ILP PROGRAM - ORACLE APPLICATIONS

Tata Consultancy Services

Oracle Reports Study Guide – Day1

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 Video1: Script: Vid1-Introduction to the chapter and its content – Face recording.

This vide will introduce the material covered in this pdf, the goals,

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2. What is the purpose of this document
3. What will you achieve after going through the document and related videos
4. How to read this document
5. How does it relate to the work you will be doing on real project
6. Reference to other reading materials for further references

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This manual has been organized as a step by step guide to teach how to create reports using Oracle Developer Suite 10G. The target audience is new comes to Oracle Developer suite. It assumes that the reader has basic knowledge of Oracle concepts and PL/SQL. After completing this course, you will be able to crate variety of reports using Oracle Developer Suite 10G. There are three sets of the “Oracle Reports Study Guide”. This particular document is meant to be covered on Day1 of the course, including the hands on mentioned inside the document. After completing this document you should continue reading the “Oracle Reports Study Guide – Day2.pdf”

This manual is organized to be read in a serial fashion and follow the instructions given in the document as it is. Practical examples are given in each section to guide you through every step. The tables referred here are common (shared) tables used by different batches, so care should be taken not to delete or update the rows which does not belong to you, this may create problem for the other batches. At the end of the course, you should delete the data you have created.

There are several symbols used to designate particular sections, which are described below:

 - Describes the purpose of the section.

 - Notes relevent to the scetion above

 - This denotes the task to be completed by the audience on his own PC. The layout of the output has to be followed as it is. For any confusion, the faculty should be contacted.

Introduction to Oracle Reports

The Oracle Reports Developer, is a component of Oracle Developer Suite. It is a powerful enterprise reporting tool that enables you to develop sophisticated reports. It also latest J2EE technologies, such as JSP and XML.

After undergoing through this tutorial, you will learn, how to create a report using the Report Wizard and preview both the Web and paper Layouts. The paper layout is suitable for printing on paper, and the web layout is meant for displaying in browsers by internet based applications. The report output can be produced in a variety of formats, which come in built with the tool. Apart from this, the report output can be in XML format, which is mainly used to transport data between different applications running on varied platforms. The concept of xml format may not sound very clear to you and the same will be discussed in more detail in later sections of this manual to make your understanding clear.

All discussions and case studies in this manual is based on the version of 'Oracle Reports 10G'. The same version of software is also installed in you training PCs, So, you will be able to see the features discussed here, in real life on your PCs.

History of Oracle Reports

Oracle RPT	Oracle RPT was an early, primitive predecessor to SQL*Report Writer.
SQL*ReportWriter	Character based report writing tool.
	The software was purchased by Oracle from a third party
Oracle Reports 1	New GUI mode IDE
	Major Rewrite
Oracle Reports 2.5	Release April 1995. New Object Navigator. New Toolbars. New Menus.
Oracle Reports 6i	• WebDB integration • XML Output • HTML Parameter Form Extensions • SQL Access to the Reports Server Queue • EXEC_SQL Integration
Oracle Reports 9i	• XML report definition • Query types: XML, JDBC, Oracle9i OLAP, text files • Pluggable Data Sources
Oracle Reports 10g	• New output format SPREADSHEET, output to Microsoft Excel. • Extended HTML formatting customization • Compliant to HTML 4.01 and XML 1.1 standards

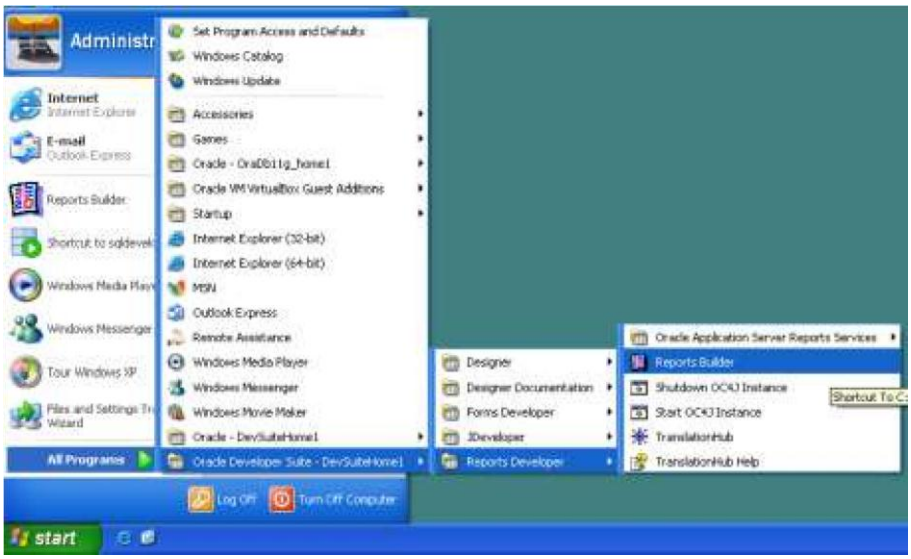
Oracle Reports is a very user friendly tool, and we will start with building a simple report.

1. Creating a Simple Report using Report Wizard

In this section you will learn how to create a simple report.

Step1: Start the report builder

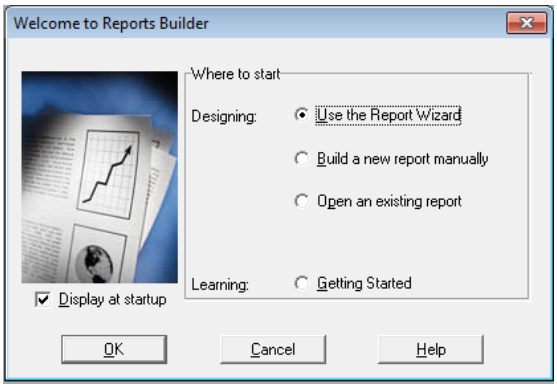
To open the Report Builder, is start from **Start >All Programs> Oracle Developer Suit > Report Developer > Report Builder .**



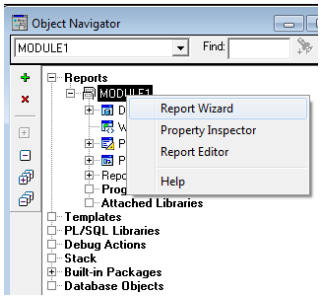
Or you can simply do this:

Start > Run: Type reports, and you can see Oracle Reports come in the search list. Simply click the same.

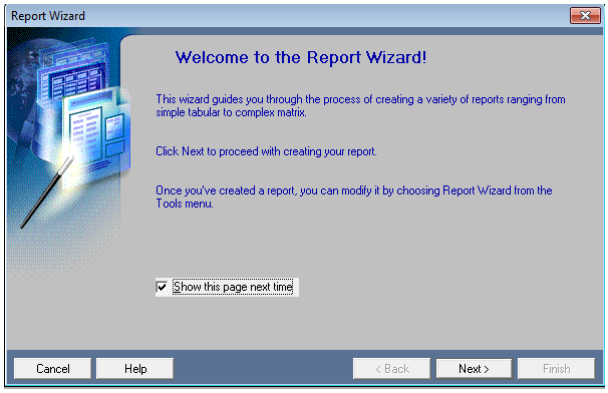
Report Builder will give you the following three options, select the first option.



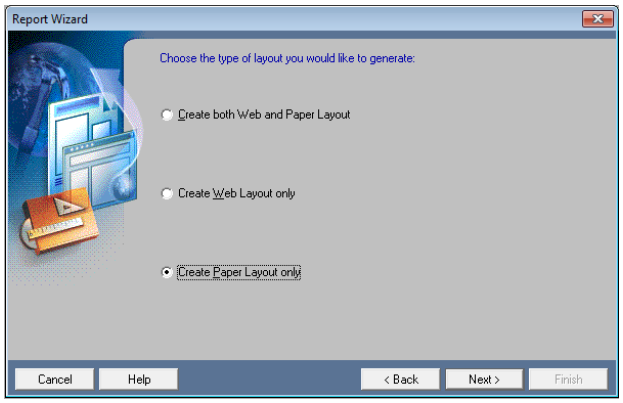
Note: The report wizard popup will come automatically, if the 'Display at startup' button is checked, else report wizard can be activated by right click on MODULE1 and selecting 'Report Wizard' as shown in the picture below.



