Chapter 1: Introduction

1.1 Overview of SAS Foundation

1.2 Course Logistics

1.3 Course Data Files

Chapter 1: Introduction

Objectives

- Characterize SAS software.
- Describe the functionality of Base SAS and SAS Foundation tools.

What Is SAS?

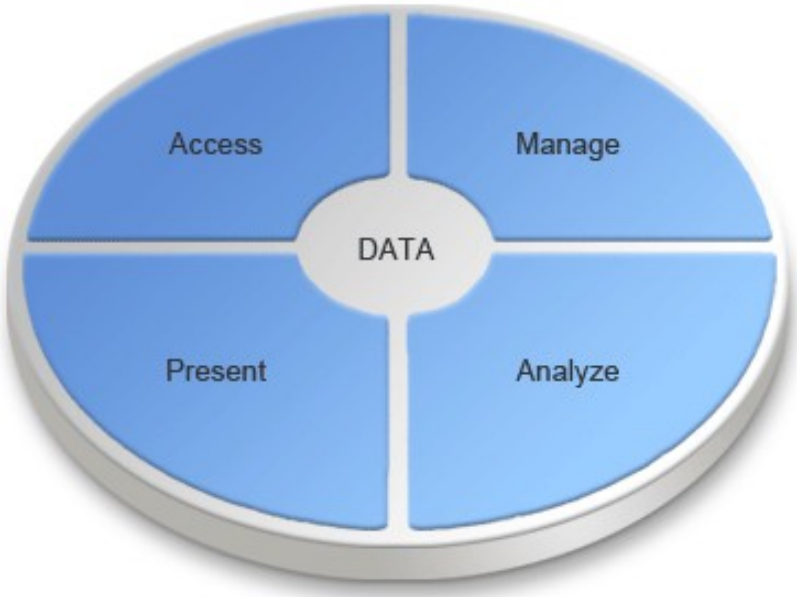
SAS is a suite of business solutions and technologies to help organizations solve business problems.

sas

What Can You Do with SAS?

SAS software enables you to do the following:

- access data across multiple sources
- manage data
- perform sophisticated analyses
- deliver information across your organization



What Is Base SAS?

Base SAS is the centerpiece of all SAS software.

Base SAS is a product within the SAS Foundation set of products that provides

- a highly flexible, highly extensible fourth-generation programming language
- a rich library of encapsulated programming procedures
- a graphic user interface for administering SAS tasks.

About This Class

This class focuses on writing SAS programs to do the following:

- access data in various forms

- ;AS data sets
- written procedures to analyze data and sic reports
- e data sets
- generate detail and summary reports in various formats, including HTML, RTF, PDF

1.01 Multiple Choice Poll

Have you worked with Base SAS?

- yes, just maintaining programs
- yes, writing some programs
- no, not at all

Chapter 1: Introduction

Objectives

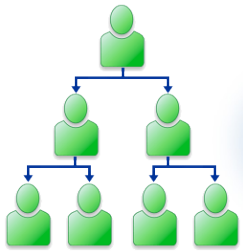
- Describe the data used in the course.
- Designate the editors and processing mode available for workshops.
- Specify the naming convention used for course files.
- Define the three levels of exercises.
- Navigate the Help facility.

Orion Star Sports & Outdoors

This course focuses on a fictitious global sports and outdoors retailer that has traditional stores, an online store, and a catalog business.

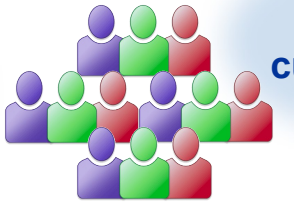
Orion Star Data

Large amounts of data are stored in transactional systems in various formats.



