

Empowerment Technologies

Quarter 1 - Module 2:
Applied Productivity Tools with
Advance Application Techniques



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Senior High School

Empowerment Technologies

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Applied Productivity Tools with Advanced Application Techniques

This instructional material was collaboratively developed and reviewed by educators from public and private schools, colleges, and or/universities. We encourage teachers and other education stakeholders to email their feedback, comments, and recommendations to the Department of Education at action@deped.gov.ph.

We value your feedback and recommendations.

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What This Module is About

Welcome to this module learners!

On this module, the learner will learn the techniques in using computer application like hyperlinking in presentations and adding formulas in spreadsheet application. In order to learn all of this, for every computer application introduce on this module learner will be guided by step by step activities.

These are the application use on this module:

- Microsoft Word
- Microsoft PowerPoint
- Microsoft Excel



What I Need to Know

At the end of this module, you should be able to:






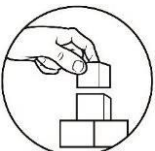


1. Understand the different uses of productivity tools.
2. Perform the following: Encoding, Apply Mail Merge, add custom animation, hyperlink, insert images in work processor and use of advance formulas in Microsoft excel.
3. Appreciate the usage of productivity tools.

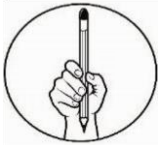
How to Learn from this Module

To achieve the objectives cited above, you are to do the following:

1. Carefully read all the lessons.
2. Take your time on going thru each lesson.
3. Answer the pretest honestly, the purpose of the pretest is for you to determine your prior knowledge before going thru the lessons and activities.
4. If you have a hard time understanding the lessons and activities, please do take a break. Having breaks between lessons and activities will give you some space where you can absorb the lesson well.
5. You can use the internet if you need more information about the lesson.

Icons of this Module

	What I Need to Know	This part contains learning objectives that are set for you to learn as you go along the module.
	What I know	This is an assessment as to your level of knowledge to the subject matter at hand, meant specifically to gauge prior related knowledge
	What's In	This part connects previous lesson with that of the current one.
	What's New	An introduction of the new lesson through various activities, before it will be presented to you
	What is It	These are discussions of the activities as a way to deepen your discovery and understanding of the concept.
	What's More	These are follow-up activities that are intended for you to practice further in order to master the competencies.
	What I Have Learned	Activities designed to process what you have learned from the lesson
	What I can do	These are tasks that are designed to showcase your skills and knowledge gained, and applied into real-life concerns and situations.



What I Know (Pre-Test)

I. Multiple Choice:

Directions: Read and answer the questions below. Select the letter of the best answer from among the given choices.

1. What button allows you to see the result of your mail merge even before you print or send it out?

- a. Address book
- b. Preview Results
- c. Greeting line
- d. Start Mail Merge

2. The following are formulas that MS-Excel can understand, EXCEPT.

- a. =Sum(a1+a2)
- b. =average(a1+a2)
- c. =a1+b2
- d. =1a+b2

3. Which of the following button do you select if you want to Open a new document?



a.



b.



c.



d.

4. This error value refers to a cell that contains 0 value or blanks.

- a. #N/A
- b. #VALUE!
- c. #NULL!
- d. #DIV/0

5. Which of the following arithmetic operators is use for exponentiation?

- a. +
- b. b. -
- c. ^
- d. *

6. Which of the following software are commonly used for presentation that contains animation?

- a. Microsoft Word
- b. Microsoft Excel
- c. LibreOffice Calc
- d. PowerPoint

7. Which of the following errors will appear if Excel encounters invalid cell reference.

- a. #REF!
- b. #N/A
- c. #Value!
- d. #####

8. Which of the following errors will appear if Excel encounters invalid cell has inappropriate value was given for the lookup value argument.

- a. #REF!
- b. #N/A
- c. #Value!
- d. #####

9. Which of the following set of effects that can be found in PowerPoint apps?

- a. Mailings
- b. Custom Animation
- c. Layout group
- d. Hyperlink

10. A function used to count the number of cells that contains something if the criteria are met.

- a. COUNT
- b. COUNTNOW
- c. COUNTING
- d. COUNTIF

II. True or False:

Directions: In your paper, write the word **TRUE** if the statement is correct, and write **FALSE** if the statement is wrong.