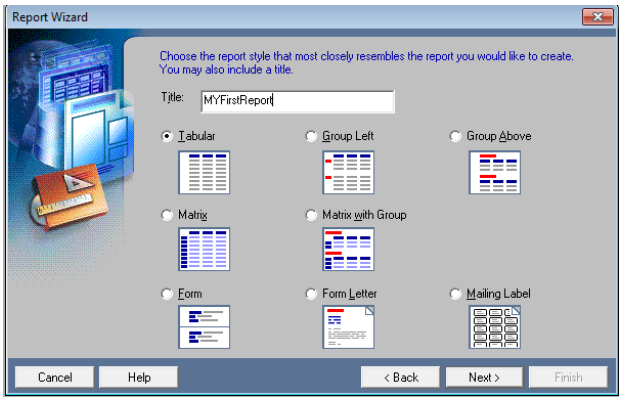
Click OK



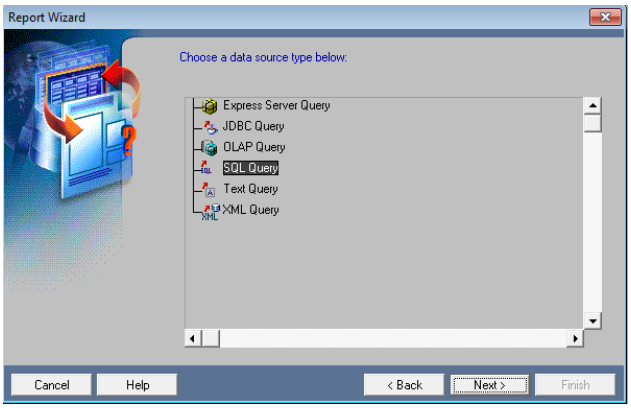
Click Next and select 'Create Paper layout only'



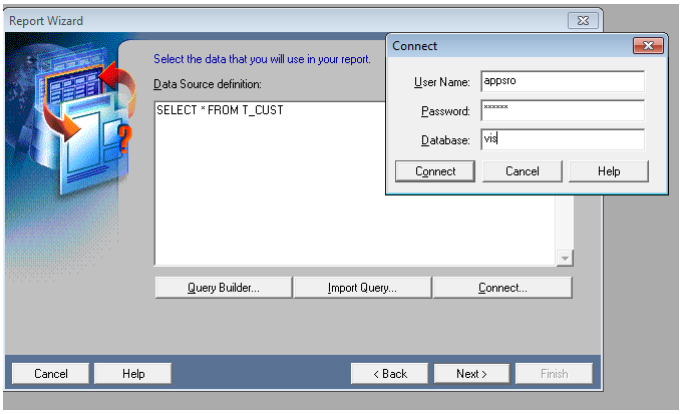
Select the Last option (Create Paper Layout only) and lick 'Next'



Select 'Tabular' option and give a title to your report (In this case MYFirstReport)

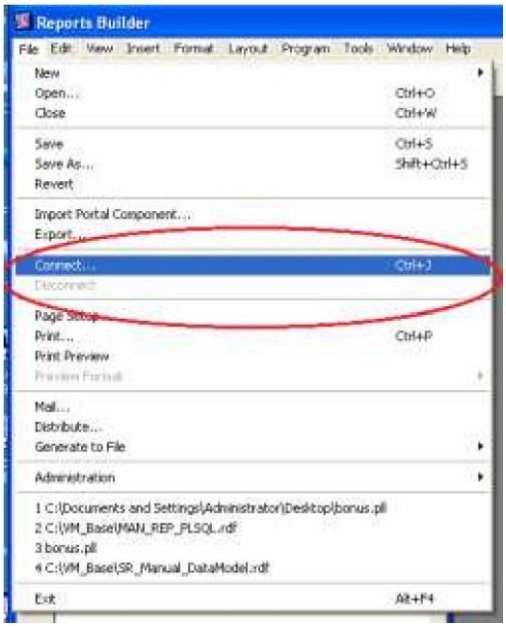


Now we need to select the data source. Data source is the means for report to collect the data from. All different data source will be discussed in subsequent sections, but for now select the '**SQL Query'** option.



Step 2: Connect to the Oracle Database

Click on the File > Connect (Shortcut Ctrl+J)



Here, you should enter the following:

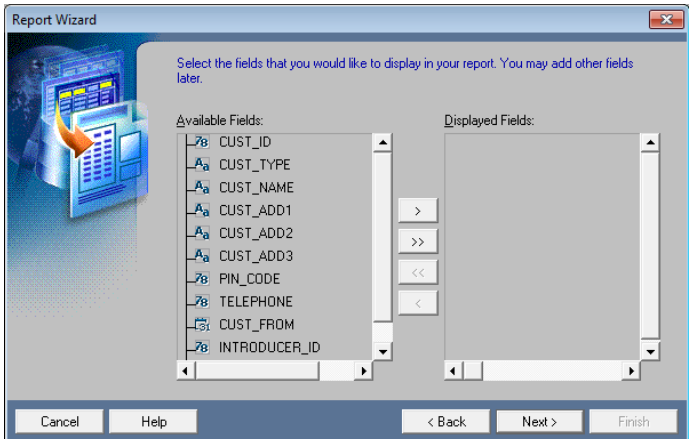
User Name: Name of the Oracle database user, who owns the objects (mainly tables), from which the report will extract the data. In our case the username will be **APPSRO.** This is also called the schema name.

Password: This is the password of the oracle database user, normally same as username (not case sensitive)

Database: This is the database instance (or the service name), in your case, it is **VIS**

Once the connection is success then system bring it into the Object Navigator Screen. The blank new report screen look like as below and then place the cursor on report name (Module1) and **Right** click then tool give an occasion to open
Report Wizard which is look in the still 2

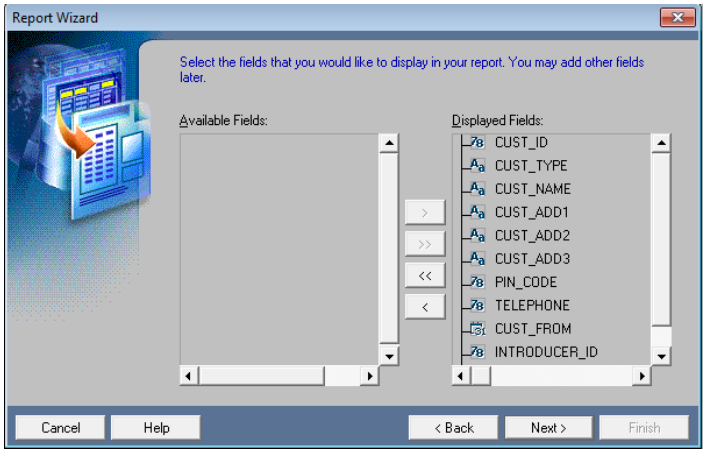
Type 'SELECT * FROM T_CUST' as shown above, and press 'Next' If you are not already connected to the database, supply the credentials of appsro and click 'Connect'



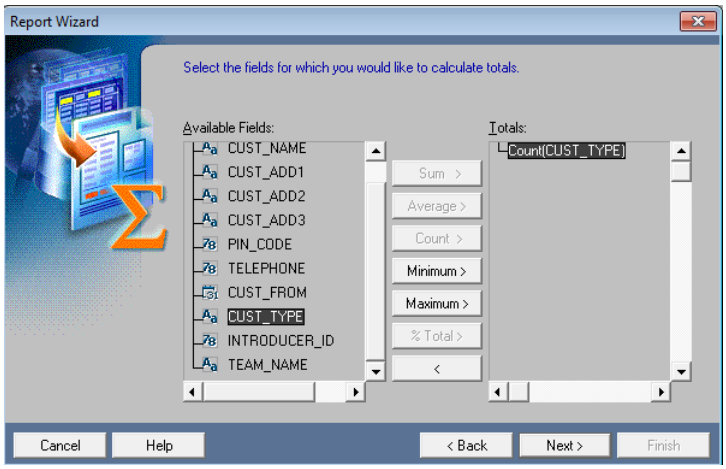
It will show all the columns fetched by the query and ask you to select the columns which you want to use in your report.

