#### Paper 202-2012

# Creating a Report in the SAS® Information Delivery Portal using SAS® Information Maps

Jenine Milum, Wells Fargo Bank, Charlotte, NC

### ABSTRACT

The purpose of this task is to guide a SAS BI developer through the steps necessary to combine SAS datasets using *Information Maps* and create a report which becomes available in the *Information Delivery Portal*. The result is a professional report viewable by the Business User within their browser. The ability to use the tools listed below to create a report available in the Information Delivery Portal frees Business Users from concerning themselves with data construction, security, information updates, and collection requirements. The Business User can focus on Analysis and other tasks without needing to be a SAS Developer. SAS Versions 9.2/4.2.

- Management Console
- Information Map Studio
- Web Report Studio
- Information Delivery Portal

#### INTRODUCTION

This task begins using SAS datasets (*class, classfit*) located in the *SASHELP* library provided with all installations. These datasets in *SASHELP* were copied to a working directory that will represent our external data source. We are assuming that no library or previous tasks have been accomplished prior to this task.

Within your operating system, create a directory in which your data will reside. (A UNIX environment is used here.) The directory should be located on a tier predetermined to house SAS datasets such as an ETL, Compute, or SPDS tier. Permissions for this new directory should minimally be set open to *Read* at least by the developer.

This library will have to adhere to the SAS libname naming conventions regardless of the operating system being used. The libname requires it begin with a character or underscore and contains only letters, numbers and underscores with a maximum length of 8 characters.

#### 1.1

Create a library definition in SAS MANAGEMENT CONSOLE This task is often performed by the system administrator. If Management Console is not installed along with your other SAS Business Intelligence software or you do not have access to it, contact your SAS administrator. If the files you will be using have already registered and available for use, continue with Information Map Studio, section 1.2.

Start *Management Console* based on an existing metadata profile and your user information profile as described in the introduction.

冠 SAS Management Console	
File Edit View Help	
Plug-ins	
Repository:	SAS® Management Console
SAS Management Console  Environment Management  Gamma Application Monitor  Application Management  Console  Application Management  Console  Conso	Environment Management Plug-ins that enable users to configure SA5 resources such as servers, metadata reposito B SPD Management Manages & Monitors SPD Servers Monitoring Plug-ins that monitor and report information about SA5 applications. B Application Monitor Minitors activities of applications, sub-systems, and services. Maintenance Plug-ins that enable users to manage SA5 application installations and updates. Application Management Plug-ins, including both SA5 and user-created plug-ins, that enable users to configure activities of the section Profile
ି ହ ତ ଦ ହ	reate a new connection profile pen an existing connection profile ev Server v Edit Delete 'Set this connection profile as the default OK Cancel Help

NOTE The role and/or permissions as a platform administrator are necessary for this task.

Once connected, select the tab *Plug-ins* to create a new library. This is done by expanding the *Data Library Manager* and right clicking on the *Libraries* folder and selecting *New Library*.

🔄 SAS Management Console - Dev Server 👘
File Edit View Actions Help
🗈 🤪 🐚 🏨 🗙 🚺
Plug-ins Folders
Repository: 🚺 Foundation
SAS Management Console
🗇 🗃 Data Library Manager
User M. 🔂 Open
Monitor 🕥 Refresh
Mainter 👸 New Library
Application management

Navigate to the SAS Base Library by expanding the Libraries folder and then the SAS Data folder.

SAS Management Console	MarketingComput BASE     MarketingComput BASE     MarketingETLDev BASE     SAS Stored Process Samples.	/Products/SAS BI Report Servic /Products/SAS BI Report Servic /Shared Data /Products/SAS Intelligence Plat
B-     Monitoring     Monitoring     Maintenance     Application Management	New Library Wizard New Library Wizard Select the type of library you wish to define.	
	Resource Templates     Lubraries     Database Data     Database     Da	
	Back: Finish	Cancel Help

**NOTE** The exact folder and library names may vary slightly but should exist in all environments. If this library structure does not exist, ask the SAS Administrator or other person who installed the software for the proper location to assign libraries.

Using the New Library Wizard that will pop-up, provide a business name for the library and a description if desired.

**TIP** Use a name that is descriptive and unique. There is no need to use abbreviations. You want to clearly identify what this folder is used for and what it contains. Use the description box if more clarity is needed.

Continuing with the wizard, assign a libref name. It must be a valid SAS libname which adheres to the same rules. If the proper location of the library is not correct, select *Browse* and choose the proper directory location.

Repository: Foundation	COW INFORMIX     Go COW INFORMIX     Go Mastering Comput BASE     Go MarketingComput BASE     MarketingComput BASE	(Shared Data ) Shared Data ) Shared Data ) Shared Data ) Products/SAS BI Report Servic ) Products/SAS BI Report Servic ) Products/SAS BI Report Servic ) X   arr ↓ 1
	Name:     chap2_1       Description:     Chapter 2.1       Location:     //Shared Data/MkgInsightSharedData/Project: SA5 9.2 Testing/Data	Browse
	< Back Next > Fin	ish Cancel Help

**NOTE** It will be easiest for continuity to assign it the exact name that was used in defining the folder within your operating system folder structure.

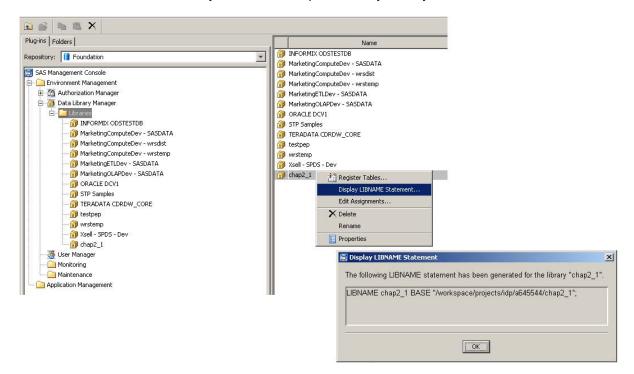
Once a library is defined, specific tables within the directory need to be selected and registered to be identifiable. For this project, we will be using and registering the tables *CLASS* and *CLASSFIT*. Either *click* on each of the files or *Select All Tables* to highlight the required tables. The location directory path should be the same as was selected in the previous step. If not, use *Browse* to navigate to the proper location.