_____ 1. LibreOffice is a free and open source software.

_____ 2. Main document is a data source that is used to populate information in the letter.

_____ 3. The default orientation of the document is a Landscape.

_____ 4. You can change the color of display text in a hyperlink.

_____ 5. Formula is an equation that performs operation on worksheet data.

_____ 6. The hyperlink can be a website address at the same time display text.

_____ 7. The default number of worksheets in an excel is 3.

_____ 8. Times New Roman is the default font style in Microsoft Office 2016.

_____ 9. The data source in a mail merge is your mailing document.

_____ 10. The mouse pointer becomes different shapes depending on the task you are performing.

Lesson

1

Developing ICT content for specific purposes



What I Need to Know

Productivity Tools

It refers to the software that people use to create and produce documents, presentations, databases, charts, and graphs.

Productivity tools help you create professional quality documents, presentations, graphics, and more.

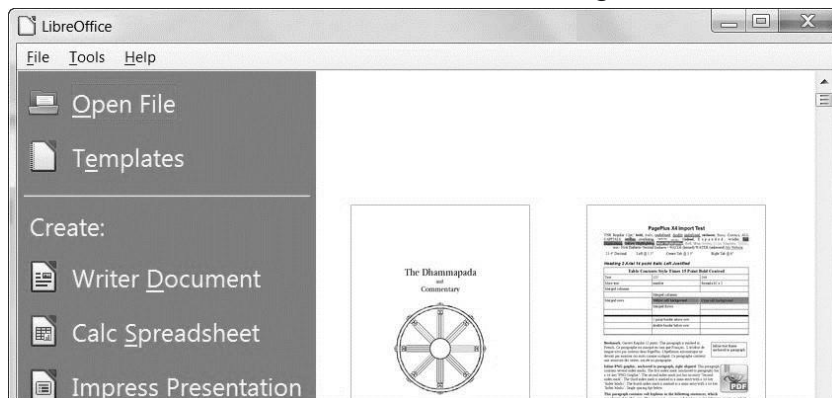
Why should you learn productivity tools?

While there are a wide range of benefits of using productivity tools, the best reason is that it just makes essential, everyday we use computer to do different tasks for more efficient.

Common productivity tools

1. Microsoft Word
2. Microsoft Excel
3. Microsoft PowerPoint
4. LibreOffice

In this time, we have many options to use of to explore productivity software, like LibreOffice, a Free and Open Source Productivity Suite, which matches and perhaps could even exceed the overall features, advantages, and benefits of their counterpart.



Although, LibreOffice is a Free and Open Source software, most software available in actual workplace are made from Microsoft. This software is a paid apps, you can visit this site <https://www.microsoft.com> for more information.

Free and Proprietary Software | Feature Comparison: LibreOffice – Microsoft Office, available here:

https://wiki.documentfoundation.org/Feature_Comparison:_LibreOffice__Microsoft_Office and here: <https://goo.gl/4tUz7x>

In this module, we are going to learn the following tools/techniques:

Tools/Techniques	Use Case
1. Mail Merge and label generation	Mass email or printed letters
2. Custom animation and timing	Enhance viewer experience
3. Hyperlinking in presentations	Optimizes use of related content and references. Applies to Word/Write document too.
4. Integrating images and external materials in word processor	Enriches textual content. Also useful in presentation slides and sometimes in spreadsheets.
5. Embedded files and data	Seamlessly integrates related files
6. Advanced and complex formulas and computations	Simplifies and automates common tasks.

Mail Merge

It is a Word's way of generating mass mailings. It involves combining a list of names and addresses to individually address to each person / receiver on the list. You can use Mail Merge to create envelopes or address labels, as well as form letters.

Mail Merged involved the following documents;

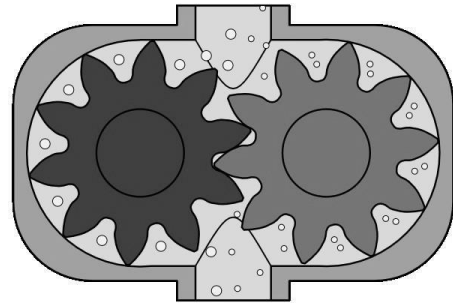
- Main document – this document contains text and graphics. Example body of the letter.
- Mailing list – this is your data source that is used to populate information in the letter. It contains names and address of the recipients.
- Merged document - this document the combination of the main document



