INTRODUCTION TO EXCEL

WITH

DATA WORKING GROUP (DWG)

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INTRODUCTION

- Microsoft Excel is an electronic accounting package (spreadsheet) which is used in performing accounting jobs. A spreadsheet is made up of Columns and Rows used for entering data and performing calculations.
- A spreadsheet can also be known as a work book. The Rows and Columns are distinguished with the use of greed lines.
- The 2007 Excel work book has a total of 16384 columns which are represented with alphabets lettered from (A to Z, AA to AZ, BA to BZ up to ZZ) (AAA – AAZ, ABA – ABZ) and so forth up to XFD.
- The total number of Rows that can be found in excel work book is 1048576. Numbered from 1 to 1048576.
- In MS Excel, you can work with as many work sheets as possible (more than 300 worksheet).

WORK BOOK AND WORK SHEET

- Another name for Workbook is spreadsheet. It is also known as a file. Workbook is the application window. This has to do with the whole environment of excel , that is; from the title bar to the task bar and from the ruler bar to the scroll bar.
- Worksheet – this is the worksheet window of the excel spreadsheet or workbook. It is the working area of the application where all jobs in the application is done and edited. In Excel, Worksheet is usually represented in TABLE form (rows and columns).

FILE

- A file is the combination of related records. This can also be seen as work book. A workbook can contain as many different related records as possible. The different records can be seen as the worksheet in a particular workbook.
- For instance, one can name a workbook 2019 annual pay roll, which may be the pay roll of a company. The work book contains 12 worksheets for twelve (12) months in a year.

ENTERING DATA

- Data, dates, time, formulas, and functions can be entered into the cells of a work sheet by typing into them. In Excel, both numbers and alphabets are accepted.
- **Note:** *when numbers are entered into a cell, they appear at the right side of the cell, while alphabets or letters appear at the left side of the cell.*
- Whenever data are typed, they appear in the active cell of the worksheet.

CELL

- A cell can be said to be the Intersection between a Column and a Row. In other words; the meeting point of a column and a Row. There are 17,179,869,184 cells that make up a worksheet. The total of 17179869184 cells has addresses which are known as cell references.
- Cell D5: this is the meeting point of column D and Row 5.
- Cell H10: is the meeting point of column H and Row 10.
- Cell E5 to cell G20; these are all the cells from columns E5 to Cell E20, F5 to F20, G5 to cell G20.

MOVING ROUND THE WORK SHEET

- **To Select a Cell**
- Click on the desired cell or use the arrow keys and move to the location
- **To Select a Row**
- Click on the row number
- **To Select a Column**
- Click on the column letter
- **To Select the Worksheet**
- Click on the space behind the column letters and also on top of the row numbers
- **To Select a Range** Click on the first cell of the range and drag to the last cell of the range

- **To Select Multiple Ranges**
- Select the first range
- Press Shift +F8
- Continue to add different ranges
- After selecting your desired rages Press Shift +F8 to deactivate the command and click on any cell on the worksheet.
- **To Cancel Selections**
- Click on any cell on the worksheet

USING KEYBOARD TO MOVE AROUND THE WORKSHEET

- To move to the next cell by the right, press the Right Arrow key
- To move to the next cell by the left, press the Left Arrow key
- To move to the next cell upward, press the up Arrow key
- To move to the next cell down ward, press the Down Arrow key or press ENTER key
- Press CTRL + RIGHT SIDE ARROW key to move to the last cell of a row
- Press CTRL + LEFT SIDE ARROW key to move to the first cell of a row
- Press CTRL + DOWN ARROW key to move to the last cell of a column
- Press CTRL + UP ARROW key to move to the first cell of a column
- To go to any cell in the worksheet, press F5, type the cell reference or address and press enter or click OK

ELEMENTS IN EXCEL SCREEN

- **File** - this button appears at the top left of the application window. It carries very important and frequently used commands
- **Quick Access Tool Bar** – It is a bar that can be customized
- **Title Bar** – this bar is always found at the top of the application window. It displays the name of the application which is “Microsoft Excel” and the name of the worksheet.
- **Tab Bar** – this bar carries the tabs. The tab takes the place of menus in office 2003. It is a bar from which commands can be chosen.
- **Ribbon Bar** – the ribbon bar carries ribbons. This is the actual bar where commands of the window are found. Each tab carries its own ribbon and each ribbon carries its own commands.
- **Name Box** – this box displays the cells references.