Select Tables			
CLASS			Select All Tables
CLASSFIT			Select None

Choosing *Next* provides the last screen of this process and acknowledges the directory and tables were assigned properly. Once *Finish* is selected the information is stored as metadata and the tables are registered.

📓 Register	' Tables	×
DDE	The following metadata will be created:	
	The following tables will be created in folder /Shared Data/MktgInsightSharedData/Project SAS Testing/Data/Chap2_1:	
	CLASS, CLASSFIT	
	I	
	< Back. Next > Finish Cancel He	elp

You will now see the new library listed in the right-hand pane. You can check the libname and directory are correct by right clicking on the newly created library icon, selecting the *Display LIBNAME Statement to* show the libname statement associated with the directory. This is often helpful to identify a library structure for additional uses.



Useful information and additional tasks are available by right-clicking on the library icon and selecting Properties.

General   Assig	n   Options   Notes   Extended Attributes   Authorization	
Name:	chap2_1	
ID:	A512T15Z.B800000U	
Description:	Creating a report listing from SAS datasets in the BI Portal	
Location:	/Shared Data/MktgInsightSharedData/Project SAS Testing/Data/Chap2_1	Browse
		OK Cancel Help

A critical task within this selection screen is to assign permissions. This is done by selecting the *Authorization* tab. Based on the role assignments at your location, the proper authorizations may be applied at this point. Below are the defaults for the role as a Developer.

Jsers and Groups:			
PUBLIC			Add
SAS System Services			-
🚰 SAS Administrators			Remove
👺 SASUSERS			
Access Control Templates Properties			
and the second			
			7
	Grant	Deny	I
Permissions		Deny	]
Permissions ReadMetadata		Deny	]
Permissions ReadMetadata WriteMetadata		Deny	]
Permissions ReadMetadata WriteMetadata CheckInMetadata			]
Permissions ReadMetadata WriteMetadata CheckInMetadata Read	য য য		]
Permissions ReadMetadata WriteMetadata CheckInMetadata Read Write			]
Iffective Permissions: Permissions ReadMetadata WriteMetadata CheckInMetadata Read Write Create Delete	য য য		
Permissions ReadMetadata WriteMetadata CheckInMetadata Read Write Create	য য য		

NOTE Users and Groups, Effective Permissions and roles are reviewed in the SAS BI Overview, Section III.

#### 1.2

**Create an Information Map using SAS INFORMATION MAP STUDIO (IMS).** An Information Map provides the ability to select and combine tables using key variables, apply filters and formats, create new variables, set permissions and perform other tasks. The end result is stored in metadata which will contain the tasks and information performed within IMS. A new data set itself is not physically created; rather the results are generated on-demand when the map is used, along the same lines as the way a data set view is used.

nformation Map Studio: /untitled/untitled # Yew Drawt Dools Belp		-			L.
	1 - 2				
urces - Application Servers	Cesign [gal startings]			>> Properties	
	Selected Resources	1	Information Map Contents		- Details -
w Tables		2	Show alitens	Property	Value
			C untited	Litrary hana	thap2_1
ParketingComputeDev     D     D     D				Department	[Shared Data/MutgInsightSharedData/. Creating a report listing from SAS data.
C.ASS				Land	stap2_1
CLASSPIT			-	Engtie	19438
🗄 💮 MichilangComputeDay - SASDATA					
🗉 💮 MarketingComputeDev - vendet					
🗉 💮 MathetingComputeDay - vestemp					
3 💮 STP Samples					
⊞-∰ testpep ⊞-∰ vratemp					
H () Ked - SPDS - Day					
- MarketingETLDev					
. () INFORMEX ODSTESTED					
🗄 🍈 MarketingETLDev - SASDATA					
B 💮 ORACIE DCVI					
TERADATA CORDW_CORE					
a 💮 testpep		121			
Xeel - SPDS - Dev     WarkstingOLAPDev					
H () Xeel - SPDS - Dev					
a Structure				Property Description-	
	1		1		

The different tiers and libraries stored on each server are shown in the top left pane under the server icon tab. You should see the library created in Section 1.1 by *Management Console*.

**NOTE** If the library does not appear in the expected server list of libraries, return to Management Console and determine the exact location created. If the step was not completed properly it will need to be redone. Another possible cause is the permissions profile described in the introduction for the library were not properly assigned and the IMS user does not have proper access to create an *Information Map*. Contact your SAS Administrator if creating maps is not applicable to your role.

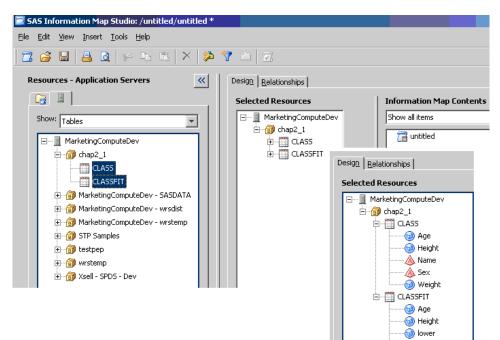
By clicking on the expand icon 庄 next to the library, the contents of the library are displayed.

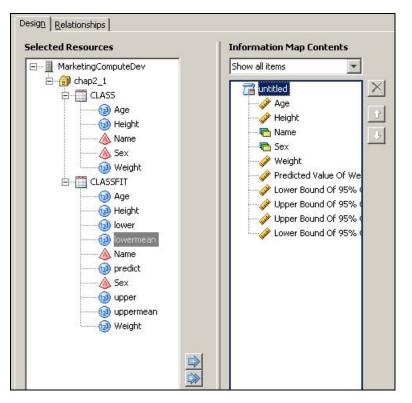
**NOTE** If all the tables required are not viewable with the expansion of the library, return to Management Console to verify the location of the files and the appropriate permissions are set. This may require the involvement of your SAS Administrator.