1,000 employees

150,000 orders

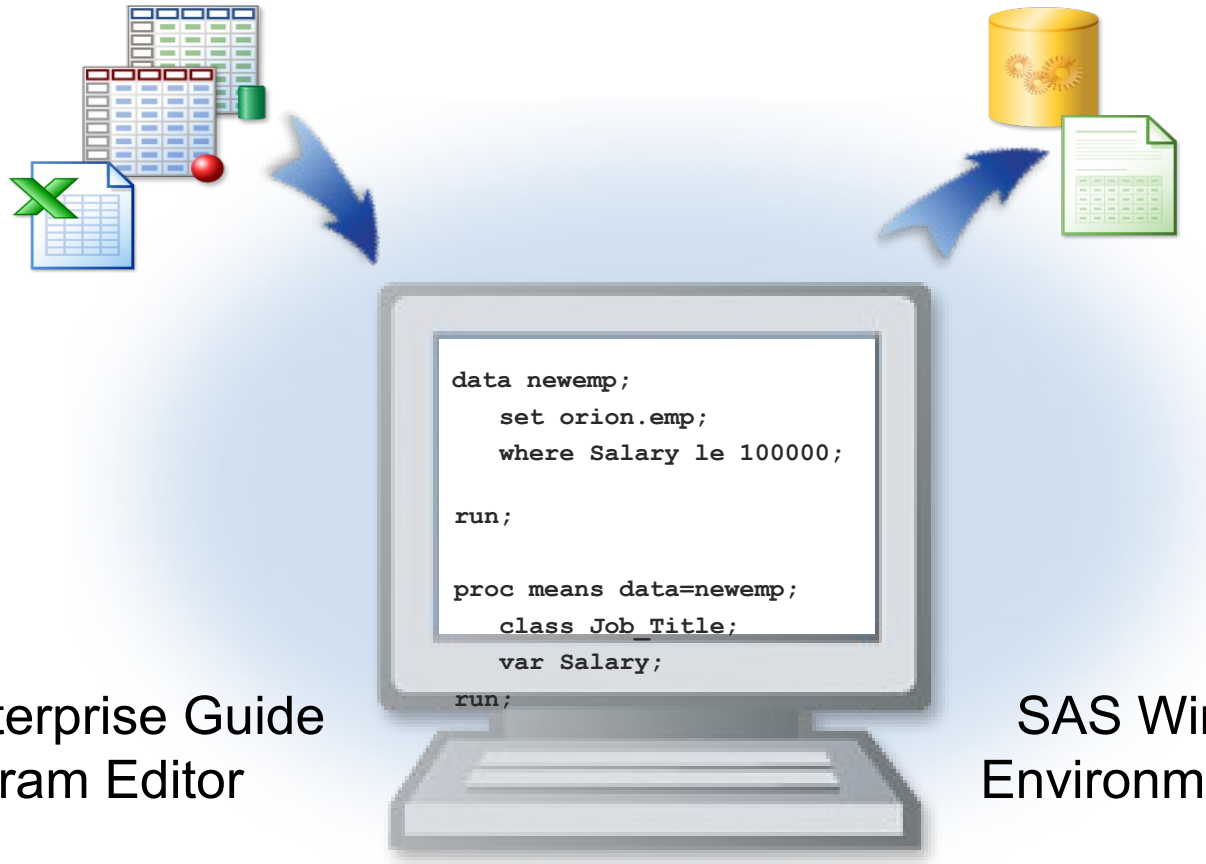


90,000 customers

64 suppliers

Orion Star Business Scenarios

In this course, you ***write*** SAS programs that access Orion Star data and create reports using an editor.



SAS Enterprise Guide Program Editor

SAS Windowing Environment Editor

What Is SAS Enterprise Guide?

SAS Enterprise Guide is a powerful Windows client application that provides a GUI for transparently accessing the power of SAS.

It provides the following:

- a point-and-click interface with menus and wizards that enable the user to define tasks
- SAS code generation and execution based on user selections
- a full programming interface that can be used to write, edit, and submit SAS code

- This class uses the programming interface.

What Is the SAS Windowing Environment?

The *SAS windowing environment* consists of a series of windows that you can use to edit and submit programs, and view the results.

The SAS windowing environment editor contains the following windows:

- the Enhanced Editor and Program Editor windows
  for preparing and submitting a program
- the Log window for viewing notes, warning messages, and error messages
- the Output window, which contains the output generated by most SAS procedures

1.02 Multiple Choice Poll

Which editor will you use outside of this class to write SAS programs?

