUTING PERCENTAGES WITHIN SUBTOTALS  
COUNTING DUPLICATE ROWS IN A TABLE  
EXPANDING HIERARCHICAL DATA IN A TABLE  
SUMMARIZING DATA IN MULTIPLE COLUMNS  
CREATING A SUMMARY REPORT  
CREATING A CUSTOMIZED SORT ORDER  
CONDITIONALLY UPDATING A TABLE  
UPDATING A TABLE WITH VALUES FROM ANOTHER TABLE  
CREATING AND USING MACRO VARIABLES  
USING PROC SQL TABLES IN OTHER SAS PROCEDURES