For this example, we will map the two tables already registered in Management Console, CLASS and CLASSFIT.

	Name	Sex	Age	Height	Weight	Predicted Value of Weight	Lower Bo 95% C Mea	.I. for	Upper Bou 95% C.I. Mean	for	Lower B 95 C.I.(Inc Pre	5% dividual		er Bound of l.(Individual Pred)
1	Joyce	F	11	51.3	50.5	56.99333435	43.80	436346	70.182	30523	29.8	8349844	8	4.103170259
2	Louise	F	12	56.3	77	76.48848569	67.96	005024	85.016	92115	51.3	1452174	1	01.66244965
3	Alice	F	13	56.5	84	77.26829175	68.90	655333	85.630	03016	52.1	5031175	1	02.38627175
4	James	М	12	57.3	83	80.38751596	72.66	708855	88.107	94338	55.4	7568645	1	05.29934547
5	Thomas	м	11	57.5	85	81.16732202		004334	88 734	eanna	56	3025285	1	06.03211553
6	John	М	12	59	99.5	87.0158674		Nam	ne Sex	A	.ge	Heigh		Weight
7	Jane	F	12	59.8	84.5	90.1350916	1	Alfred	М		14		69	112.
8	Janet	F	15	62.5	112.5	100.662473	2	Alice	F		13		56.5	8
9	Jeffrey	м	13	62.5	84	100.662473	3	Barbara			13		65.3	9
10	Carol	F	14	62.8	102.5	101.832182	4	Carol	F		14		62.8	102.
11	Henry	м	14	63.5	102.5	104.561503	5	Henry	М		14		63.5	102.
12	Judy	F	14	64.3	90	107.680727	6	James	М		12		57.3	8
13	Robert	М	12	64.8	128	109.63024	7	Jane	F		12		59.8	84.
14	Barbara	F	13	65.3	98	111.579758	8	Janet	F		15		62.5	112.
15	Mary	F	15	66.5	112	116.258594	9	Jeffrey	м		13		62.5	8
16	William	м	15	66.5	112	116.258594	10	John	М		12		59	99.
17	Ronald	м	15	67	133	118.208105	11	Joyce	F		11		51.3	50.
18	Alfred	м	14	69	112.5	126.006170	12	Judy	F		14		64.3	9
19	Philip	М	16	72	150	137.703260	13	Louise	F		12		56.3	7
							14	Mary	F		15		66.5	11
							15	Philip	М		16		72	15
							16	Robert	М		12		64.8	12
							17	Ronald	M		15		67	13
							18	Thoma:	s M		11		57.5	8
							19	William	M		15		66.5	11

To start mapping the two tables, drag each table into the *Design tab* under *Selected Resources* and expand them to view their individual data items.



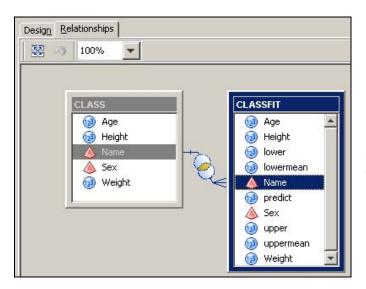


Select the variables from the two tables that are needed in the mapping by highlighting each and clicking on the move arrow

to drop them into the Information Map Contents pane.

Switch to the *Relationships* tab. There we see each of the tables with the variables selected in the previous step.

器 🦻 100% 💌	
CLASS	CLASSFIT
🔞 Age	🔞 Age 🔺
😡 Height	🔞 Height
💧 Name	🔞 lower
💧 Sex	🔞 lowermean
😡 Weight	💧 🔌 Name
	🔞 predict
	💧 Sex
	🔞 upper
	🔞 uppermean
	😡 Weight 🔽



For our purpose, the variable *Name* is the key linking the two tables. Click on *Name* in the box *CLASS* and click on the same variable *Name* in *CLASSFIT*. A join connector is automatically produced to match our desired initial matching criteria.

Key variables are not required to have the same name but do need to be defined identically as either both character or numeric data types. If they are not compatible you will receive the message below. This was assigned in *Management Console* when the tables were registered. If these attributes are not the same at this point, return to *Management Console* to assign the same formatting to each variable and re-register the tables. This may require the involvement of the SAS system administrator. Return to *IMS* and begin mapping the tables by refreshing the tables in the *Resource – Application Servers, Server* pane and remap the tables.

🔁 SAS I	Information Map Studio	1
	You can insert a relationship only if the columns that you select have the same data type,	
	OK	

Beldstonnings	Double click on the join connector in the <i>Relationships</i> tab and the <i>Relationship Properties</i> window appears. This may also be opened by clicking on the con.
Certmaton         Relationship ID: 3000_21         Table 1:       Certmatty         Constrainty       Table 2: LCLASSFIT         Constrainty       Constrainty         Constrainty       Constrainty         Constraints with roomesponding CLASSFIT rows.         Only those CLASSFIT rows with a single corresponding 0.4655 row.	We see a one to many Cardinality is initially assigned. Options to alter the Cardinality and apply an <i>Outer join</i> or <i>Inner Join</i> are available.
Son kays (for table 1):     Operator:     Son kays (for table 2):       Image: App     Image: App     Image: App       Son: condition:     Image: App     Image: App       Image: App     Image: App     Image: App <t< th=""><th>(Advanced criteria for the join are available by selecting the Advanced Edit button.)</th></t<>	(Advanced criteria for the join are available by selecting the Advanced Edit button.)
Adgement Edite	Select <i>OK</i> to save the matching criteria or <i>Cancel</i> if you are not making any changes.

**Note** These tables may be combined using a different set of logic, additional tables, and alternate parameters for other purposes by simply saving it as an additional Information Map.

Test the mapping's validity by clicking on the *Run A Test Query* icon clocated on the tool bar. This test uses the information we stored earlier stored in Metadata. Select all the variables from the map by clicking on the *Insert All* icon click *Run Test*.