- **Formula Bar –** It is at the right side of the Name Box and has the sign(=). It is a bar that is used to enter and edit text. It is also used to know the initial content of a cell that has been used to perform a calculation.
- **Worksheet** – this is where the actual job takes place.
- **Scroll Bar** – the scroll bar appears at the right and bottom of the worksheet window. It is used to get to the part of the worksheet that cannot be seen at the moment.
- **Zoom Bar** – this bar appears at the bottom right of the application window. It is used to magnify the page of the active worksheet.
- **PAGE NAVIGATOR –** this bar displays the pages of a workbook and the navigation buttons of a work book (sheet 1, sheet 2 etc)
- **Status Bar** – this bar is situated at the bottom right of the application window. It presents the necessary information of the worksheet.
- **Task Bar** – this bar is always the last bar at the bottom of the application window.

EXCEL COMMANDS

These commands are so important that one needs to have an in-dept knowledge about them. One that does not know these commands cannot be proud of his/her ability to manipulate a system.

FILE COMMAND

NEW - The **new** command is used to open a new work book

PROCEDURE (Ctrl + N)

Click on the File and click on new OR Click on the icon if it is found on the "Quick Access Tool bar" application icons, etc.

SAVE AS

The command "save as" is used to store a workbook in a computer system. This command is used to give name to a file. A user may decide to use password to store a workbook because the use of password may be very important when it comes to saving confidential workbooks. The save as command can also be known as a command used to protect a worksheet or file.

PROCEDURE

Click on the File and click on save as (this will lead to a dialog box). In the save in box, choose a location of your choice.

Type the name of the file in the file name box. Click on save.

SAVE - This command is used to over write an already saved workbook.

PROCEDURE

Click on the File and click on save (Ctrl + S)

- **OPEN**

This command is used to open an already existing file.

- **PROCEDURE**

Click on the File and click on open (this will lead to the open dialog box). Choose the location of the file from the “look in box”. Click on the name of the file from the list box or type the name of the file in the “file name box”. Click on open (Ctrl + O or Ctrl +f12)

- **CLOSE**

Whenever a user comes to the end of manipulating an excel workbook, it is advisable to save properly and close, and the close command is used to achieve that.

There are always two types of close in application, the close and exit. Close is used to close the worksheet (worksheet window) while exit is used to close the workbook (application window).

- ***** To close the worksheet, Click on the File and click on close (Ctrl = f4 or Ctrl + W)
- * To close the workbook, Click on the File and click on exit excel (Alt +f4)

- **TO REMOVE PASSWORD DO THE FOLLOWING**

Open the file or if the file is already opened. Click on the File and click on save as. Click on tools at the bottom of the dialog box. Click on general option. Delete the password to open and click ok. Delete the password to modify and click ok. Click on save

- **PRINT PREVIEW**

This command is used to view how a document will look like when the workbook is printed. As the command implies, a view before the hard copy is produced.

- **PROCEDURE**

- Click on the File. Point to print and click on Print Preview

- **PRINT**

In other words, any information that can been seen, touched or felt is called hard copy.

- Thus, we can say that the act of making hard copies is called Printing.
- **PROCEDURE**
- Click on the File
- Point to Print and click on Print
- In the Printer name box, choose the printer to be used
- Under Page Range, choose an option (All, Current Page, Pages or Selection)
- Under copies, enter the number of copies you wish to print
- And click on ok

QUICK ACCESS TOOL BAR

It is a bar that carries a user's most frequently used command.