What Is It

Custom Animation

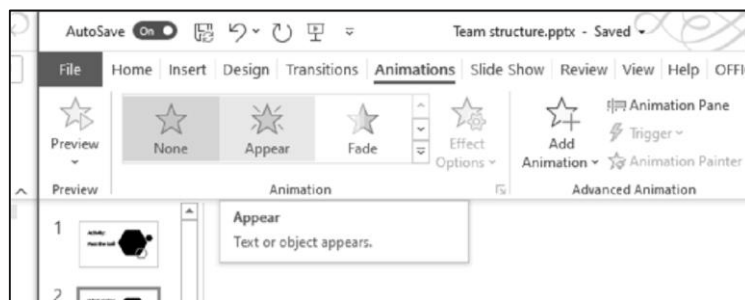
Animation is a simulation of movement created by displaying a series of pictures, or frames. Animation on computers is one of the chief ingredients of multimedia presentations. There are many software applications that enable you to create animations that you can display on a computer monitor. One of this application software are presentation software that you can use to create a slide show for your presentation. Some of the popular software that are available online for free or for purchase are WPS Office, LibreOffice, and MS-PowerPoint.



https://commons.wikimedia.org/wiki/File:Gear_pump_animation.gif

Steps in applying animation effect to an object:

1. On a slide in Normal view, select the object you want to animate.
2. Select Slide Show – click **Animations** tab, in the **Animation** group, select your desired effect or click dropdown button to choose more effects. To preview the animation, click the **Preview** button to play.



Add a motion path animation effect

You can apply motion path animation effects to an object to move in a sequence that tells an effective story.

Add a motion path to an object

1. Select the object that you want to animate.
2. On the **Animation** tab, click **Add Animation**.
3. Scroll down **Motion Paths** and select one.

- If you want to create a customize path, Select **Custom Path** option, and draw path that you want the object to move.

Editing motion paths

1. To do things like to change the direction of the motion path, edit the individual points of the motion path, or to lock (make it so others can't change your animation) or unlock the animation, **Effect Options**.
2. to preview the motion path, click the object on the slides, and click **Animation** and select **Preview**.

Remove an animation effect from an object

1. On the slide in a **Normal** view, select the object from which to remove the effect.
2. On the **Animation** tab, in the **Animation** group, click **None** to remove the effect.



What Is It

Hyperlink

A hyperlink or simply a link, is a reference data that the reader can directly follow either by clicking or tapping. Hyperlinks are found in nearly all Web pages, allowing users to click their way from one page to another. In text hyperlinks are often color blue and underlined. When you move the cursor over a hyperlink, whether it is text, button or an image, the arrow cursor should be change to a small hand pointing to the link.



Hyperlinks have two basic parts:

1. The Address – can be webpage, email address, or other location they are linking.
2. The Display – can be picture or shape.

Example:

- <https://www.microsoft.com> - address

- microsoft - display text
- <https://www.microsoft.com> - address at the same time display text

Link to a website

1. Opening PowerPoint Program. (Click **Start** button, type **PowerPoint** and press Enter).

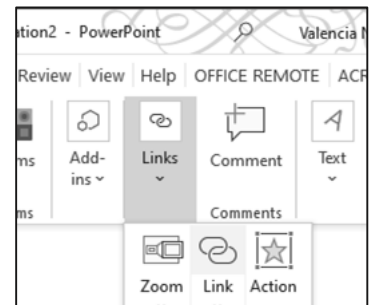
2. Select the text, shape, or picture that you want to use a hyperlink.

3. Select **Insert** tab and in the **Links** group, click **Link**.

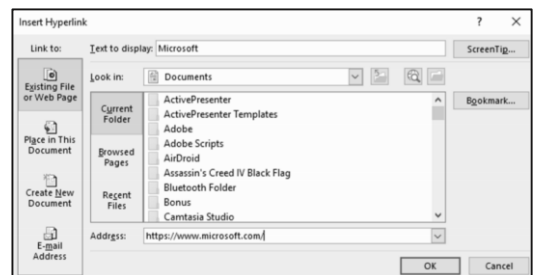


4. Select **Existing File** or **Web page**, and choose the:

- **Text to display:** type the text that you want to appear as hyperlink.
- **ScreenTip:** Type the text that you want to appear when the user hovers over the hyperlink (optional).



- **Current Folder, Browsed Pages, or Recent Files:** Select where you want to link to.
- **Address:** if you haven't already selected a location above, insert the URL for the website you want to link to.