Svallable konisi Solo	cted terrs:	
Show alikens	Item Role Properties	
Program     P	Test the Information Map         Name of information map:         Data selected for test         Available forms         Street of information map:         Apple         Product data         Product data         Data selected for test         Street data         Product data         Product data         Product data         Product data         Data selected for test         Product data         Product data         Data selected for test         Product data         Product data         Data selected for test         Data s	×
	No description for CLASS  Cutput options  F Reality aggregated values (group by category)  F Reality aggregated values (group by category)  F Land the gamber of values (rows) that are retrieved:  Bun Test Quee Hdu	

The test will return a Results window and an opportunity to view the SQL code that generated the results.

11	whitero	tion Servers		K De	ND Belationships				>> Properties	
41					elected Russources	Information	Map Contents	2.5		Details
a: Table	le s		2		- MarketingComputeDay	Show allitens		-	Property	Value
Concession in which the		mouteDev			🕀 🛞 chap2_1	Chap2	1 Map	×	Information map name	Chop2_1 Map UShared DataMittoIns
	81 Den			est the life	mation Map	II Emer	With Comments		×	
	chep2		1000						1.11	3un 29, 2009 8:56:06 Depine Milura
TH	1 cu	SS	35	ione of inform	stion map : Chap2_1 Map					Jun 29, 2009 9131:21
	1 au	SSELT		Data selection	for test					Deniné Miuni
B 😥				Available iter		Calculated Bases		1.000	ters	-
B 🗭				Show all iter	View Query			× -	T at a	- Internet
1.1		ngComputeDev - S	49	Paron ou we	options Locale-en_US;				لند ر	
	insults.				LIBNAME dtap2_1 BASE "/workspace/bro	leidtsi/ldp/a645544(dhap2_1")			- 101 (A	×
	Age	Height Name	Sec	Weight				1	Aakae Of Weight Sec. Up	per Bound OF 95% C.L
1	14	69 Allved	N	112.5	Proc SQL: Oreate Table %DATA% as SELECT				126,00617011M	
Z	14	62.8 Carol	1	102.5	SUN(table0.Age) AS OFF_2				101.83218244 P	
3	14	63.5 Henry	M	102.5	SUNICableO Height) AS DIR tableO. Name AS DIR_+ LABE	3 LABEL-HHIGHK',			104.56150363M	
4	15	62.5 Janet	r -	112.5	table0. Sex AS DIR_S LABEL	-'Sex',			100.66247336/*	
5	14	64.3 Judy	۴	90	SUM(table0./Weight) AS DIR				107.68072784 F	
6	15	66.5 Mary	r	112	SUN(tablet_Age) AS OIR_7 SUN(tablet_Height) AS OIR_	a LABEL-Height',			116.25659443/*	
7	16	72 Philip	N	150	SUN(tablet lower) AS DIR	9LABEL="Lower Bound Of 95% C.i.	i (Individual Pred)/,		137.70326091 M	
в	15	67 Ronald	N	133	table1.Name AS DIR, 11 LAB	DIR_10LABEL="Lower Bound Of 91 IEL="Name".	614 C.A. For Mean,		118.20610957 N	
9	15	66.5 William	14	112	SUNIXable1 predict) AS DER	12 LABEL='Predicted Value Of We	spr,		116.25859443M	
	4				table1. Sex AS DIR_13 LABE SUM(table1.upper) AS DIR	L='Sex', 14 LABEL='Upper Bound Of 95% C	J (individual Pred).			*
-	3.5				SUM(tablet upperniean) AS	DIR_15LABEL='Upper Bound OF 9	6% CJ. For Mean',			
					SUN(tablet.Weight) 45 DIR. FROM	"TE L'ABEL= Weight,			Yew SQL	⊊loss
-			12.51	******	chap2_1./CLASSitable0 Inner	r join chap2_1.0.ASSFIT table1 on	n (table) Name = table1.Name	410 -		
				COSTA	table0. Sex = table1. Sex) GROUP 87					
				-	3					
				F Lint th	10.					
					12					
					HAVING DIR. 2 >== 14					
11000			-		4.5				Halo	
Structu			-	-111	dnyt			- 12	scription-	
						Qose				
						Quie				
						1	<u></u>			

**NOTE** Common errors are mismatching variable length and formatting. Verify you are trying to match the intended variables and that the attributes are correct. To correct attributes, use Management Console to set variables to the same value type and/or length.

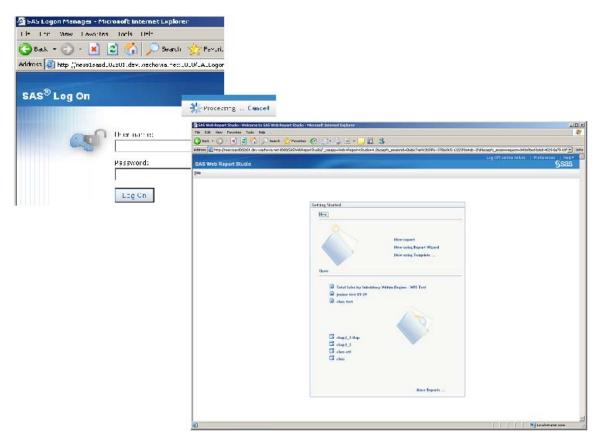
Once the mapping is complete and validated save the map for future use. Select the icon from the menu bar and the following pop-up will appear. Choose an appropriate descriptive name.

🔁 Save a	n Information Map	×
Save in:	Information Maps	
<u>N</u> ame: cl	hap2 1	Save
-	nformation map	Cancel

**NOTE** Although it is not necessary, it is best to save *Information Maps* in the Information Maps folder. Subdirectories may be created for specific projects.

## 1.3

**Creating a Report in Web Report Studio.** Web Report Studio (WRS) is a web based application that does not require SAS to be installed on the desktop/laptop. The URL for launching this tool will be provided by the SAS Administrator. The location can be stored in the My Favorites location of your web browser so it can be easily accessed. Launching Web Report Studio opens the Log On and Getting Started screens seen below. We're going to select New Report.



**NOTE** The Open widget will reveal reports and Information Maps previously saved or viewed. If selecting one of these generates an error it may be due to the map or report having been removed or the permissions were altered. Contact your SAS Administrator if you receive this error.