- **DO THE FOLLOWING TO CUSTOMIZE THE ABOVE BAR**

- Click on the drop down menu of the bar. Click on any command icon of your choice. OR

- Click on the drop down menu of the bar. Click on more commands (which is the last option of the menu). From the "choose command from box" Click on a location. Click on the command you wish to add. Click on add. Click ok

- **To remove a command or more than one command**

Click on the drop down menu of the bar. Click on any of the command you wish to delete. OR

Click on the drop menu. Click on more commands. Click on the command you want to remove. Click on remove . Click ok

THE TABS

- The content of the Microsoft Excel tab bar is slightly different from that of Microsoft Word. Microsoft Word has References and Mailings tab but in place of these two tabs, the Microsoft Excel has Formulas and Data Tabs.
- As earlier described, Tab gives access to all the command that can be found in an Application package.
- **HOME TAB**
- **EDITING**
- This is the act of cross checking a workbook and making possible corrections such as duplicating part of the items in the workbook, making transfer, searching for items and so on.
- **UNDO** - The undo command is therefore used to reverse the last command.
- **TO DO THIS** - Click on the Undo Icon on the quick access tool bar (Ctrl + Z)
- **REDO OR REPEAT**
- This is the opposite of the undo command. If the undo is seen as a mistake, the redo or repeat command can be used to revert the undo command.
- **TO DO THIS** - Click on the redo icon on the quick access tool bar (Ctrl + Y)
- **CUT, COPY, TRANSPOSE, AND PASTE**
- The copy, cut and paste commands are used when editing a workbook.
- **Cut /Move -** This is a way of moving a selected data from one location to another.

- **FILL TOOL**

This is a small black square that appears at the right bottom of a selected item on the worksheet. It is used to enter or fill data in to cells automatically.

- **Procedure** - Select the data or range of cells

Point to the fill (small black square at the right end bottom of the selected item) and make sure the pointer changes to a slim black cross sign. Click and drag.

- **TRANSPOSE**

Transpose is the changing of position of data from columns to rows or from rows to columns.

- **Procedure**

Select the item or range of cells to be transposed. Click on **"Home Tab"**. Click on ***"Copy"*** (ctrl +c), from the Editing Ribbon. Click on the first cell of new location.Click on paste drop down and ***click paste Special***. Click on **"Transpose" "**. Click OK

FORMATTING

- Formatting in Excel is done with the use of variety of commands located in the HOME TAB. Formatting is to change the appearance of your worksheet. In formatting, you select the range of cells you wish to format and apply any of these commands. Some other forms of formatting can be dome from the Page Layout tab.
- **FONT**
- This command is used for character formatting. It has to do with color, style, type, size and so on.
- **Procedure** - Select the range of cells to be formatted. Click on Home Tab. From the Font Ribbon or group, set to taste (i.e. type, size, colour, style & border). **OR**
- Select the range of cells to be aligned. Click Font ribbon access button at the bottom right of the ribbon (this will lead to format cells dialog box). Click on Font Tab . Set as desired. Click OK

- **ALIGNMENT**

This is a formatting tool that is responsible for the placement of data in a particular cell. This is said to be the positioning of texts and figures in cells. In a cell, texts appear at the left hand side while values appear at the right hand side. But this can be formatted as desired.

- **STEPS**

Select the range of cells to be aligned. Click on the home tab

From the alignment ribbon, click on any alignment of your choice. OR

Select the range of cells to be aligned. Click Alignment ribbon access button at the bottom right of the ribbon(this will lead to format cells dialog box). Click on Alignment Tab. Under horizontal choose either left, right, or center.. Do the same for vertical. Click OK

- **CONDITIONAL FORMATTING**

This has to do with formatting some specific data to denote a category.

For instance, in the case of grading students' scores, a range of 0 – 39 can be graded as fail, 40 – 49 as pass, 50 -59 as credit and so on. All these grades can be given different format for easy location and recognition.

- **TO DO THE ABOVE**

Select the range of cells. Click on home tab. From the style ribbon, click on conditional formatting . Point to highlight and click on between. Enter values and click on format. Format as desired. Click ok

- Click on add(this will enable you to add a different range). Repeat step five and six and Click ok

- **AUTO FORMAT =======(FILTER)**

The Auto Format command gives you options of already designed backgrounds.

