



Spreadsheet Methods 5N1977

9. Produce a Spreadsheet for a Specification

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1. CREATE A DESIGN SPECIFICATION FOR A GIVEN SPREADSHEET



TASK

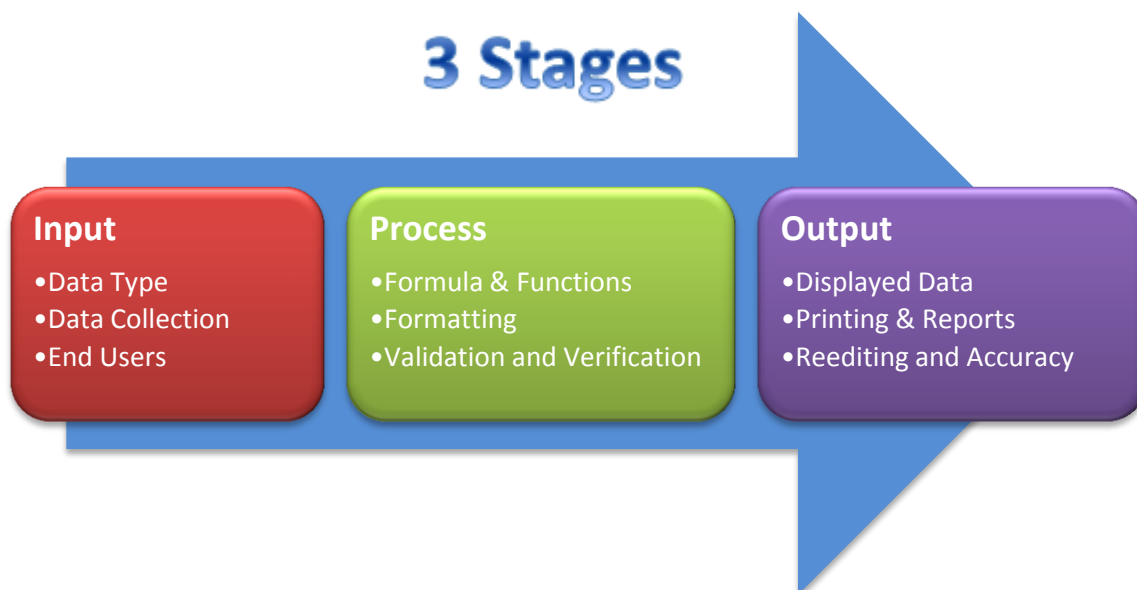
Think of an example where you could use an excel spreadsheet; the spreadsheet may be for use at home or within a business. Describe in detail in a word document what the spreadsheet is and how it would be used.

Within the word document explain the following (at least a paragraph on each point):

1. Describe the functions you will need to use in this spreadsheet. What is the spreadsheet used for? Who will use the spreadsheet? What will the spreadsheet need to show/do?
2. Will there be any formula? What will this formula be?
3. What formatting will you need for this spreadsheet? Currency, date, colours?
4. How will the final spreadsheet be presented?
5. How will the information be organised on the spreadsheet?

2. DESIGN STAGES

When creating a spreadsheet it is important to carefully plan the spreadsheet to ensure it meets the **Design Specifications**, this planning is completed through the design process. There are three distinct stages of the design process for creating a spreadsheet they are as follows:



1. Include Data Input and Format

At the **Input** stage it is important to carefully plan the spreadsheet to ensure it is readable and has a clear lay out. **Consider** the following factors about the information and any other that may be relevant:

1. **DATA TYPE:** What type of data is being included? Will it be text, numeric, date, time or percentage, etc.?

2. **DATA COLLECTION:** How will the data be collected? Will it be inputted manually? Is there a need for a *data capture form*? Will the data be inputted from another data source automatically?
3. **END USER:** Who will use the spreadsheet and input the data? Will they need to have a detailed knowledge of formula? Should data validation be put in place for the end user? Should the spreadsheet be protected from accidental damage by the end user?

What is a Data Capture Form?

Data is usually collected through a data capture form and it is very important to ensure that **ALL** data required for the spreadsheet is requested by the data capture form. For example when collect data for the college in Monaghan Institute the following is some of the information that is requested.

Using this form a comprehensive spreadsheet regarding the details of every student in the college could be created. From the data collected it would be possible to determine data types, validation required, etc.

Note: The information provided on this form is confidential and will be retained, used and disclosed by Monaghan Institute and centrally by Co. Monaghan VEC in line with the Data Protection Notice on page 82.