Note: *The query shown here is a simple query fetching all the rows from a single table. In real life situation, this will be a complex query, which may join many tables/views/synonyms on a complex condition.*

Here, you can select individual columns and use the > key to move them to the selected field list or use >> to select all columns in one go. Here, we will select all the columns.

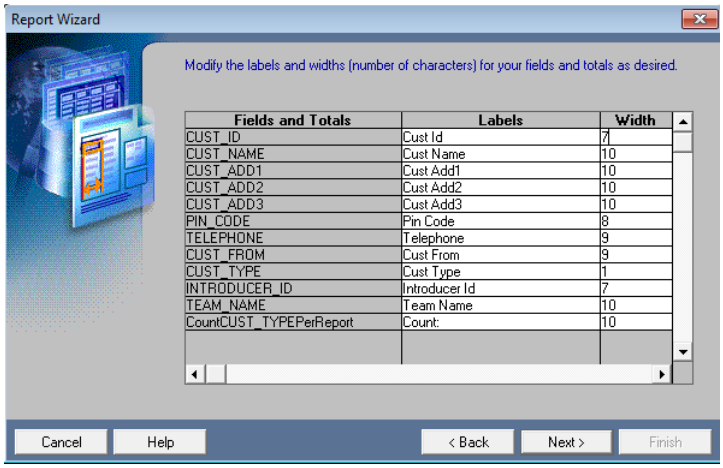


Click 'Next'

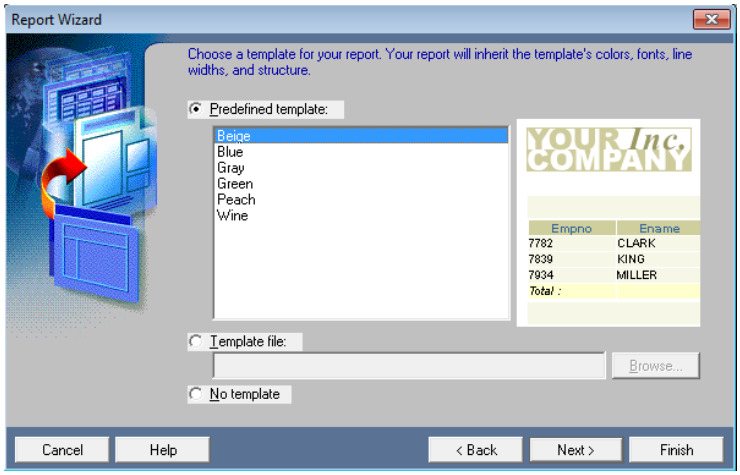


Now you can select the columns whose total needs to be calculated. Select CUST_TYPE and click 'Count'

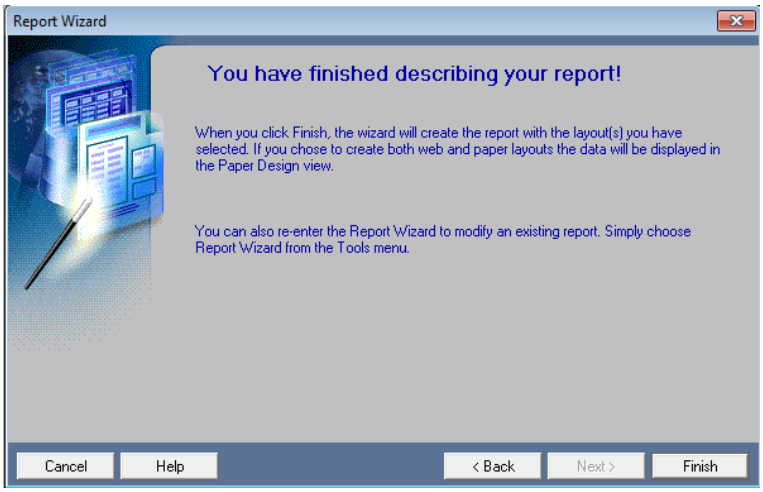
Note: Depending on the data type of the column, the Functions (Sum, Average ...) will be enabled. Since CUST_TYPE is a character type, only Count, Minimum and Maximum function is available for use, Click 'Count', and click 'Next'.



You can select the Labels for the columns (the label will appear before the actual value in the report output). Oracle selects the default Initcap format for the labels, and column size as width, but you can change it, Click 'Next'

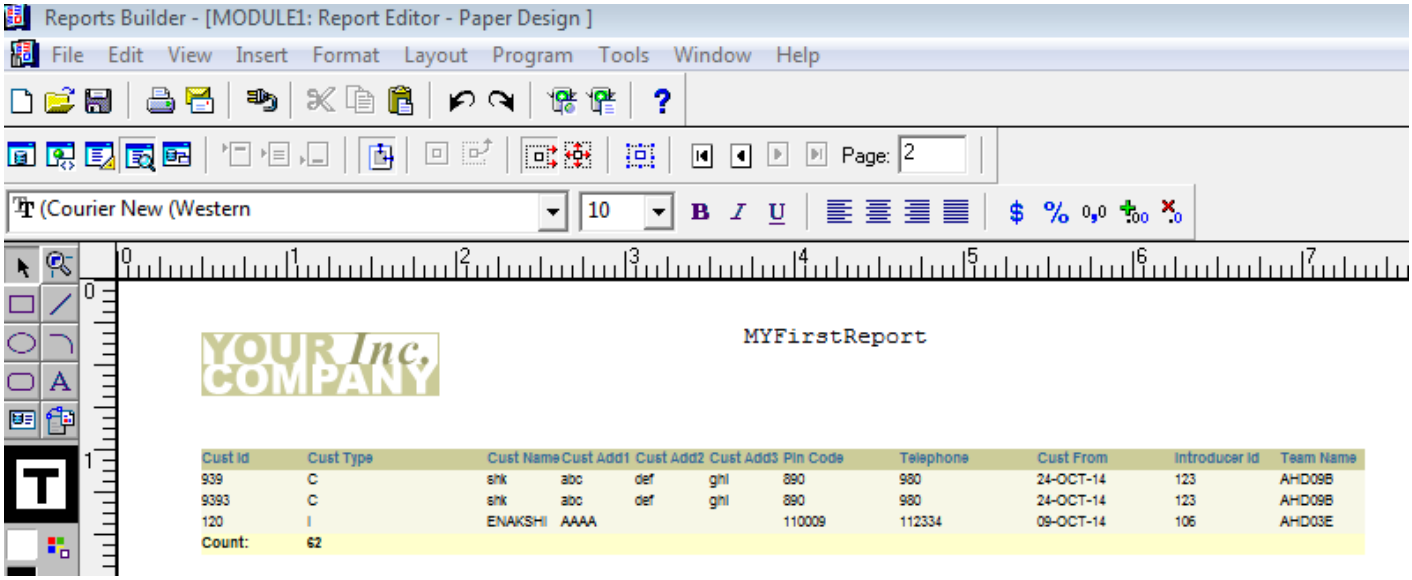


You can select from one of the predefined templates, or use an existing template file (discussed later), or no template. For this case, select the Beige template.



Click Finish. You have now created a simple report.

The report will run and produce the output as below



Note the report title and the count. The count of the Cust Type column has been displayed at the end of the report. To go to the end of the report, click the button in the second title bar.