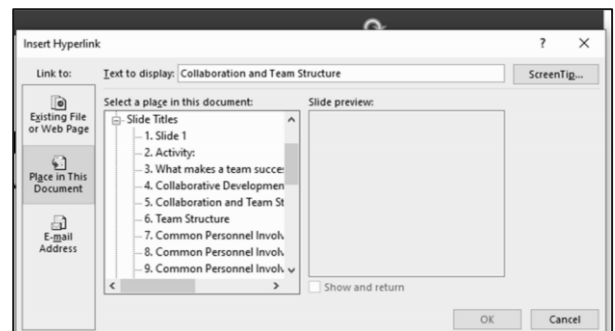
5. Select **OK**.

Link a slide in the same presentation

1. Opening PowerPoint program. (click **Start** button, type **PowerPoint** and press Enter)
2. Select the text, shape, or picture that you want to use as a hyperlink.
3. Select **Insert** tab > **Links** group, click **Link** button and select an option:



- **Place in This Document:** Link to a specific slide in your presentation.
- **Create New Document:** Link from your presentation to another presentation.

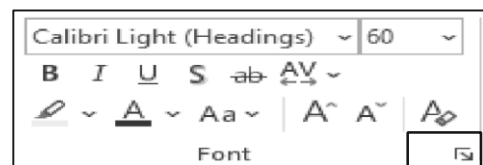


- **E-mail Address:** Link a displayed email address to open up a user's email program.

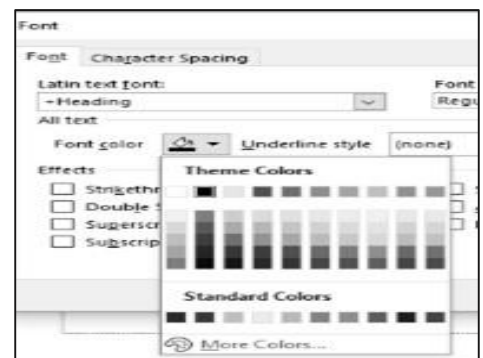
4. Fill in the **Text to display**, **ScreenTip**, and where you want to link to.
5. Select **OK**.

Change the color of a hyperlink

You can also change the color of a hyperlink. If you want to change the display **text** of a link to blue or any other color.



1. Select the hyperlink you want to re-color.
2. On the **Home** tab of the ribbon, select down arrow next to the Font Color button to open the menu of colors.
3. Select the appropriate color that you want for the hyperlink.





What Is It

Integrating Images

In Microsoft word processing you can do a lot of things to make your documents look good and presentable. One of its function is to integrate image. Word processing refers to an application program for manipulating text-based documents; the electronic equivalent of paper, pen, typewriter, eraser, and most likely, dictionary and thesaurus. Word processors run the scope from simple through complex, but all ease the tasks associated with editing documents (deleting, inserting, rewording, and so on).

Microsoft Word 2016 Interface

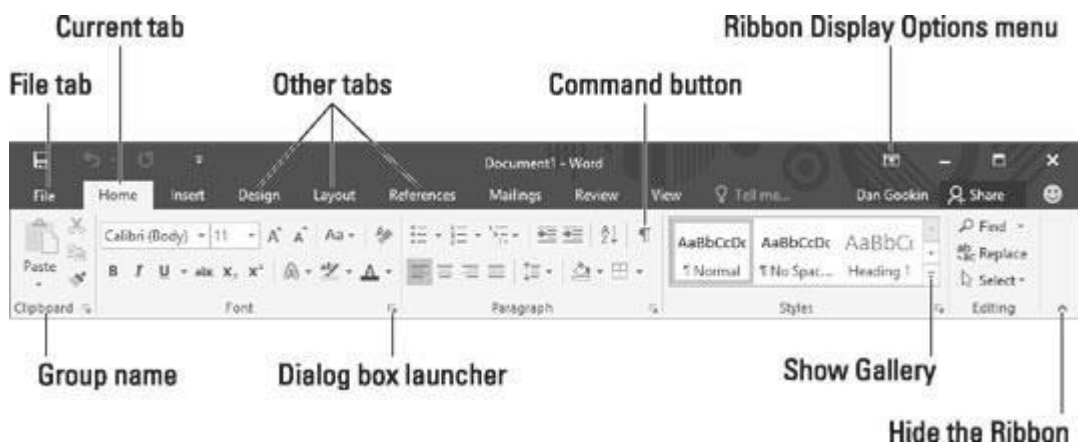


Image source: <https://bit.ly/2WbcUQf>



What Is It

Electronic Spreadsheet

According to emerald.com electronic spreadsheet is probably the most useful general-purpose software for the microcomputer user. Almost all spreadsheets are now packaged in combination with other applications, such as database system and graphic capabilities. Electronic spreadsheet refers to a collection of text and numbers laid out in a rectangular grid. It is an application program commonly used for budgeting, inventory management, decision making, forecasting and other finance-related tasks.