A new report begins with the following screen. WRS provides a section on the left to control data, a vertical tool bar in the middle to design and modify the report layout, and a horizontal tool bar to select reporting options.

SAS Web Report Studio - Un	itled Report	Log Off Janine Milum   Praferences   Help+ SSBS
ile Edijt Vie <u>w</u> lesert Dyta  🏠 🚅	Edit View	n T
*		
* Table of Contents Options - >> Section1	Header -	
20 March 1997		
No group breaks are defined.)	☐Drag and drop a report object here	
14 14		
Section Data Options •		
	Footer +	

For this task we will begin by opening the Information Map created in the previous section. Select *File > Open* from the top tool bar then navigating to the location of the Information map.

🖷 💽 http://hessisasd002201.dev.wa	chovia neti 8080/S	and the second		Log Off Janine Milu	m   Prafarancas   He	(p.w.
Web Report Studio + U	ntitled Repo	nt			sa:	S
idijt Vie <u>w</u> lesert Dyta 🔛 🍰		Edin View		and a second sec	1	71
*		Open - Microsoft Internet Explorer		×		
sie of Contents Options -	Head	★ Search for files				
	1					-
	3	Location:				
	3	Chap2_1	🔄 😥 🎦 😚 🗖 Shaw description			
	0	in My Folder	Keywords	1		
	3	Can Shared Data	2009			
i.		Dis MoghnightSharedData				
	1	📄 Information Mapo				
		Chup2_1				
			1 Open - Microsoft Internet Explorer	L.L.		103.0
	÷					
	Feat		Search for files			
	1		Lecation:			
			and a second sec			0. 33
			Church 1		S 100 10 (A 17 )	
			Chup2_1			how description
				Actions Author	Dote	Keywords
				Actions Author		
			Names	and the second se	Date	
			Names	and the second se	Date	
			Names	and the second se	Date	Keywords
			Names	and the second se	Date 6/29/2009	Keywords
			None.		Date 6/29/2009	Keywords
			Names		Date 6/29/2009	Keywords
			None.		Date 6/29/2009	Keywords
			None.		Date 6/29/2009	Keywords
			None.		Date 6/29/2009	Keywords
			None.		Date 6/29/2009	Keywords
			None.		Date 6/29/2009	Keywords
	a		None.		Date 6/29/2009	Keywords
			None.		Date 6/29/2009	Keywords

Opening the Information Map produces the following window in the View tab.

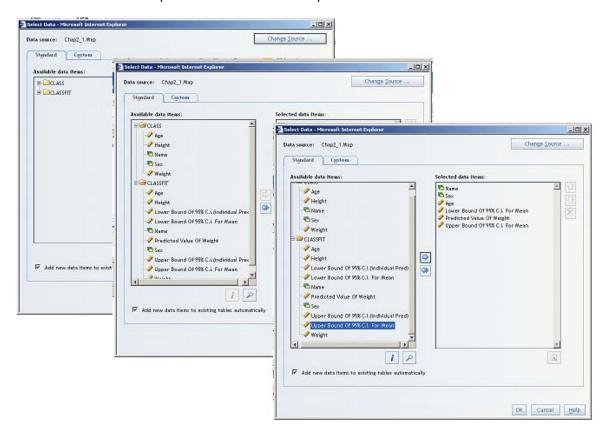
ile View Dyta 😭 🚅 🔛 🏭 🕼	Edit		Vie	w												1
***		led filters	- Mary													
A Table of Contents	240	act neters	ALC:NO	V												
Section1	È				Name	1						40	red			
(No group breaks are defined.)						Aps	Age (2)	Beight	Weight	Age (CLASSRT)	lleight (CLASSRIT)	Lower Bound Of 95% C.L (individual Prod)	Lower Bound Of 95% CA For Mean	Predicted Value Of Weight	Upper Bound Of 95% C.L (Indhidual Pred)	Upper Bound Of 95% CA Fo Mean
	Sea	Ilanie (2) Alice	Sек (2) Г	Name (CLASSFIT) Alice	Sex (CLASSEIT) F											
		Barbara	F	Bathara	5			,							1	
		Carol	6	Carol Jane	6									-		
	r.	Janet	1	Janet												
		Joyce	F	Jayce	F											
Section Data Options +		Judy	P	Justy	1			1 +		- i					N	
		Louise	F	Louise	F	-		-							1.4	
Chop2_1.Wap		Mary Attred	M	Mary Affred	M	14	14	69	112.5	14	60	100.64558742	110 04100400	100 00017011	+0+ 30070370	100 000000
Nane A		Henry	M	Henry	M			03	112.5		00	100.040007.42	110.04100425	120.0001/011	101.000/02/0	100.01000
Sex		Ameo	M	James	м			1					· · · ·			
		Jeffrey	м	Jeffrey	м											
🛷 Age	64	John	м	John	M					C						
🧳 Age (2)	1	Philip	м	Philip	м									·		
🧳 Height		Rebert	м	Robert	м											
C Nanie (2)		Borrald	M	Ronald	M											
🔁 Sex [2]		Thomas William		Themas	M											
🧳 Weight		william	PH.	Ventano	101	-						-	+			
Age (CLASSFIT)																
Height (CLASSFIT)																
Lower Bound Of 95% C.I. (in dividual Pred) - [																

Elle View	Data 🔛 🥁 🔛	30		ļ	Edin	
	Refresh Data	ec.	Applie	dähers	None	(
Section1	Select Data	3	llame Sav	Alfred Age		Bart As
No group	breaks are defined.	)	r M	14	13	

The data source needs to be chosen and associated with the Information Map. Click on *Data > Select Data* from the tool bar and navigate to the folder location of the table.

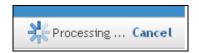
**NOTE** If the data source is not found it most likely because the table has not been registered or you do not have proper permissions to read the data. Return to Management Console to verify the name, location, and the permissions. Contact the SAS Administrator if necessary.

Having identified the data source, we now select the items we wish to have represented in the report. Expand each table by clicking on the 🖃 next to it, enabling us to view all variables available. Highlight each variable that needs to be included in the report and then click on the 📄 icon to move the variables to the other pane. Select OK when all the variables have been copied to the Select Data Items pane.