Video2: Script: - Vid2-Rep-MyFIrst Report.avi – (12 MB, 2:40 min)

This video will show the screen capture of how to make a simple report as described above, with audio explaining the same.

2. Report Styles

 In this section you will learn different report styles

There are 8 different layouts available:

Simple:

1. **Group Left** - Data is grouped on certain columns and the group is shown on the left of the report.
2. **Group Above** - Data is grouped on certain columns and the group is shown on the left of the report.
3. **Tabular** - No grouping , data displayed in form of a table

Special Purpose:

4. **Form** - Displays one record per page, displaying field values to the right of field labels
5. **Form Letter** - Contains database values embedded in boilerplate text (any text that you enter or import into a Report Editor
6. **Mailing Label** - Prints mailing labels in multiple columns on each page. Using the Report Wizard, you can specify the format for your mailing labels

Matrix Report:

7. **Simple Matrix** - One group of data is displayed across the page, one group of data is displayed down the page. The intersection of the across and down contains the actual value.
8. **Matrix with Group** - (Verify Day1 excise Document)

3. Creating a Group Left Report

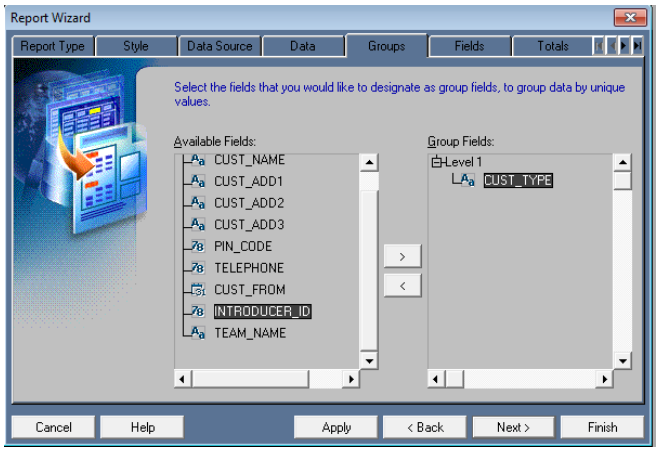
 In this section you will learn how to create a Group Left Report

Follow the same process in section 1 (for creating a simple report), we are listing it again for your quick recap:

Steps:

1. Open Oracle reports, and click File > New > Report
2. Select 'Use report Wizard'
3. Click Next
4. Select 'Create Paper layout Only', click next
5. Select mailing Label, click next
6. Select SQL Query, click Next
7. Type the query – ' select * from t_cust' , click connect
8. Supply appsro/appsro and connect
9. Click Next

Select the fields as shown below, and select the grouping column, everything else remains same. The additional screenshots are shown below



YOUR Inc. COMPANY

Cust Type	Cust Id	Cust Name	Cust Add1	Cust Add2	Cust Add3	Pin Code	Telephone	Cust From	Introducer Id	Team Name
A	1000	Paul Jones	2048 Pacific Drive	California	USA	200001	2456790	01-JAN-13	2000	
	2000	Steve	2049 Pacific Drive	California	USA	200001	2456790	01-JAN-13	2000	
	3000	Harry	2050 Pacific Drive	California	USA	200001	2456790	01-JAN-13	2000	
B	4000	Peter	2051 Pacific Drive	California	USA	200001	245679	01-JAN-13	2001	

Notice that the data has been grouped by the Cust Type column appearing in the left side.

Video3: Script: Vid3-Rep-GroupLeft.avi (16.6 MB, 3:08 min)

This video is a screen capture (with audio) of the steps to make a group left report, as described above, and also explains some finer navigational details.

4. Creating a Group above Report

In this section you will learn how to create a Group above Report

Follow the same process as above and select the 'Group Above' style, the output will look like this:

YOUR Inc. COMPANY

Cust Type	A								
Cust Id	Cust Name	Cust Add1	Cust Add2	Cust Add3	Pin Code	Telephone	Cust From	Introducer Id	Team Name
1000	Paul Jones	2048 Pacific Drive	California	USA	200001	2456790	01-JAN-13	2000	
2000	Steve	2049 Pacific Drive	California	USA	200001	2456790	01-JAN-13	2000	
3000	Harry	2050 Pacific Drive	California	USA	200001	2456790	01-JAN-13	2000	
Cust Type	B								
Cust Id	Cust Name	Cust Add1	Cust Add2	Cust Add3	Pin Code	Telephone	Cust From	Introducer Id	Team Name
4000	Peter	2051 Pacific Drive	California	USA	200001	245679	01-JAN-13	2001	

5. Creating a Tabular Report

In this section you will learn how to create a Tabular Report

Tabular report is the simplest form of the report, follow the same process as above, and just select the Report Style as Tabular. Sample output is shown below, there is nothing special here.

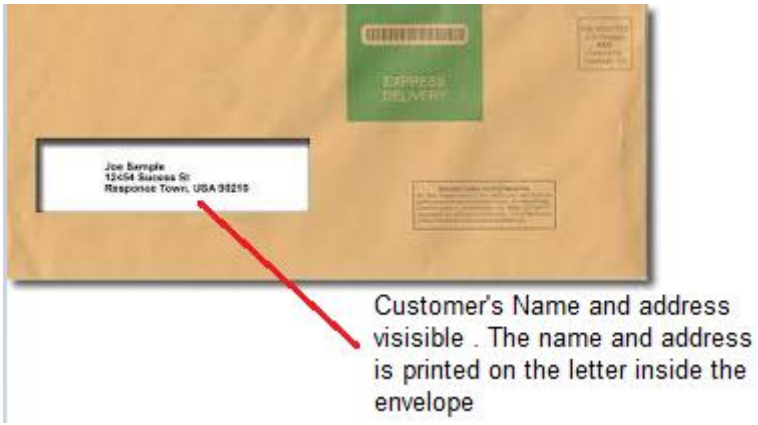
Cust Id	Cust Name	Cust Add1	Cust Add2	Cust Add3	Pin Code	Telephone	Cust From	Cust Type	Introducer Id	Team Name
1000	Paul Jones	2048 Pacific Drive	California	USA	200001	2456790	01-JAN-13	A	2000	
2000	Steve	2049 Pacific Drive	California	USA	200001	2456790	01-JAN-13	A	2000	
3000	Harry	2050 Pacific Drive	California	USA	200001	2456790	01-JAN-13	A	2000	
4000	Peter	2051 Pacific Drive	California	USA	200001	245679	01-JAN-13	B	2001	

6. Creating a Mailing Label Report

In this section you will learn the use of a Mailing Label Report and learn to create a Mailing Label Report.

A mailing label report is used to created letters, which can be posted by courier or post office personnel to real addresses. So a mailing label report should have the following features:

1. Letter for each customer will be printed on a separate page
2. Each page will have the name and address of the customer
3. The name and address should be printed in s specific area of the page. So that when it is put in envelope, the small window cut on the envelope, though which we can see the name and address.