- SAS Enterprise Guide Program Editor
- the Program Editor in the SAS windowing environment
- a different editor
- I do not know.

Running SAS Programs

In this course, you invoke SAS in interactive mode (SAS Enterprise Guide or windowing environment) to ***process*** programs.

Running SAS Programs

There are other modes for processing SAS programs.

Batch Mode for z/OS (OS/390)	Noninteractive Mode
Use any editor to create a file with SAS statements plus job control statements (JCL), and then submit the file to the operating system. Example file: `//jobname JOB …` `// EXEC SAS` `//SYSIN DD *` `proc freq data=x.pay;` `  tables ID;` `run;`	Use any editor to create a file with SAS statements, and then issue the SAS command referencing the file. Directory-based example: **SAS** *filename* z/OS (OS/390) example: **SAS INPUT(***filename***)**

1.03 Multiple Choice Poll

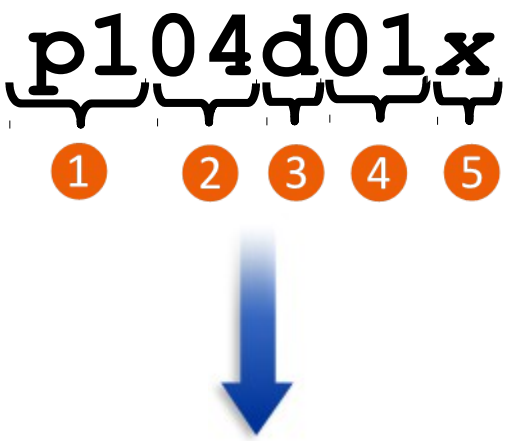
How will you invoke SAS outside of this class?

- interactive mode using SAS Enterprise Guide
- interactive mode using the windowing environment
- batch mode
- noninteractive mode
- I do not know.

Program Naming Conventions

In this course, you retrieve and save SAS programs using the structure below.

1. course ID
2. chapter #
3. type
   a=activity
   d=demo
   e=exercise
   s=solution
4. item #
5. placeholder



Programming 1, Chapter 4, Demo 1

Filename and Library Name References

In this course, macro variable references are used to give a more flexible approach for locating files.

Examples:

```
%let path=s:\workshop;
```

```
filename sales "&path\sales.dat";
```

```
infile "&path\payroll.dat";
```

Three Levels of Exercises

The course is designed to have you complete only ***one*** set of exercises. Select the level most appropriate for your skill set.

Level 1	Provides step-by-step instructions.
Level 2	Provides less information and guidance.
Challenge	Provides minimal information and guidance. You might need to use the Help facility.

Getting Help

In class, you can get product help in several ways, depending on the editor being used.

- Getting Started tutorials
- Help facilities included in the software
- web-based help, if web access is available

Investigating the Help Facility

The demonstration illustrates how to access and explore the Help facility in Enterprise Guide and in the windowing environment.

Setup for the Poll

- Start an Enterprise Guide or SAS session.
- Open the Help facility.

1.04 Multiple Choice Poll

Were you able to open the Help facility in your session?

- I opened Help in Enterprise Guide.
- I opened Help in SAS.
- I was not able to open Help.

Extending Your Learning

After class, you will have access to an extended learning page that was created for this course. The page includes

- course data and program files
- a PDF file of the course notes
- other course-specific resources.

- This page might also be available during class.