**NOTE** In version 9.2 you can also select variables by dragging and dropping them from the left-hand pane to the right-hand pane.

Select And SAS will process the data and the mapping.



The finished report will appear under the *View* tab. As you can see in the screenshot below, the report and data are as we requested, although it is not in a format or layout we prefer to publish.

SAS Web Report	Studio - Chapi	2_1 Ma	P										Log O	If Janine Mili	an l	Preferences	Ssas
ile View Data 🏠	<b>3 9 2 5</b>	1	Edit	v	iew												E)
A Table of Contents	ex.			rst None													
Section 1		llame		a second second		Upper		Lower	Alice	Typer		Lower	Barbara	Upper		Lower	Carol
No group breaks are			Age	Bound Of 95% C.L.Por Mean	Prediated Value Of Weight	Bound Of 95% C.L.For Mean	Ape	Recent Of	Predicted Value Of Weight	Bound Of 55% C.A. For Moun	Age	Bound Of 95% C.L.Por Mean	Prediated Value Of Weight	Bound Of 95% C.L.For Mean	Ape	Bound Of 55% C.J. For Mean	Predict Value ( Weigh
		Sex F M		116.94169423				68 506883333	77 268291747	85.830030161	13	105 20025322	111.57975011	117.89925301	14	95 375045159	101.8321
Section Data	Option: +																
C Name C Sex Age	f 958-C.I. For Mean																

Return to the *Edit* tab to redesign our output. Right click on *Table 1* to bring up the design drop down menu. There are multiple design choices available. Select *Assign Data*. Use the Move Items drop down to manipulate the order

and grouping of the variables in the report. When you have the report variables aligned as desired, select

SAS web Report Studio : Edit Report - Nic	crosoft I	nternet Explore	1				
the Edit View Payoettee Tools Help							A
) Back + 🕑 + 💌 🖉 🏠 🔎	Search	📩 Pavorkas 🤞	🕝 🗁 🛬 🗷 • 🗾	12 3			
ddraua 🔊 http://nessiisasd0002a01.dev.wachov	ria net: 60	80/SASWebReport	Studio/openRi8Current.do				💌 tank
SAS Web Report Studio → Chap	p2_1 M	Иар				Log Off Jenine Milum	Preferences   Help* SBAS
ile Edijt Vie <u>w</u> lysert Dyta 👔 🍰 📓	(K)	Edit	<u>V</u> iew ////////////////////////////////////				TT n
R Table of Contents Options +	~						
Section	X	Header +					
(No group breaks are defined.)	● F   中台目 W	Fahlet	Assign Data Total Percent of Total Filter and Bank	🗃 Assiga Dete - Microsoft Informet Kog			
	크	router +	Conditional Highlighting	Data item:	<u>M</u> ove Items≖		
Section Data Options +	ण अ		Report Linking	Columns	Move to Calumns		
Chop2_1.Map	<u>u</u>		× Remove Table	Name	Move to Rows		
<ul> <li>France</li> <li>Sex</li> <li>Age</li> <li>Lower Bound Of 95% C.I. For Mean</li> </ul>			Data Source Details Properties	<ul> <li>Age</li> <li>Lower Bound Of 95% C.i. For</li> <li>Predicted Value Of Weight</li> </ul>	Marve Up Move Down		
Prediced Vidue Of Weight				Ø Upper Bound Of 933 C.3 For ■Rows Sex 1414depn S <sup>®</sup> Tootfors30	2		
	2	4					Local intranet zone
Start 🧑 🛞 🔌 🦰 3 Internet Ise	_		1.00	K SAS	1.00	SAS Management	

NOTE In Version 9.2 items can be moved by dragging and dropping

	Edit		View		
ă pijel	ien de	ters) None			
	Age	tige and of Value	Predicted Value Of Weight	Upper Bound Of 95% C.S. For Mean	Select the <i>View</i> tab to see the resulting
Sex F	119	772,59537761	838,89893961	905 20250161	report.
M	134	987 26110314	1051 5010504	1135.5210176	

To enhance the report by adding column totals, return to the *Edit* tab. Again, right click on the report to open the design drop down menu and this time select Total. The Total window appears and has several options. Choose

*Column Totals* and click on <sup>OK</sup>. This returns us to the View tab which now shows the report which includes Column totals.

	View 1 🖄		H		1		2			
Header -	1	1	100							
Age, Lower Bound C	1.95	Filt Cor	tal rcent ter a nditi	of 1 nd P onal	rotal ank High	 Vigh	-1	a Total - Nicrosoft Internet Cap Internet □ Row totals	10.0	Row subtotals
	×			uros	ble Det	ails		🖻 Column totab		Column subtotals

<u>E</u> dit View							
Applie	Applied filters: None						
	Age	Lower Bound Of 95% C.i. For Mean	Predicted Value Of Weight	Upper Bound Of 95% C.i. For Mean			
Sex							
F	119	772.59537761	838.89893961	905.20250161			
м	134	987.28110314	1061.6010604	1135.9210176			
Total	253	1759.8764808	1900.5	2041.1235192			

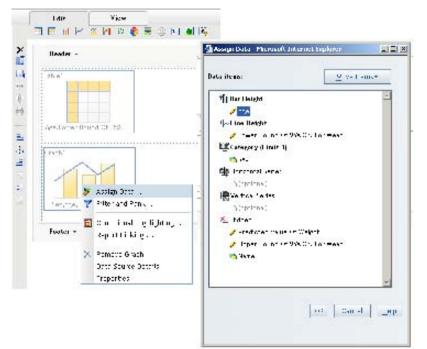
Let's add a graph to this report for a more visual representation of the data. To do this simply drag and drop one of the graphical reporting widgets on the Edit tab tool bar to an available grid square.