In this report, we are going to use the table T_CUST, which looks like this:

```
SQL> desc t_cust
 Name                 Null?    Type
 -------------------- -------- ------------
 CUST_ID              NOT NULL NUMBER(5)
 CUST_NAME                     VARCHAR2(30)
 CUST_ADD1                     VARCHAR2(30)
 CUST_ADD2                     VARCHAR2(30)
 CUST_ADD3                     VARCHAR2(30)
 PIN_CODE                      NUMBER(6)
 TELEPHONE                     NUMBER(7)
 CUST_FROM            NOT NULL DATE
```

```
CUST_TYPE          NOT NULL VARCHAR2(1)

INTRODUCER_ID      NOT NULL NUMBER(5)

TEAM_NAME                   VARCHAR2(12)
```

And contains the following data

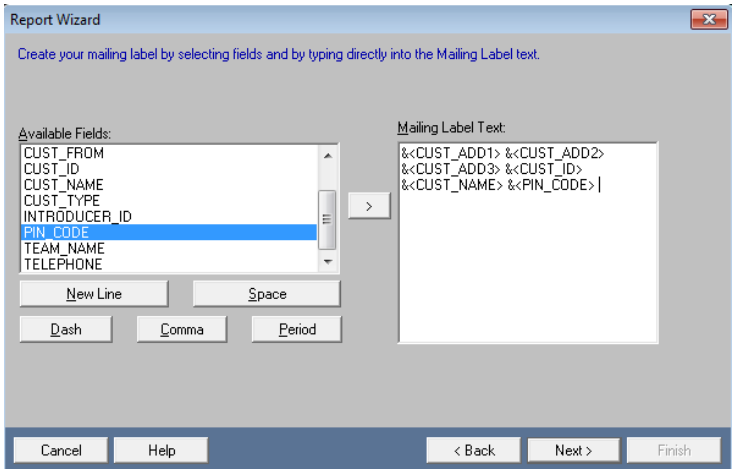
SQL> select * from t_cust

```
SQL> select * from t_cust
   CUST_ID CUST_NAME  CUST_ADD1            CUST_ADD2   CUST_ADD3 PIN_CODE  TELEPHONE
   ------- ---------- -------------------  ----------  --------- --------  ---------
      1000 Paul Jones 2048 Pacific Drive   California  USA         200001    245679
      2000 Steve      2049 Pacific Drive   California  USA         200001    245679
      3000 Harry      2050 Pacific Drive   California  USA         200001    245679
      4000 Peter      2051 Pacific Drive   California  USA         200001    24567
```

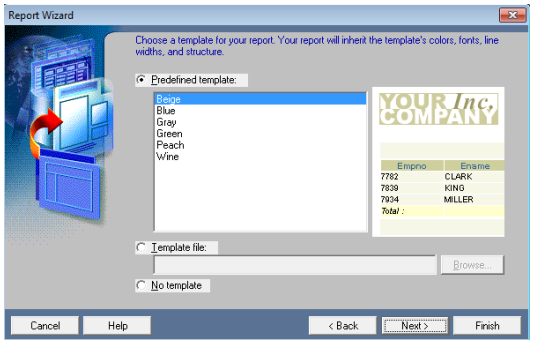
This table is owned by user appsro.

Steps:

10. Open Oracle reports, and click File > New > Report
11. Select ‘Use report Wizard’
12. Click Next
13. Select ‘Create Paper layout Only’, click next
14. Select mailing Label, click next
15. Select SQL Query, click Next
16. Type the query – ‘ select * from t_cust’ , click connect
17. Supply appsro/appsro and connect
18. Click Next
19. Select the fields as shown below:

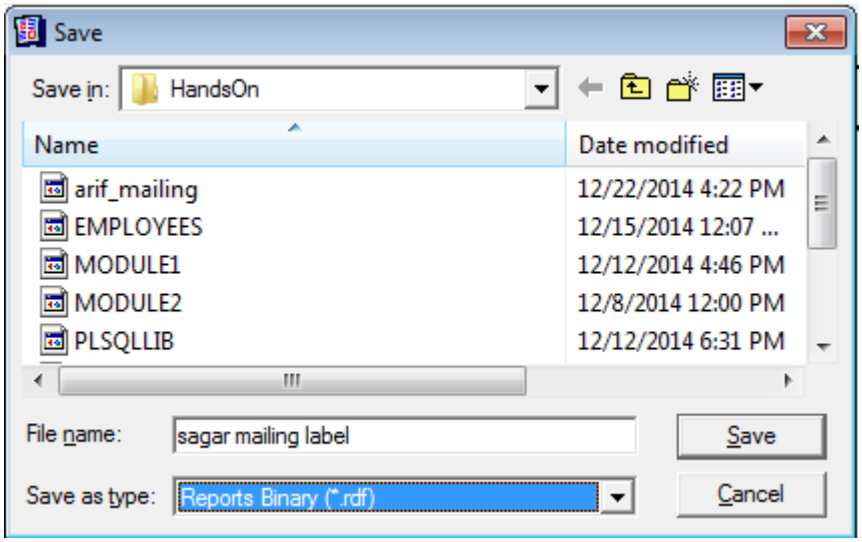


Select the default layout



Keep clicking next, and run the report. You will see the output as below

Save the file - Click on the 'MODILE1' and click File > Save, in the save dialogue box, select Type as .rdf



Run your report (click the traffic button - )

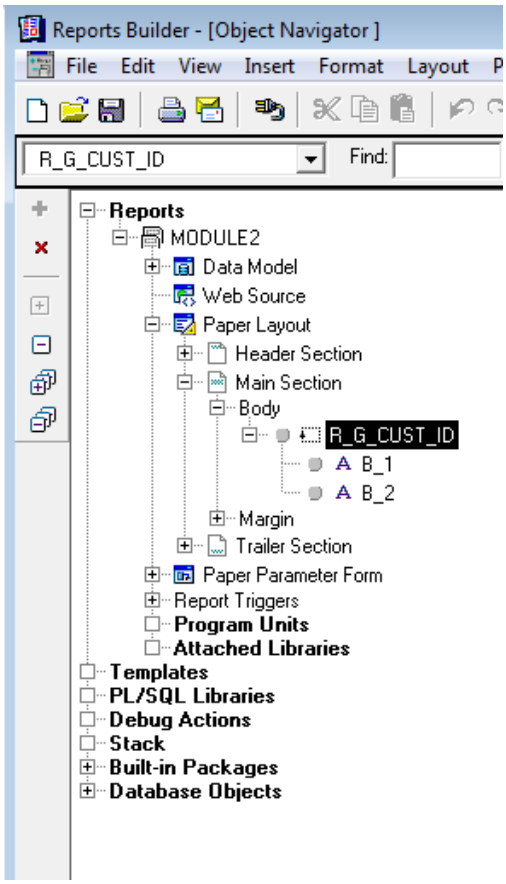
You will see the report output as:

This does not make much sense, all the name and address records are printed on each line.

We wanted to print something like this:

We will change this now to make a meaningful output.

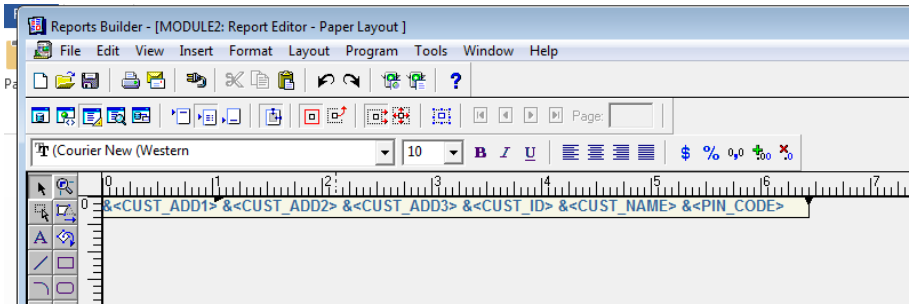
To do this, let us go to the Object Navigator:



And **Double click** on the Layout editor (The triangle at before 'Paper Layout') 

This will open a workspace called 'Layout Editor'

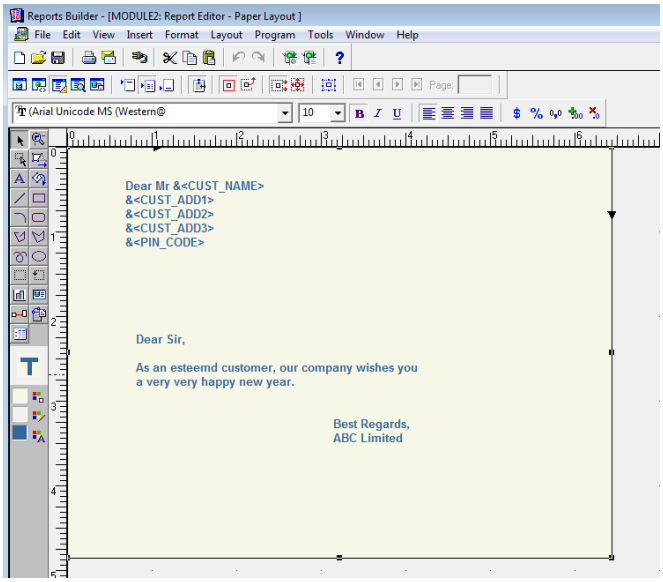
Here you can arrange the fields as per your requirement



Here you can see that the fields are all put one after another. Now we need to arrange them.