Your Personal Public Service Number (PPS No.) is your unique reference number for all dealings with the Public Service, e.g. Social Welfare, Tax, etc. If you hold an RSI Number this is now your PPS Number. If you do not know your PPS Number contact your local office of the Department of Social Protection.

Monaghan Institute APPLICATION FORM

PERSONAL DETAILS - PLEASE USE BLOCK CAPITALS *(Required for enrolment to the Institute and contact purposes)*

Name

Date of Birth Nationality

Address

Home Tel No. Mobile No.

Personal Public Service No. (ie RSI No.) *It is very important that this number is included on your application*

COURSE FOR WHICH APPLYING

	Code
First Choice
Second Choice
Third Choice

SCHOOLS/COLLEGES ATTENDED *Note: We may need to contact the school in connection with your enrolment*

	Dates
.....
.....
.....

ARE YOU CURRENTLY STUDYING FOR THE LEAVING CERTIFICATE EXAM (OR EQUIVALENT)? YES NO

PLEASE PROVIDE DETAILS OF ACADEMIC QUALIFICATIONS *Always officially checked - false information will disqualify*


Leaving Certificate/Applied, A levels, GCSE/Junior Certificate or Other

Subject	H/L	Grade	Year
.....

Please Detach

ATTACH
PHOTO HERE

The following is an example data capture form for a wages spreadsheet.

**MV Computers**

Application Form

Full Name: _____ Surname: _____

Address: _____ Nationality: _____

_____ Date of Birth: _____

E-Mail: _____

Phone number: _____

PPS number: _____

Education: _____

How many hours you can work per day? _____

Full time
 Part time
 Full time or Part time

Signature _____ Date _____

This is an example of a Data Capture Form for a kitchen design company, which has been laid out in Excel and set up to print appropriately.

	A	B	C	D	E	F	G	H	I	J
1	<u>Leonard Furniture Co Ltd</u>									
2										
3										
4	Client Name :					Phone Number :				
5										
6	Address :					Email Address :				
7										
8										
9	<u>Finishes</u>									
10										
11	Woodgrain Colour:									
12										
13	Door Type :		Solid			Mdf			Pvc	
14										
15	Handles :		Cat 1			Cat 2			Cat 3	
16										
17										
18	<u>Carcass Information</u>									
19										
20	Size	Type	Standard	Woodgrain 1	Woodgrain 2					
21	300									
22	350									
23	400									
24	450									
25	500									
26	550									
27	600									
28										



NOTES: Explain here in your own words what a data capture form is...

2. Data Processing and Formatting

Data Processing can be defined as the collection of data and the carrying out of operations (changes or manipulation) on data. The result of **data processing** is usually to retrieve or transform the information, to produce meaningful information.

In relation to spreadsheet software (Excel) we usually think of the application of formula and functions to values and text as **data processing** as the information is collected and changes are applied to the data by the formula and functions. Other processing or formatting that could be applied include the following: Have graphs been applied to allow the end user to see the data clearly? Is there a need for conditional formatting? Should you include some comments to explain how the spreadsheet works?

Under processing we can also consider how the data is organised, has it been sorted and by which columns? Has a filter been applied to the data and why? Have the key input cells been highlighted through formatting? Has the company logo or any images been added to the spreadsheet?

Most importantly the end user has to be considered - will they understand the spreadsheet and know how to use it? Should comments be added to help the end user understand the database?