- **Procedure**

Select the range of cells you want to format. From the style ribbon, click on “format as table”. Click on a Format of your choice

- **Inserting Cells, Columns And Rows**

There are situations whereby in a workbook, a cell or group of cells, column or group of columns, row or group of rows have to be added to the worksheet

- **CELLS**

This command is used to insert or produce an empty cell

- **Procedure**

Click on the cell you desire to be empty. Click on Home Tab. From the Cells Ribbon, click on insert. Click on Insert cells. Choose an option and click ok

- **ROW**

This command makes the Row of a selected cell empty

- **Procedure**

Click on the cell you desire to be empty. Click on Home Tab. From the Cells Ribbon, click on insert. Click on Insert Sheet Rows

- **COLUMNS**

This is used to make selected Columns empty

- **Procedure -** Click on the cell you desire to be empty. Click on Home Tab. From the Cells Ribbon, click on insert. Click on Insert sheet Columns
- **WORKSHEET**

In the introductory lecture of this course, we learnt that the default number of worksheets in a workbook are three, but more worksheets can be inserted to suit the nature of the job. Therefore, worksheet command is used to enter a new worksheet.

- **Procedure**

Click on Home Tab. From the Cells Ribbon, click on insert. Click on Worksheet

- **RENAME**
- This command enables you to change the name of your work sheet. When ever the excel application is opened it appears with three default worksheets with the; name sheet 1, 2, and 3. Also, if a worksheet is inserted, it will be named according to many sheets you have inserted.
- **To Change the name of worksheet (rename)**

Activate the worksheet. Click on home tab. From the cell ribbon click on format. Click on rename sheet. Type the name of the worksheet and press enter.

- **FORMATTING CELLS**

This has to do with editing the cells, columns and rows of the current worksheet. For instance making the height of a row or the width of a column suitable for the text or data in the worksheet. This area also deals with the colouring of text and the activation of grid lines for printing and so on.

- **COLUMN WIDTH AND ROW HEIGHT**

This command is used to adjust (reduce or increase) the width of a column and the height of a row. Some times when data are entered into a cell, they are hidden. Adjusting column with and row height will help you display them. The default column width is 8.43pix, while the default row height is 15.00pix

- **ROW HEIGHT (**15.00pix)

This is used to increase or reduce the height of a Row. This is necessary if the data in a cell is wrapped and the cell don't contain the data any more.

Click on a cell in the Row to be adjusted. Click on Home Tab. **From the cells ribbon, click on format and click on row height**. Enter your desired Row Height and click ok. OR

Point to the line that demarcates the column label you want to increase or decrease, and then Click and drag.

- **COLUMN WIDTH (**8.43pix)
- This is used to increase or reduce the width of a column. This is necessary if the length of the data is longer than the cell horizontally.

Click on a cell in the column to be adjusted. Click on Home Tab. From the cells ribbon, click on format and click on column width. Enter your desired column width and click ok. OR

Point to the line that demarcates the column label you want to increase or decrease, and then Click and drag.

- **To Delete either a Worksheet, Cells, Column, or Rows**
- Click on any of the above you wish to delete. Click on home tab. From the cell ribbon click on delete. Click on any option of your choice

- **BORDER**

Borders are the grid lines that identify the cells. This command is used to change appearance of the grid lines. It is also used to activate the gridlines for printing.

- **Procedure**

Select the range of cells to be formatted. Click on Home Tab. Click on from the cells ribbon, click on format. Click on format cells and click on borders (this will lead to a dialog box). Click on the border tab and choose a border style of your choice. Under style, choose a line style of your choice . Under color choose a color of your choice. Click on outline and inside. Click OK

- **FILL**

This command is used to enter same data into cells. For instance if you have to enter a particular data into more than one cell. This command can be used to achieve this function.