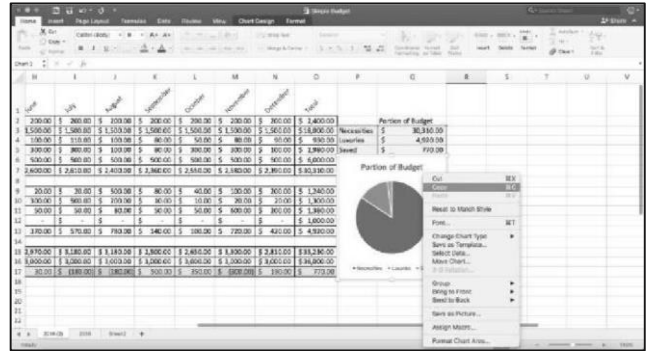


Photo Credit: <https://bit.ly/36Gzsdv>

It replaces the traditional financial modeling tools, the accountant's columnar pad, pencil and calculator. In a spreadsheet program, data and formulas used to calculate those data are entered into ledger-like forms (Spreadsheets or Worksheets) for analysis, tracking, planning, or "what-if" evaluations of the impact of real or proposed changes on an economic strategy.

A great free alternative spreadsheet program is LibreOffice Calc, and OpenOffice spreadsheet program.


Arithmetic operations

ARITHMETIC OPERATORS /SYMBOLS	OPERATION	EXAMPLE
+ (Plus Sign)	Addition	=A1+A2
- (Minus Sign)	Subtraction	=A1-A2
* (Asterisk)	Multiplication	=A1*A2
/ (Forward Slash)	Division	=A1/A2
^ (Exponentiation)	Raises a no. to a power	=3^2
- (Negation)	Negative	-11
% (Percent Sign)	Percentage	=90%

Formula – is an equation that performs operation on worksheet data. A formula in Microsoft Excel always begins with an **equal sign (=)**.

Common Error Values That You Can Encounter from Faulty Formulas

1. **#DIV/0!** appears when entering a formula that performs explicit division by zero (0), using a reference to a blank cell or to a cell that contains zero as the divisor in a formula or function that performs division or running a macro that uses a function or a formula that returns the #DIV/0! error. The solution is to make sure that the divisor in the function or formula is not zero (0) or blank or change the cell reference in the formula to another cell that does not contain a zero or a blank value.
2. **#####** - appears when the column is not wide enough to display the content and/or dates and times are negative numbers. The solution is to increase the column width.
3. **#NAME?** Appears when the formula refers to a **range name** that doesn't exist in the worksheet. This error value appears when you type the wrong range name or fail to enclose in quotation marks some text used in the formula, causing Excel to think that the text refers to a range name.
4. **#N/A** – appears when
 - A) an inappropriate value was given for the **lookup_value** argument in the HLOOKUP, LOOKUP, MATCH, or VLOOKUP worksheet function,
 - B) the VLOOKUP, HLOOKUP, or MATCH worksheet function was used to locate a value in an unsorted table,
 - C) an array formula (array formula: A formula that performs multiple calculations on one or more sets of values, and then returns either a single result or multiple results. Array formulas are enclosed between braces { } and are entered by pressing CTRL+SHIFT+ENTER.) is using an argument that is not the same number of rows or columns as the range that contains the array formula,
 - D) one or more required arguments were omitted from a built-in or custom worksheet function,
 - E) a custom worksheet function that you use is not available and
 - F) a macro that you run enters a function that returns **#N/A**.

Solution is optionally, if error checking is turned on in Excel, click the button that appears next to the cell that displays the error , click **Show Calculation Steps** if it appears, and then click the resolution that is appropriate for your data.

5. **#NULL!** Appears most often when you insert a space (where you should have used a comma) to separate cell references used as arguments for functions.
6. **#NUM!** Appears when Excel encounters a problem with a number in the formula, such as the wrong type of argument in an Excel function or a calculation that produces a number too large or too small to be represented in the worksheet.
7. **#REF!** Appears when Excel encounters an invalid cell reference, such as when you delete a cell referred to in a formula or paste cells over the cells referred to in a formula.
8. **#VALUE!** Appears when you use the wrong type of argument or operator in a function, or when you call for a mathematical operation that refers to cells that contain text entries. For example, the formula **=A1+B1**, where A1 contains the string "Hello" and B1 contains the number 3, returns the #VALUE! error.

Order of Operations

EXCEL FORMULAS	MEANING
=A12	Assigns the value in cell A2 to the active cell.
=10 +3^2	Assigns the sum of 10 + 9(or 19) to the active cell.
=3*D5 or D5*3 or =(3*D5)	Assigns three times the contents of cell D5 to the active cell.
=50% * 20	Assigns the product of 0.50 times 20 (or 10) to the active cell.
-(F3 * J25)	Assigns the negative value of the product of the values contained in cells F3 and J25 to the active cell.
=6 * (G5-P7)	Assigns the product of 6 times the difference between the values contained in cells G5 and P7 to the active cell.

$=B4/D8-E3 * M10 +A3$ F3	Completes the following operations, from left to right: exponentiation ($A3^F3$), then division ($B4/D8 - E3 * M10$) + ($A3 ^F3$). If cells $A3=2$, $F3=4$, $E3=6$, $B4=3$, $M10=4$, and $D8=3$, then Excel assigns the active cell the value 18; that is, $3/3 - 6 * 4 + 2 ^ 4 = -7$
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What I Know (Post-Test)

I. Multiple Choice:

Directions: Read and answer the questions below. Select the letter of the best answer from among the given choices.

1. What button allows you to see the result of your mail merge even before you print or send it out?

- c. Address book
- d. Preview Results
- c. Greeting line
- d. Start Mail Merge

2. The following are formulas that MS-Excel can understand, EXCEPT.

- c. =Sum(a1+a2)
- d. =average(a1+a2)
- c. =a1+b2
- d. =1a+b2

3. Which of the following button do you select if you want to Open a new document?



b.



c.

b.



d.

4. This error value refers to a cell that contains 0 value or blanks.

- c. #N/A
- d. #VALUE!
- c. #NULL!
- d. #DIV/0

5. Which of the following arithmetic operators is use for exponentiation?

- c. +
- d. b. -
- c. ^
- d. *

6. Which of the following software are commonly used for presentation that contains animation?

- c. Microsoft Word
- d. Microsoft Excel
- c. LibreOffice Calc
- d. PowerPoint

7. Which of the following errors will appear if Excel encounters invalid cell reference.

- c. #REF!
- d. #N/A
- c. #Value!
- d. #####

8. Which of the following errors will appear if Excel encounters invalid cell has inappropriate value was given for the lookup value argument.
- | | |
|----------|------------|
| c. #REF! | c. #Value! |
| d. #N/A | d. ##### |
9. Which of the following set of effects that can be found in PowerPoint apps?
- | | |
|---------------------|-----------------|
| c. Mailings | c. Layout group |
| d. Custom Animation | d. Hyperlink |
10. A function used to count the number of cells that contains something if the criteria are met.
- | | |
|-------------|-------------|
| c. COUNT | c. COUNTING |
| d. COUNTNOW | d. COUNTIF |

II. True or False:

Directions: In your paper, write the word **TRUE** if the statement is correct, and write **FALSE** if the statement is wrong.

- _____ 1. LibreOffice is a free and open source software.
- _____ 2. Main document is a data source that is used to populate information in the letter.
- _____ 3. The default orientation of the document is a Landscape.
- _____ 4. You can change the color of display text in a hyperlink.
- _____ 5. Formula is an equation that performs operation on worksheet data.
- _____ 6. The hyperlink can be a website address at the same time display text.
- _____ 7. The default number of worksheets in an excel is 3.
- _____ 8. Times New Roman is the default font style in Microsoft Office 2016.

_____ 9. The data source in a mail merge is your mailing document.

_____ 10. The mouse pointer becomes different shapes depending on the task you are performing.



What I have learned

Activity 1 - Synthesizing your Learning

Answer the following questions based on your learning. Be brief and concise.

1. Based on your reading of the discussion, give at least three (3) types of productivity tools.
 - a. _____
 - b. _____
 - c. _____
2. In the list that you provide in number 1, which productivity tool you used frequently? Why?

Output should be based on the rubric.

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