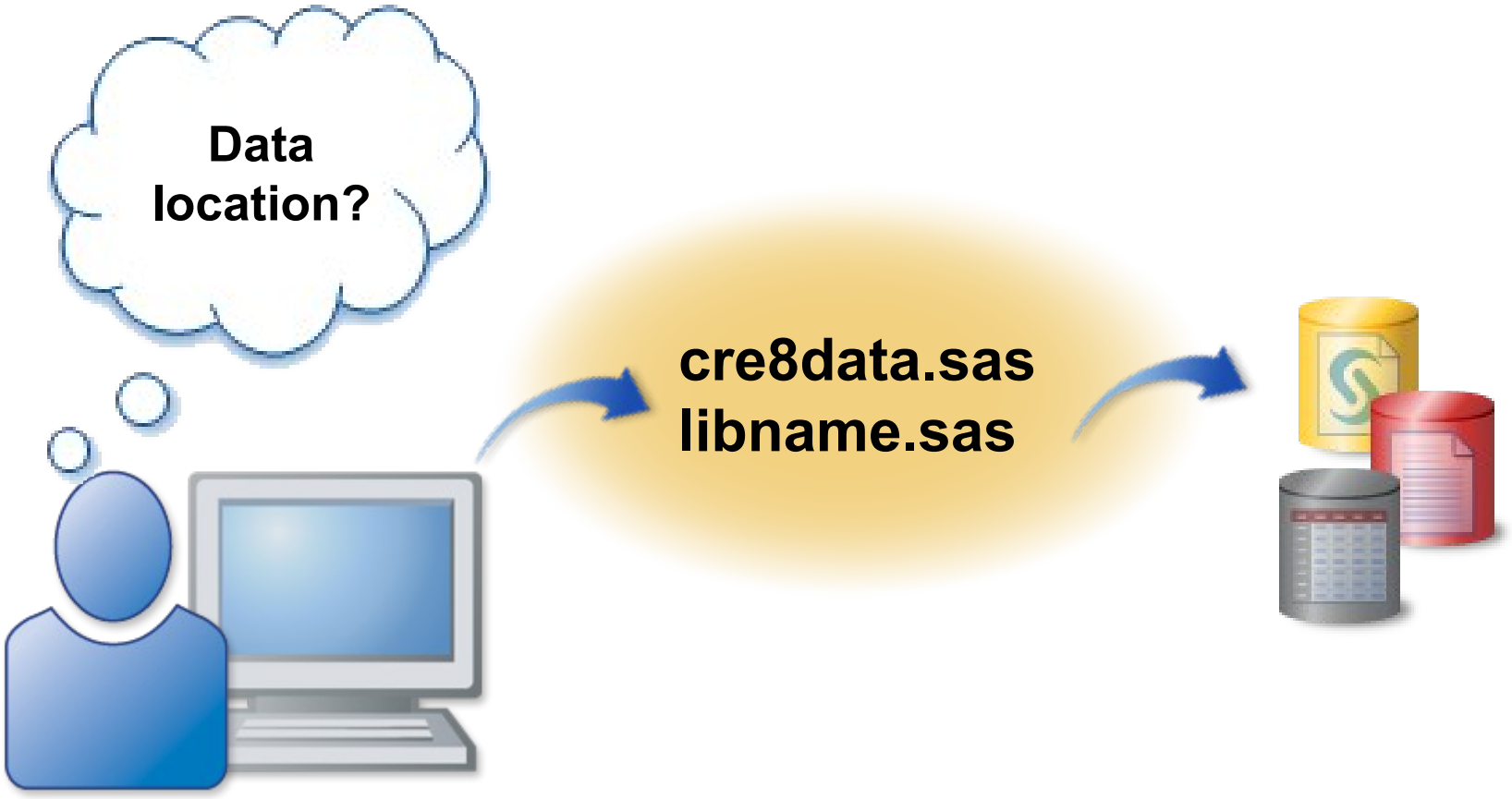
Chapter 1: Introduction

Objectives

- Execute a SAS program to create the course data files.
- Execute a SAS program to define the data location.

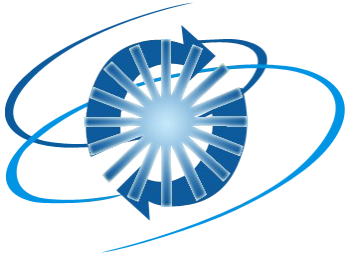
Business Scenario

Identify a location for the course data files and execute programs to create the files and define the location.



Creating Course Data Files

This demonstration illustrates how to create the course data files and define the data location.



Exercise

This exercise reinforces the concepts discussed previously.