- **TO DO THIS**

Type in the data. Select the range of cells you want to enter the figures including the first data. Click on home tab. From the editing ribbon click on fill. Choose an option of your choice

Note: your choice will depend on the way you have selected the empty cells

- **DELETE/CLEAR**
- The delete function cannot be over emphasized in the editing culture of computer operation. There are two types of delete, the content delete and format delete
- **Content Delete** is used to delete a selected item while **Format Delete** is used to bring a formatted item to normal.
- **TO DELETE AN ITEM**
- Select the item and press delete from the keyboard
- **TO CARRY OUT FORMAT DELETE**
- Select the item. Click on the home tab. From the editing ribbon click on clear format
- **SORTING**
- Sorting in Excel is the art of arranging data in ascending or descending order.
- **Procedure**
- Select the range of cells you want to sort. Click on Home Tab. From the editing ribbon, click on sort & Filter icon . Click on either A – Z (sort descending) or Z – A (sort ascending)
- **FIND AND SELECT**
- This button is used to locate a particular cell in the worksheet. There are cases where a user may want to go to a cell that cannot be easily reached.
- For instance moving to cell ZA55678, such a location cannot be easily reached. The Goto command can be used to actualize this.
- To do this, Click on home tab. From the editing ribbon click on find and select. Click on GOTO. Enter the cell reference. Press enter

INSERT TAB

- **CHART**

Microsoft Excel has the feature of plotting graphs. This can be done with the used of chart wizards. Charting is the presentation of data with pictures and diagrams. In other words it is the graphical representation of data. This can also said to be the interpretation of data using pictures.

- **Steps on How to Create a Chart**

Step one: Select the Data to be interpreted. Click on insert tab. From the charts ribbon Click on a chart type of your choice. Choose a chart sub type

- **CHANGING THE CHART TYPE**

After selecting the chart type and sub type, and it is noticed that is not suitable, you can make changes by doing the following:

Click on the chart (the design tab and its ribbon will be displayed. From Type ribbon, click on change chart type (the change chart type dialog box will appear). Choose a chart type of your choice and click ok

- **SWITCHING BETWEEN COLUMNS AND ROW**

This is used to change the position of legend values and the horizontal values at the bottom part of the chart.

- **To do this** - Click on the chart. From the data ribbon, click on switch row/column

- **MAKING TITLES ON A PREPARED CHART**

This command is used to add titles, and also add axes for categories and values

To do this, Click on the chart. From chart layout ribbon, click on Quick layout. Choose a layout of your choice. Edit as desired

- **CHANGING THE LOCATION OF THE CHART**

A prepared chart usually appears in the sheet where the data is. But this can be changed and made to be on its own with the command as in new sheet.

TO DO THIS - Click on design tab. From the location ribbon, click on move chart. Click new sheet. Type the name of the sheet and click ok

- **HEADER AND FOOTER**

This command is used to display a particular word or group of words at the top and bottom of all the pages of a workbook.

The command header and footer makes it easy and possible for such manipulation, because the moment the command is activated, and the text typed, it automatically appears in all the pages of the workbook.

Note: The header and footer text does not display on the normal screen, but appears in print layout view. It also appear when the document is printed out.

- **PROCEDURE TO SET HEADER AND FOOTER.**

Click on Page Layout Tab. Click on margin combo. Click on custom margins. Click on ***"Header and "Footer"***

Click on custom Header and type your header either in the left, center or right alignment space and format as desired. Click OK.

Click on custom Footer and type your header either in the left, center or right alignment space and format as desired. Click OK. Click OK

Note: *you can also preview your work book from this box.*

- **TO REMOVE HEADER AND FOOTER**

Double click on the header or the footer. Delete the header and the footer. Double click on the free area of the working area

PAGE LAYOUT TAB

- **PAGE SETUP**

This is a term that refers to the setting of the workbook. Recall that during the previous course “MS Word” we were told that there are group of commands that makes up the page setup.

There are three (3) parts of page set up. They are shown below **page Margins, paper Size and Paper Orientation.**

- **MARGINS**

A margin is the distance between the edge of the paper and the edge of the write-up on the worksheet. It can therefore be inferred from the definition, that there are usually four (4) margins on a paper. The Top, bottom, left and right margins.