Worksheet Layout

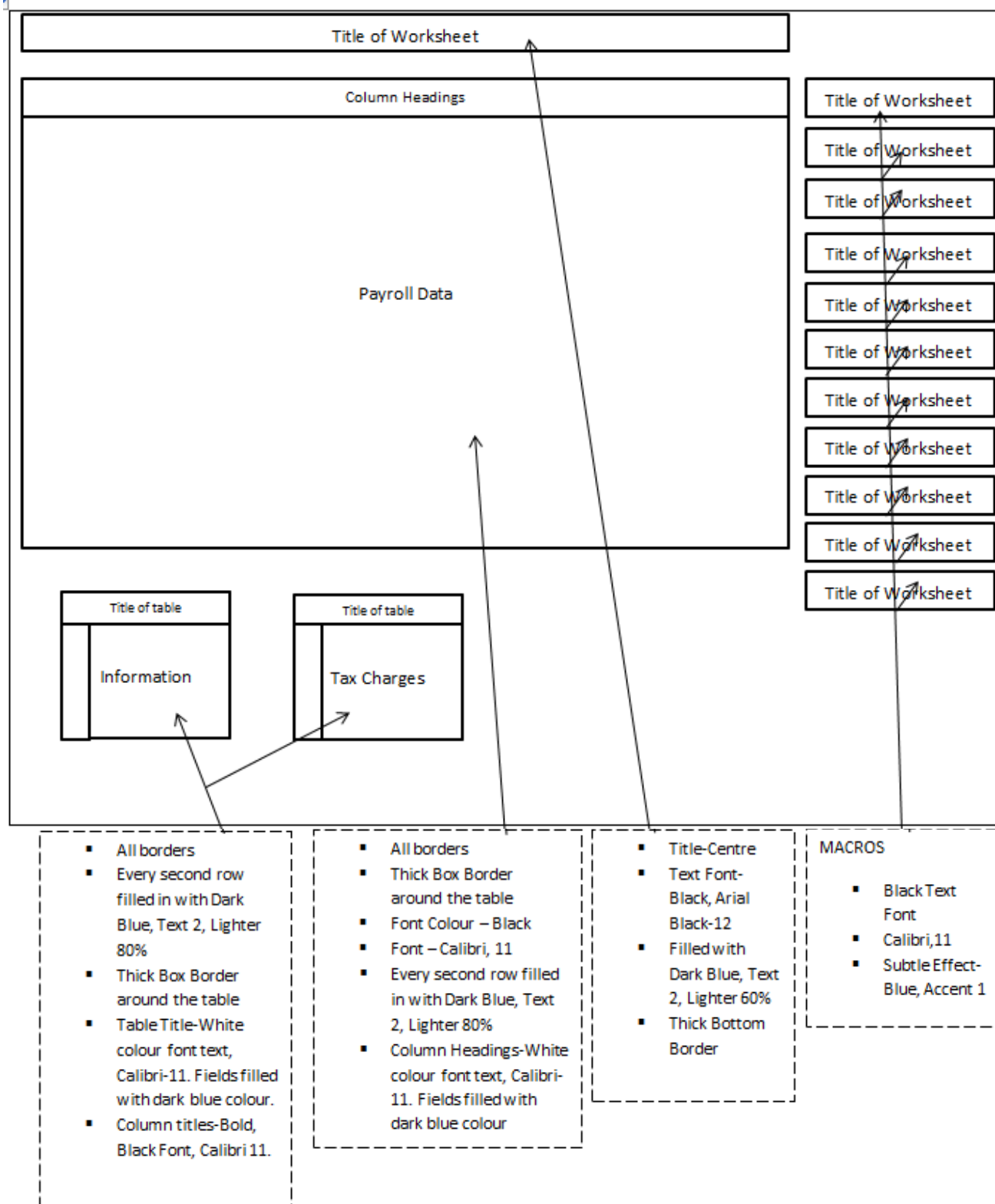
The layout of the data on a worksheet is a very important consideration in the design process. This should be decided before the data is inputted into the worksheet, in the format of a screen layout design.

Details included in this design should relate to the position of the information on the spreadsheet including details on any formatting that will be included. Specification of formatting could include: worksheet name, alignment, cell formats, column height and widths, font style, font size, font colour, location of borders (including the colour, style and weight), shading, page orientation, text direction, merged or wrapped cells, positions of images and macros.