Hire ¥ise   4 ⊕ ₩ \$ \$ \$ 14  □	el 1%	
lleader -		
sha'		
April and the SS		
Survige, Lower Blund		

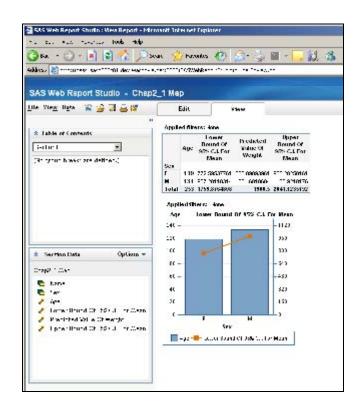
**NOTE** Although it is not necessary, you can eliminate unwanted cells blocks by highlighting them and clicking on the delete  $\mathbb{H}$  icon located on the vertical toolbar.

Return to the graph generic picture and right click on it. This opens the design drop down list. Select *Assign Data* to open the window that allows you to control the graph's components.

As described earlier, Use the *Move Items* drop down list to adjust the variables to their desired components of the graph.



Select or return to the *Edit* tab and select *View* tab to see the resulting report and graph. These are the reports that will be viewed from the *Information Delivery Portal*.



Hane:	Chells , 'actual				
Tapa: Location:	Data can te menua	atri of osites			
1-1 P-y-1			E % 🗆 65	🗆 5 vædatar pri	-0
tan•.		-unber	line .	<b>}</b> =0	
		0			
Description	Charles 2: Grader	51%-01isi te	El Torta.		
Description	Chaster 2 Grastin	galeuotdei to	Bl Turta.	_	
	Charter 2 Granter	ga≅e.ortigi tv	II "wta.	_	
Kaywords: 🔲 -arzin	D MJ201. 12230291 00	ning that to wroad	0	_	
Kaywords: 🔲 -arzin	D MJ201. 12230291 00			_	

To complete our work in Web Report Studio and save our reports select *Files > Save As* from the menu tool bar.

**NOTE** It is a best practice to give the report a descriptive name and state that it's a Report such as "Chapter 2.1 Report". This provides easier identification.

### 1.4

Surfacing a Web Report Studio Report in the SAS Information Delivery Portal (IDP). The Information Delivery *Portal*, also known as the *IDP*, is the tool that allows users access to a wide variety of information. While It has many purposes and capabilities, for our purposes, we will surface and view the report created in section 1.3.

As with *Web Report Studio, IDP* is a web based application. The URL to access the *Information Delivery Portal* should be provided by your SAS Administrator. Logon on to the *IDP* and to deliver a page similar to the one below.

SAS Lagan Menegel - Mirmonit Take net Explorer				
na za na nanaza tuda nap				1 At
🔾 Bar + 🖸 - 🖹 🗟 🏠 🔎 Shar 👷 Hormanis 🕐 🎡 - 🦆 🗷 + 🥁 🎉 🚳				
Addese 👸 ministration with the device structure of a ministrative score from the second structure of the	Ň			•
				P
SAS <sup>®</sup> Log On			Sæ	IS:
Leo'nome I Pres=are Logo*				
	Recented	111.4.11	Ocolonation Coorce	Log OF Jonite Vium Helpt
SAS <sup>®</sup> Portal				(Sas
Home Home Page Dashboard test BIDemo All hands				
				Deales (Acto Faller) Fernichter Detty
My Collection	ы ж 🕹 –	Dookmarks		µи ж∣,
That we have a start			i su nake no soskina ka.	
<ul> <li>a the standard and a state of the state of t</li></ul>				

i Paga Protectias La ge n Va Paga	
u ve Page	
-	alea (kate folio): Ferandese Ferapal
	\$n ×  <sup>−</sup>
nto Pogo Template	
	•
	ngo Pogo Orden W Pogo History and Pogo Template Istantas

Start with a fresh page by selecting *Options* from the top right tool bar and select *Add Page*.

The next screen will provide you an opportunity give a name to your new page (also viewed as a tab). Provide a description and select the groups desired to view the page. Groups are created and determined by the SAS administrator. Select *Add* to receive *Page Successfully Added*. Click on *Done* to view our newly created Page.

Add Pages to	Profile				
Create Search		ц. <u>.</u>	st.	and the	
•Farre:	Urade 2.1			-	
Costiptor	Surfacine al	WRU Report in the	Porta	-	
Foceards				-	
Page rank	ΙU	Tages and ordered	i se rankarom (	la=ast to regreat	
t este (Diel)	Nitstand				
	Add		🚺 Paga 🖃	s successfully acd	cd.
Eu e					

Returning to the Portal main page, again select *Options* from the top right navigation bar. This time select Edit Page Content.

Solitas, 💐	<u>.</u>
Einthefter 4-to	Options* Deprot Log Of Jonite Viam Hep*
SAS <sup>30</sup> Partal Hime Hime Page Dashboard test BlDemo All hands <mark>Chapter 2.1</mark>	17 dil Pageon ad dil Page Prine ice 17 A di Age X Gin ve Page
	Chango Popo Ordon Deve Popo History Deve Popo Tempiate Deve Popo Tempiate

This will lead to a new page allowing control of the content of the new page. With IDP, all information is surfaced in individual *Portlets* contained within *Portal Pages*. We are going to create a *Portlet* within the newly created *Portal Page* to house a link to the report generated from *Web Report Studio*.

	🔗 By column — 🔿 By gric
edia 1 dans	
ro-rowdda	Ϋ́, »
inflot layout	
01m (	
	2
	*
	×

Naviate to the *Edit Page Content* page. Select *Add Portlets*... You can manipulate the number of portlets and the layout of these portlets within this page. There are 2 ways to add the WRS Report to a Portlet. Select to describe the portlet returning to the Portal Page. Next, edit Content or Search for the report while creating the portlet. For this task we will create the portlet and edit its contents.

reate Searc	
R offer 15pe	A 81 -
Harre:	Unable 2.1 WRG Report
Eess-pto-	[
Foo-ores	ſ
t natur () u	(: N I stard
	A (I)

Provide a descriptive name to the new portlet and

click on the Add 🔤 button to receive the message

Edit Page Contents screen.

Edit Page Content + Chapter 2.1
Lisyn : O By column O By agto Karchen I Lanis IV. O 2 C 3 Forann webbe TY s Portfor: ∠yout
21m 1
Practer 11 MPF D-prit 🌩
×
out Parties as
Den of

You can see that our portlet has been included in the page content. Select or return to the Portal page.

	Constantine de la	Optionam Dearch	Log Off Jonite Vium Hept
SAS <sup>®</sup> Portai			§sas
Home Home Page Dashboard test BIDemo All hands Chapter 2.			
Chapter 2.1 WIS Report			[] 2 × []
Hiktorio da contra			

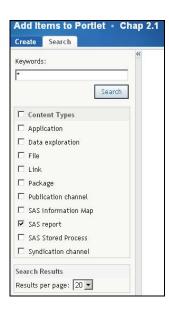
Select on the *Edit Content* icon from the portlet menu.

Edit Portlet Con	tent - Chap 2.1	
Show description     Show location     Sort packages in a ch.     Use preferences     Ascending     Descending     Items:	annel by their creation date: setting	T P
	Add Items	
OK Cancel		

The following screen will appear allowing control of the *Edit Portlet Content*. Select *Add Items…* 

The Create tab of the Add Items to Portlet screen appears. For this task, select the Search tab.

Create	Search	
⊙ Ap	plication	C Link C Syndication channel
*Name:		
Descrij	otion:	
URL:		
Keywoi	rds:	
Locati	on (group):	Not shared
		Add



Using the \* as a wild card, check *SAS report* to search reports available for the IDP.

The following Add menu appears. A complete list of reports is listed allowing the user to select reports based on their names and descriptions. Check the Chap2\_1 Report and click on Add button.

Keywords:	* Add					
*		• Туре	Name 🔺	Description	Location	Crea
Search			Chap2_1 Map.srx	Chapter 2 - Creating a Report Listing in the BI Portal	Shared Data/MktgInsightSharedData/Project SAS Testing/Reports	6/29
Content Types Application	ঘ		Chap2_1 Report.srx	Chapter 2 - Creating a Report Listing in the Bl Portal	Shared Data/MktgInsightSharedData/Project SAS Testing/Reports	7/6/
Data exploration	Г	1	Executive.srx	rortat	Shared Data/Metadata From 9.1.3	5/21
🗖 File			Executive3.srx		Shared Data/Metadata From 9.1.3	5/22
Link     Package			MDSS - Retail Banking by Region Report.srx		Shared Data/MktgInsightSharedData/MDSS Combined	7/7/
Publication channel			MDSS - Retail Banking Counts for 2009 Report.srx		Shared Data/MktgInsightSharedData/MDSS Combined	7/7/
SAS Information Map		1	Mortgage.srx		Shared Data/ MktgInsightSharedData/ Reports	7/7/
SAS report			NLR by Region.srx		Shared Data/Metadata From 9.1.3	5/21
			NLR Trend.srx		Shared Data/Metadata From 9.1.3	5/21
SAS Stored Process     Syndication channel			Publish [SAS Report - MDSS For Summary Statistics].srx	Published by Jenine Milum	Shared Data/ MktgInsightSharedData/ MDSS Combined	7/8/
			Publish [SAS Report - Stored ProcessDev_shoes_via_EG].srx	Published by X666614	Shared Data/ SAS Admin Demo/Reports	5/21
Search Results			SHOE SALES BY REGION.srx		Shared Data/SAS Admin Demo/Reports	5/21
Results per page: 20 💌			SHOE SALES BY REGION using INFOMAP.srx		Shared Data/SAS Admin Demo/Reports	5/21
		1770	Shoe Test with PUBLIC.srx		Shared Data/SAS Admin Demo/Reports	5/21
			Total Sales by Subsidiary Within Region - WRS Test.srx		Shared Data/SAS Admin Demo/Reports	5/22

**NOTE** The type of item listed in the Add menu is identified by its Icon and the file name extension. In this case Chap2\_1 Report is identified as a report by the .srx file extension and the incon.

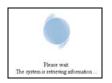
The	🚺 1 item(s) added.	is returned to the screen.	Select Done	Done	from the bottom left corner of the screen.
-----	--------------------	----------------------------	-------------	------	--

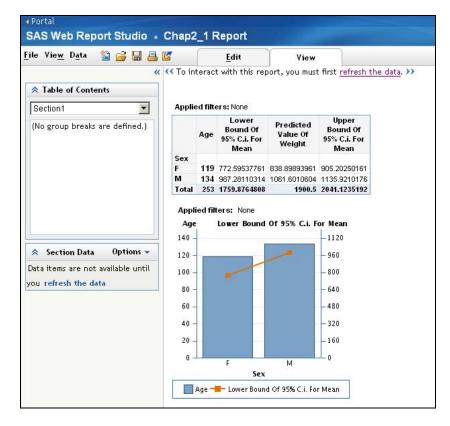
	Edit Portlet Content • Chap 2.1  ✓ Show description ✓ Show location Sort packages in a channel by their creation date:
This returns us to the <i>Edit Portlet Content</i> screen for Chap 2.1. The Report select will be visible in the <i>Items</i> menu.	Items: Chap2_1 Report.srx
Select $\bigcirc$ to return to the main Portlet window.	OK Cancel

Within the main portlet page, the individual portlet will appear as below. The report is now available any time the Portlet is accessed.



To view the report, click on the report name *Chap2\_1 Report.srx*. This will open to *Web Report Studio* and the report created in section 1.4.





The report is now available as created. Accessing the WRS report from IDP allows the user to not only access the report as designed; it allows the user to interact with the report to make alterations and new reports without changing the originally saved report.

There is a **Portal** link located in the top left-hand of the screen returning the user to the IDP.

#### ACKNOWLEDGMENTS

Thanks to SAS Publishing for encouraging me to write and submit this sample chapter for publishing consideration. Special thanks to John Bentley for his considerable editing skills and valuable input.

#### **CONTACT INFORMATION**

Your comments and questions are valued and encouraged. Contact the author at:

Name: Jenine Milum E-mail: jeninemi@yahoo.com

SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration.

Other brand and product names are trademarks of their respective companies.