- **PROCEDURE TO SET MARGINS.**

Click on the page layout tab. From the page set-up ribbon, click on margin and. Choose a margin of your choice. OR

Click on custom margin’ Set as desired and click ok

- **PAPER SIZE**

This has to do with how large or how small the physical paper of the document will be (i.e the hard copy). There are different sizes of paper. E.g. A4, A5, A6, A2, A3 etc. The most commonly used size of paper is A4.

- **PAPER ORIENTATION**

Paper Orientation is concerned with the positioning of the paper. Documents are placed horizontally while some are placed vertically.

The documents placed horizontally are called Landscape document, while the vertically placed documents are Portrait.

Click on the page layout tab. From the page set-up ribbon, click on Orientation then click on either Portrait or Landscape

- **TO SET THE PAPER SIZE OF YOUR DOCUMENT**

Click on the page layout tab. From the page set-up ribbon, click on size and choose a size of your choice

- **CHANGING THE BACKGROUND OF THE WORKSHEET**

Click on page layout tab. From the page set up ribbon, click on background. Choose the location of the background or the colour you wish to use. Click on the background or the colour you wish to use. Click insert

- **TO REMOVE THE BACKGROUND COLOUR**

Click on page layout tab. From the page set up ribbon, click on delete background

FORMULAS TAB

- **CALCULATION IN EXCEL**
- **PASTE FUNCTION**

This is a command found in the formula tab, which is used for solving mathematical problems in Excel. Paste function gives you all the formulae you need to use in excel.

- **How To Use Paste Function**

Click on the cell you wish your answer to appear. Click on formulas tab. From function library ribbon Click on insert function. Under Category, choose a Category of your choice. Under Select a Function, choose a Function Name or your choice . Click OK

Enter the range of cells to be calculated. Click ok. **OR**

Click on the individual categories and choose a function name of your choice (this is easier than the above)

- **FORMULA**
- This is a function in excel that is used for calculation. A formula is made up of three things
- Equals sign or plus sign (this sign gives an indication to excel that it is a problem to be calculated)
- Function Name (the function name tells what kind of calculation to be carried out)
- Range of Cells (this is the location or the area where the calculation should be carried out)
- **NOTE:** Function name is the name given to an operation e.g. summation as shown above.
- **OPERATORS AND OPERANDS**
- Operators and Operands are those items that make up an equation or expression. The signs that are used for calculation are called **OPERATORS.**
- While the figures to be calculated are called **OPERANDS.**

REVIEW TAB

- **PROTECTING THE WORK SHEET**

Just like the save as command that can be used with password. This is almost in that manna. The above commands can be used to lock or protect a work book or worksheet.

To lock the worksheet. Click on review tab. From the changes ribbon, click on protect worksheet. Enter a password and click ok. Re-enter the password and click ok

Note: one can view the work sheet but cannot be able to edit it or make any form of correction, except the individual has access to the password.

- **VIEW TAB**

There are different views an operator can use while working with Microsoft Excel. Such as

- NORMAL VIEW
- PAGE BREAK VIEW and
- FULL SCREEN VIEW
- Whenever an operator is working with Microsoft Excel, it is advisable that the print layout View should always be used, because it keeps the working area in paper form in order for you to see the four (4) edges of the paper.
- **TO GET TO ANY OF THE VIEWS**

Click on the View Tab. In the workbook views Ribbon or Group, click on either of the above views

- *PRESS SHIFT + F1 TO DISPLAY OR HIDE THE TASK PANE*
- *PRESS CTRL + F1 TO DISPLAY OR HIDE THE RIBBON *
- *TOOL BARS ARE NOT PRESENT IN OFFICE 2007*
- **ZOOM**

This has to do with magnifying the pages of the document to suit your view. Zoom differs based on the screen resolution of the VGA and the size of the monitor. But you should note that the size of an item remains its size. Zooming only makes it look bigger or smaller for viewing purpose but the size remains the way it is.

- **TO ZOOM THE WORKSHEET**

Click on view tab. From the zoom ribbon click on any zoom of your choice. *It is always advisable to use 100% or Page Width*