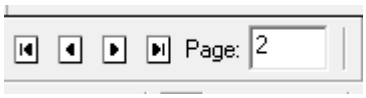
First we need to make some space to write, so click and drag the frame surrounding the fields, and then click on the 'A' symbol as shown below:

Then type the following, exactly as it appears below, and arrange the fields as shown below:



Now run the report now, you will get one letter for each of our 4 customers on each page.

Use these buttons to navigate between the pages



Pg. 1:

Pg. 2:

These can be printed and will server our purpose.

Video4: Script: Vid4-Rep-MailingLabel.avi (22.9 MB, 5:58 min)

This video will show the screen capture of how to make a simple report as described above, with audio explaining the same. It also covers the finer navigational details not covered in the text above,

TASK1: Create a mailing label report as described below:

We have another table shown below, which records the fuel purchased by each customer,

```
SQL> desc T_DAILY_TRANSACTION

Name                                      Null?    Type
 ----------------------------------------- -------- ---------------
 TEAM_NAME                                 NOT NULL VARCHAR2(12)
```

```
TRAN_DATE                                 NOT NULL DATE
CUST_ID                                   NOT NULL NUMBER(4)
PETROL_QTY                                         NUMBER(5)
DIESEL_QTY                                         NUMBER(5)
PETROL_RATE                                        NUMBER(6,2)
DIESEL_RATE                                        NUMBER(6,2)
TOTAL_VALUE                               NOT NULL NUMBER(7,2)
```

Our company is running a bonus offer stored in the following table:

```
create table t_fuel_bonus (
Purchase_Amt number,
Bonus_item varchar2(100)
)
/
```

This year ABC Company has announced the following gift items:

Purchase_Amt	Bonus_item
1000	Executive Diary
2000	Wall Clock
3000	Wrist Watch
4000	Cell Phone

Eligibility for gift will be considered on the each transaction in the current financial year (April to March). For example:

If Mr A made the following purchase:

1. Rs 5000 in Jan, Rs 3500 in Feb

Two separate letters will be generated for him, selecting the nearest match of his transaction with the gift rule (intention is to give him the most expensive gift he is eligible for). So Mr A will get one letter for a Cell phone, and one letter for wrist watch.

Write a milling label report to send a covering letter for the gist to all our eligible customer in the following format:

ABC Limited

To:

Mr. XXX

Address.....

Dear Sir,

We are pleased to send you <*Gift Item name for this customer*> as you have purchased fuel for Rs. <*Total Fuel Purchased by him for the current year*>. Also note that, you can earn more gifts with further purchases, the list of gift items is given below:

Purchase_Amt	Bonus_item
1000	Executive Diary
2000	Wall Clock
3000	Wrist Watch
4000	Cell Phone

Warm Regards,

ABC Limited.

1. The data is distributed across three tables – T_CUST , T_DAILY_TRANSACTION and T_FUEL_BONUS
2. Take the image file of company logo from this document.
3. If the table does not have proper data, insert more data for testing your report.

TASK2: Mailing label report, single letter per customer

Write a mailing label report for the above case, where a single letter is generated for one customer, detailing all the gifts he will get.

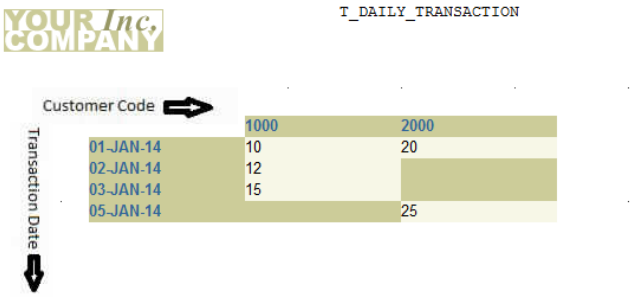
7. Creating a Matrix Report

In this section you will learn to create a Matrix Report

A matrix report is used to display the value at the intersection of row and column value. To demonstrate this, we will take a table called T_DAILY_TRANSACTION, having the following data:

CUST_ID	TRAN_DATE	DIESEL_QTY
1000	01-JAN-14	10
1000	02-JAN-14	12
1000	03-JAN-14	15
2000	01-JAN-14	20
2000	05-JAN-14	25

Our goal is to display this data in form of a matrix as below:

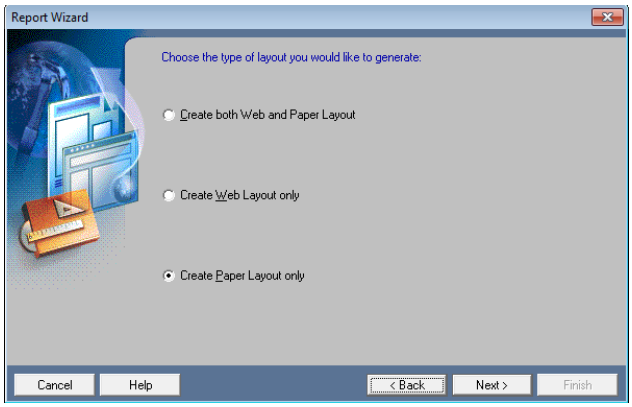


Here the Fuel purchased by the customer is printed for each day in the matrix form. In the above picture, the Fuel purchased by the customer (1000 and 2000) is displayed for each transaction date.

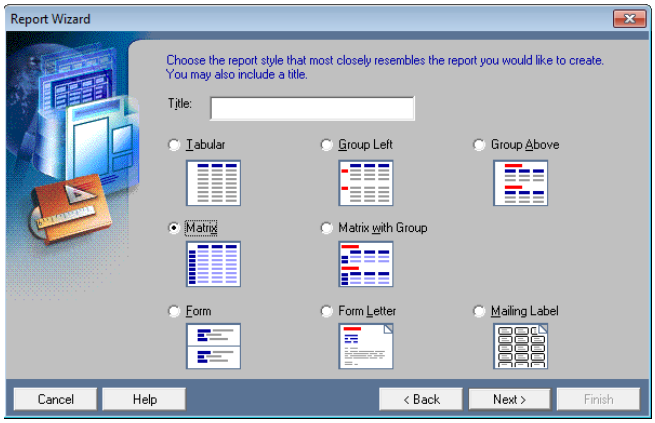
To achieve this, we need to do the following:

Follow the same set of steps using Report Wizard and select the Style=Matrix.

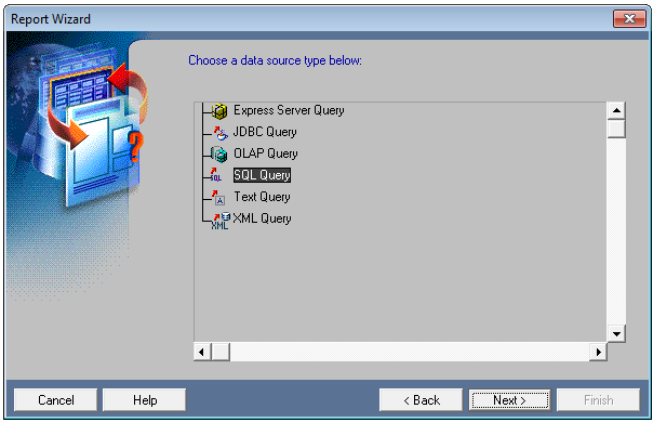
Step1: Select 'Paper layout'



Step1: Select 'Matrix' Style

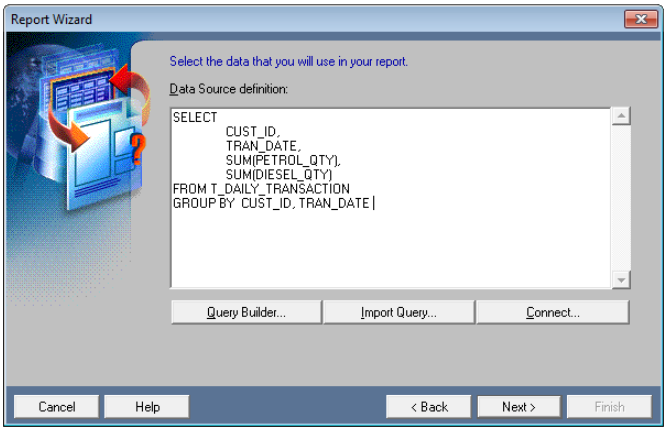


Step1: Select data source = 'SQL Query'

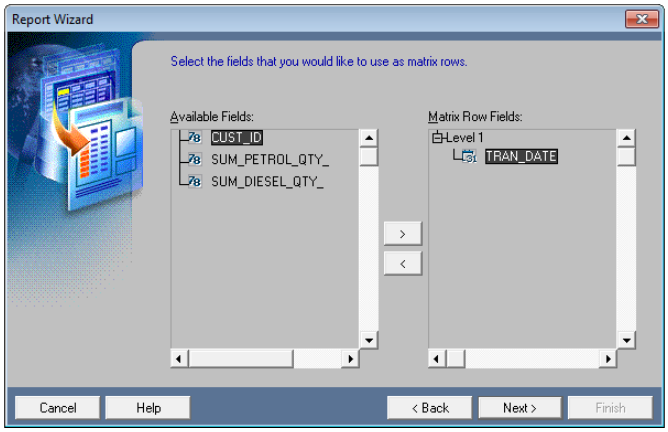


Step1: Insert the query:

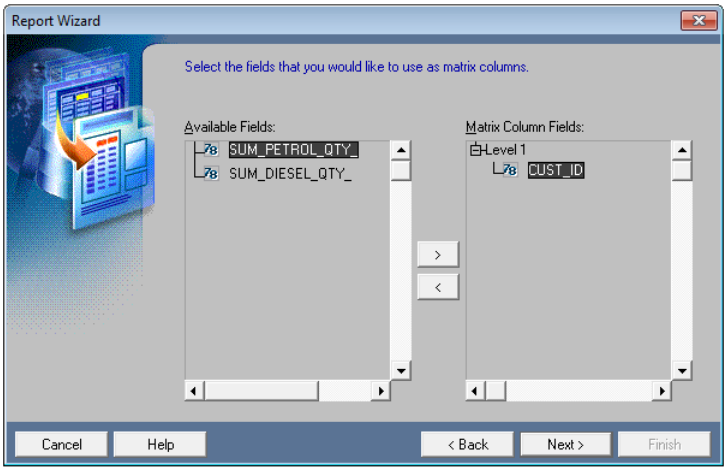
```
SELECT
    CUST_ID,
    TRAN_DATE,
    SUM(PETROL_QTY),
    SUM(DIESEL_QTY)
FROM T_DAILY_TRANSACTION
GROUP BY CUST_ID, TRAN_DATE
```



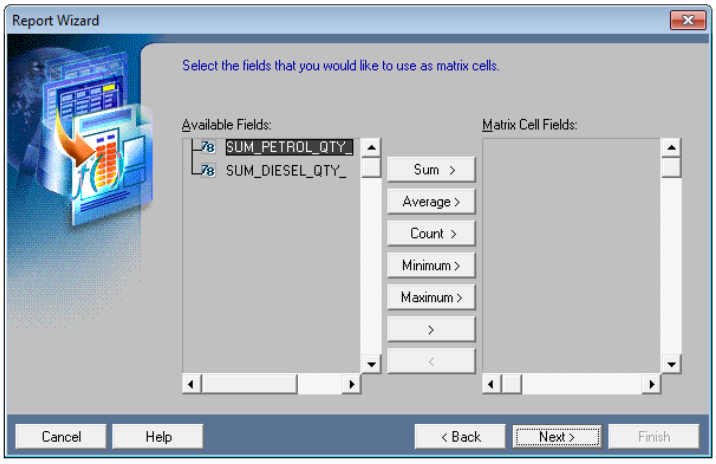
Step1: Click on Field TRAN_DATE and click '> 'to select it for Row display



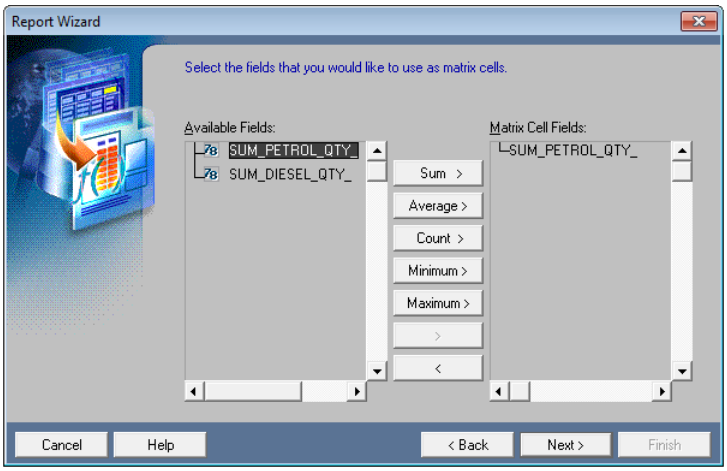
Step1: Click on Field CUST_ID and click '> 'to select it for Column display



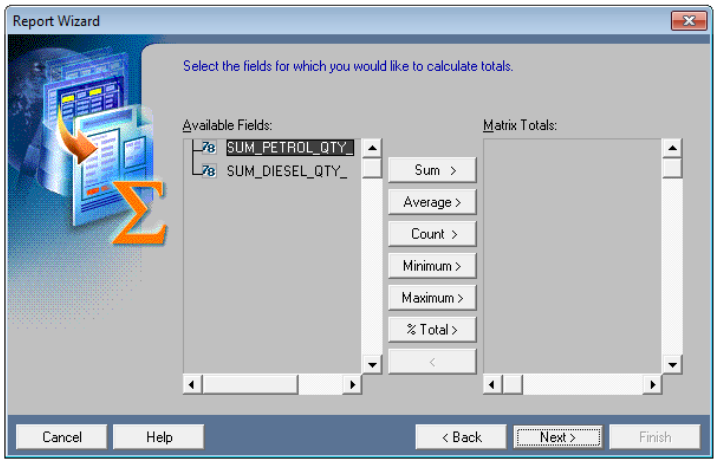
Step1: The next screen will ask you to select the field to be used for a matrix cell



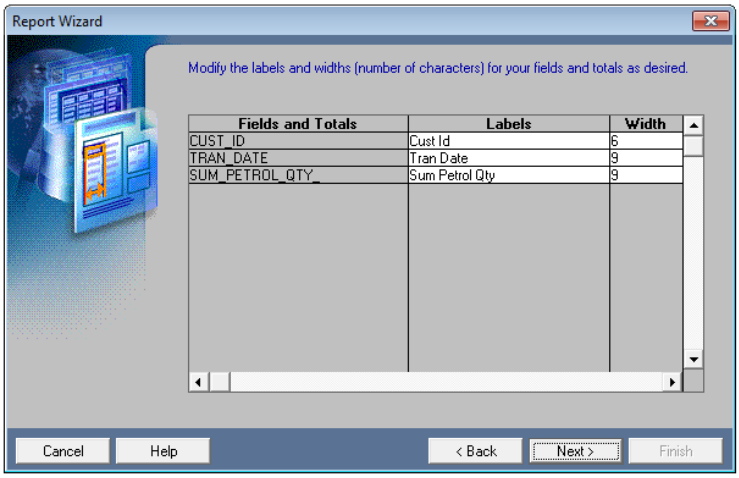
Step1: Click on Field SM_PETROL_QTY and click '> 'to select it for display inside the matrix cell (the cross section of row and column)

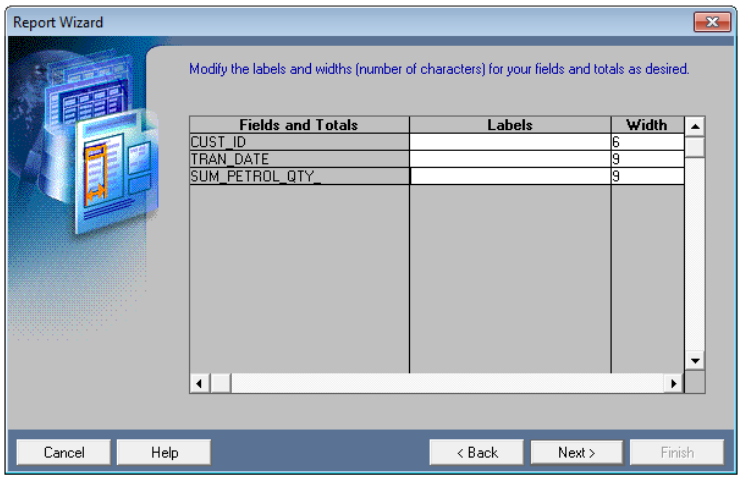


Step1: Do not select anything here, and click next (we are not showing any calculated field here)

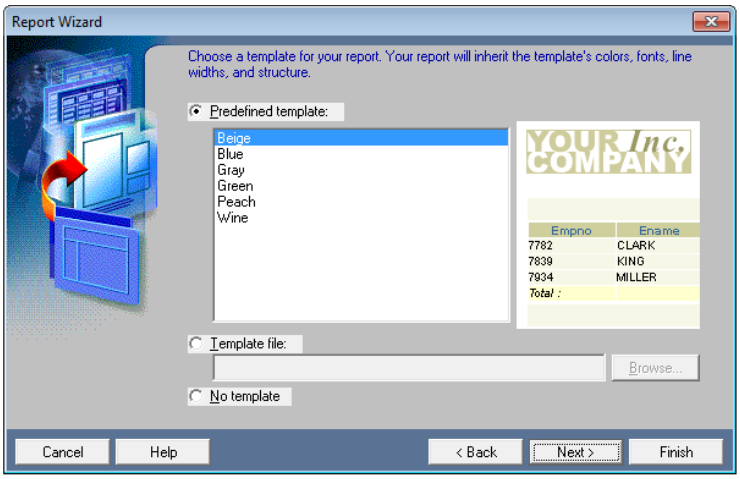


Step1: Remove all the Labels, select and delete

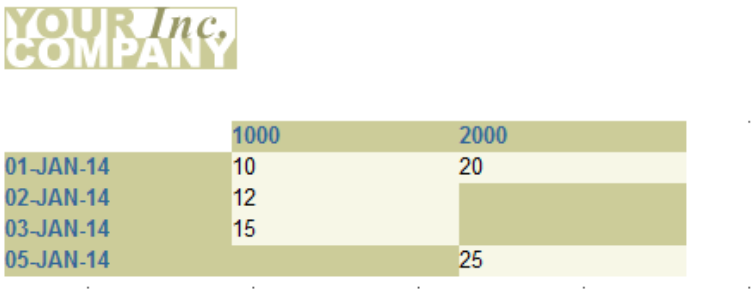




Step1: Select the default layout and press Finish.



Step1: It will display the report output as below:



Note: *The heading* Customer Code  *and* 

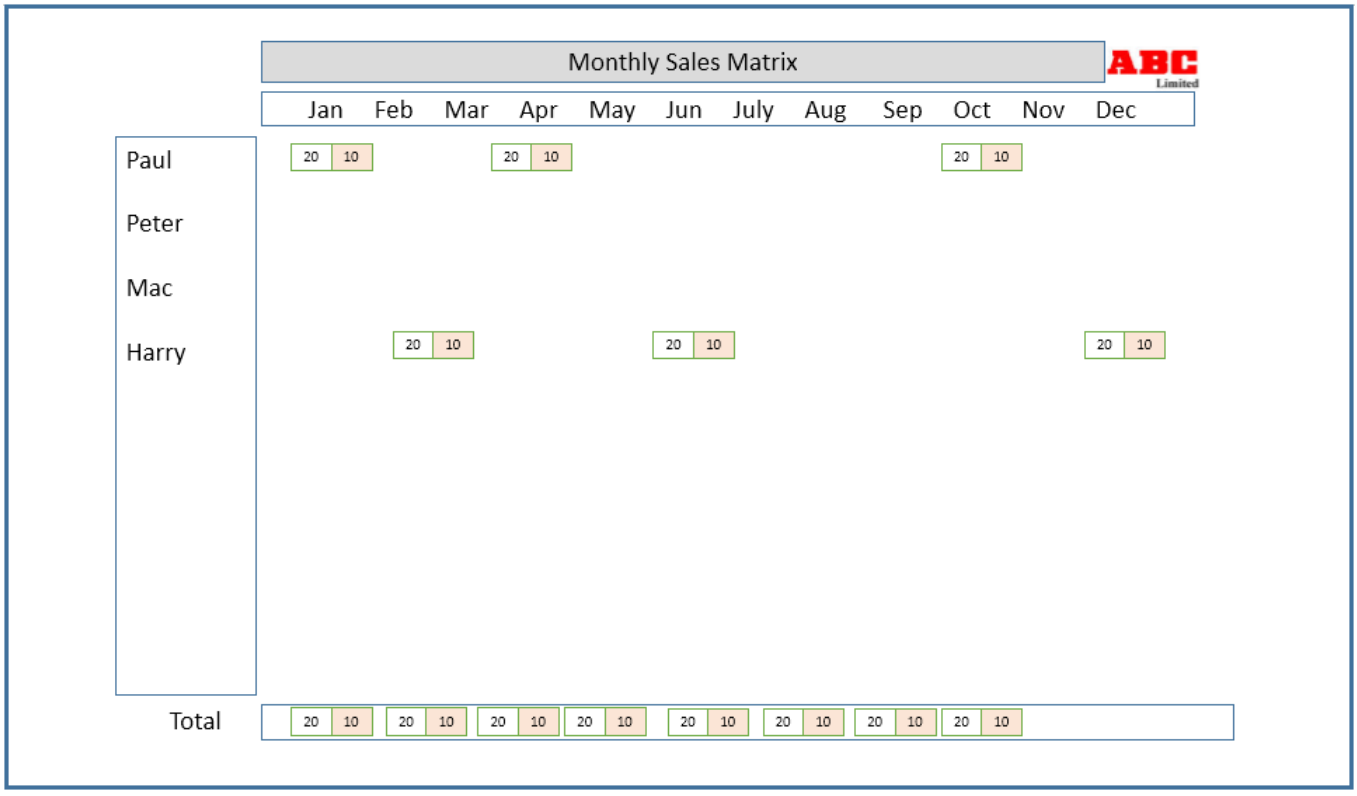
has not been shown in the steps, and this is purposely left for you as an exercise.

Video5 Script: Vid5-Rep-Matrix.avi (Screenplay of creating a Matrix report)

This video will show the screen capture of how to make a Matrix Report as described above, with audio explaining the same. It also covers the finer navigational details not covered in the text above

TASK3: Develop a matrix report as described below:

The output of the matrix report should look as below:



Specifications:

1. Customers are listed in the left column
2. Months of a year are listed in the top row
3. The cross section of the row and column, lists the petrol, diesel brought by the customer for the month
4. A summary of the monthly petrol is to be displayed at the end of each page
5. A grand summary has to be displayed at the end of the report

1. The data is distributed across two tables – T_CUST and T_DAILY_TRANSACTION
2. If the table does not have proper data, insert more data for testing your report.

Next Reading: "Oracle Reports Study Guide - Day2.pdf"