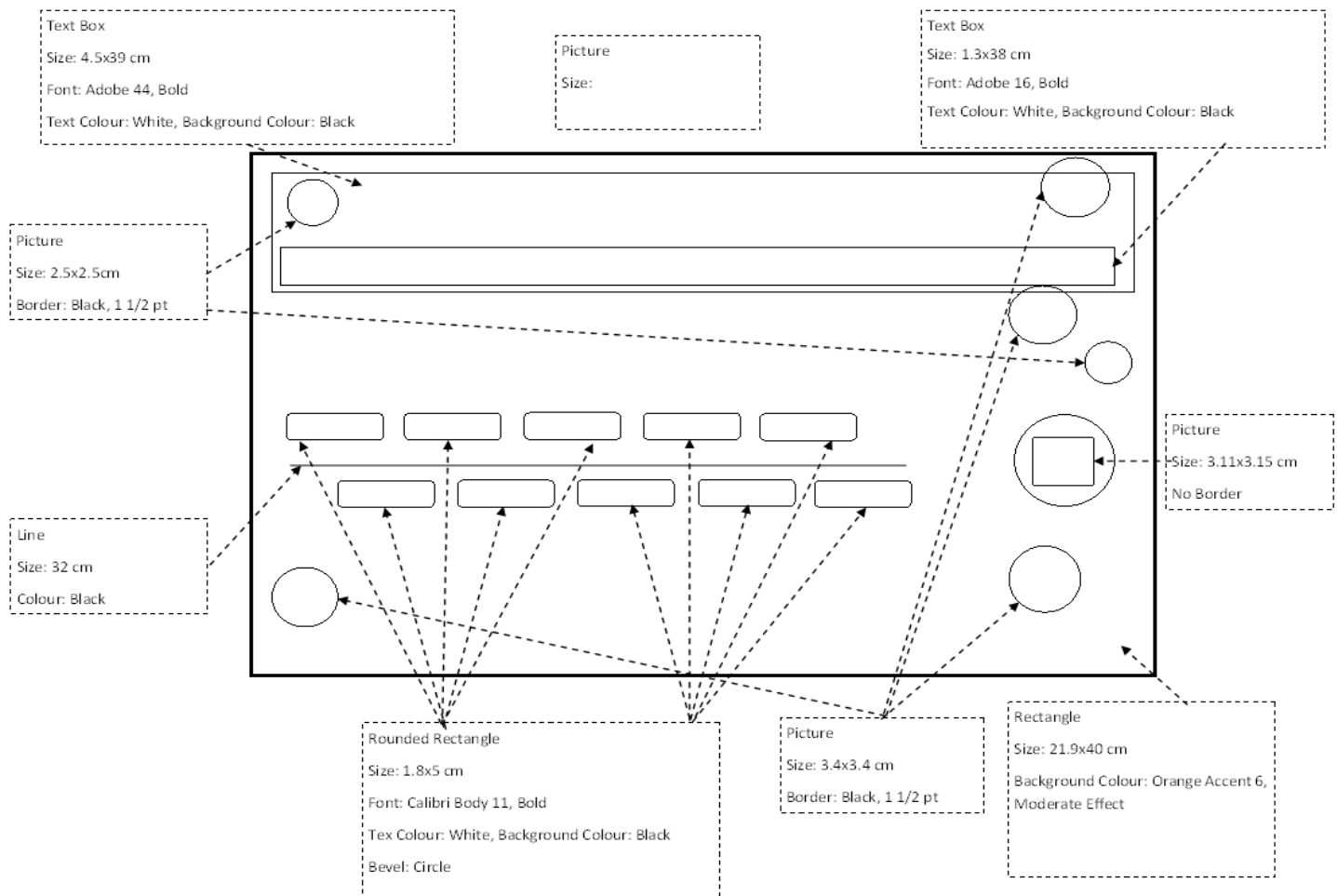
The following are two examples of worksheet layouts, one for a payroll spreadsheet and the second from a home page.

Payroll Spreadsheet Layout

Screen Layout of Payroll



Home Page Layout



3. Data Output

Output can be considered as the result or expected results from the spreadsheet. The success of a spreadsheet can be determined by the output data, how it is displayed and if it meets the output expectations of the end user.

Output can be in two formats from a spreadsheet on paper or on screen. The following are considerations that should be taken into account when implementing both options.

- 1. Printed on Paper:** Have suitable borders been applied? Can the end user print a document to one page by scaling? Is there a page header on the document? Have column headings been repeated for every page of the report? Has the information been aligned correctly on the page? What margins have been used? How is the page orientated? Are the column and row headers showing? Are the gridlines turned on? Is the page number or file path of the document show in the header or footer? If the document is a report or receipt has it been formatted professionally with the company logo?

2. **On Screen:** What file format has the document been saved in? Have the company's profit margins and calculations been hidden from the customer? Is the information clearly labelled and of a professional design standard? Have comments and labels been efficiently applied to self-document the spreadsheet?

Testing

After the spreadsheet has been completed test it to see if it can be broken. Ask guest testers to find errors in your design, let them suggest strengths and weakness of the spreadsheet and ask for suggested improvements - note the results in a word document. Look for any further improvements you could make/have made since the design, to this spreadsheet and complete the improvements.

Review

Which areas of the creation of this spreadsheet did you find difficult and why? What areas do you need to review? How would you complete a part of the spreadsheet differently if you had to do it over again?

3. CREATE A SPREADSHEET FROM A DESIGN SPECIFICATION



TASK

Using the design specification you have created for the SLO 2.1 create the spreadsheet you have described. You must ensure you have completed every requirement in the description you have created.

Use the points outlined in each of the **Design Stages** outlined above in 1, 2 and 3 to ensure your spreadsheet has been properly designed.

NOTES: