



COMPUTER SYSTEM SERVICING G10

QUARTER 1–WEEK 6: Computer Systems Design Computer Assembly Procedures

Name of Learner: _____

Date: _____

Grade & Section: _____

Teacher: _____

MOST ESSENTIAL LEARNING COMPETENCY (MELC):

Assemble computer hardware in accordance with established procedures and system requirements. (TLE_IACSS9-12ICCS-Ia-e-28)

Objectives:

1. To create portable bootable devices in accordance with software manufacturer instruction
2. To prepare customized installers in accordance with software utilization guide and end user agreement.
3. To carry out installation of portable applications in accordance with software user guide and software license



TEACH ME

Learning Task 1:

Identify the following terms based on the given statements. Arrange the jumbled words to get the correct answer.

1. It is a collection of programs or modules that is directed at some generic application and can be tailored (perhaps with some additions) to the needs of a specific instance of that application.

NTLAPCIPAOI AAECGPK

2. It is a program, or a group of programs designed for the end-user to perform a specific task in a computer.

NTLAPCIPAOI AEOFRSWT

3. It dictates what file manager to use, default text editor, image viewer, wallpapers, and the interface used to log in and log out of the local system.

POTKESD EEOPNNMRTV

4. It is a set of programs which ensures the interoperability of the hardware and software in your computer.

AEGINOPRT EMSSTY

Learning Task 2:

Software Installation



An installation program or installer is a computer program that installs files, such as applications, drivers, or other software, onto a computer.

Installation (or setup) of a computer program (including device drivers and plugins), is the act of making the program ready for execution. Because the process varies for each program and each computer, programs (including operating systems) often come with an installer, a specialized program responsible for doing whatever is needed for their installation. Installation may be part of a larger software deployment process

Installer

An installation program or installer is a computer program that installs files, such as applications, drivers, or other software, onto a computer. Some installers are specifically made to install the files they contain; other installers are general-purpose and work by reading the contents of the software package to be installed.

Common Windows Installer File Extension:

1. Executable - .exe
2. Microsoft Windows Installation - .msi



3. Compressed Zip File - .zip
4. ISO image - .iso

Bootable USB is a regular USB storage device (like a USB stick or external hard drive) that has an “ISO image” of an operating system saved on it.

ISO image is an archive file that contains all the information found on an optical disc, such as a CD or DVD. It is a disk image of an optical disc ISO image files bear the .iso filename extension. The name **ISO** is an **International Organization for Standardization (ISO) ISO 9660** file system used with CD-ROM media, but what is known as an ISO image might also contain a UDF.

Universal Disk Format (UDF) is a profile of the specification known as ISO/IEC 13346 and ECMA-167 and is an open vendor-neutral file system for computer data storage for a broad range of media. In practice, it has been most widely used for DVDs and newer optical disc formats, supplanting ISO 9660. Due to its design, it is very well suited to incremental updates on both recordable and rewritable optical media. UDF was developed and maintained by the Optical Storage Technology Association (OSTA).

WinISO is the kind of professional utility tool that can serve as an **ISO Burner**.

- **System Requirement**
 1. Windows XP/2003/Vista/Windows 7/ Windows 8
 2. CPU 1.0GHz above
 3. 512MB memory
 4. At least 100MB hard disk space
 5. CD/DVD/Blu-ray Disc Drive (Optional)

How do I burn ISO to CD/DVD/Blu-ray Disc with WinISO?

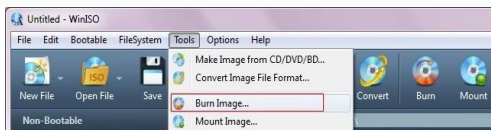
Step 1: Download and Run WinISO

Free Download WinISO from the website and then install it. It will just take you several seconds.



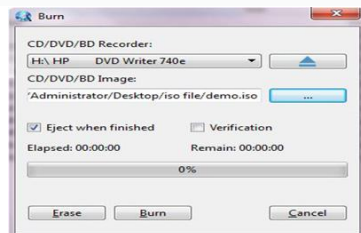
Step 2: Click “Burn”

Please run WinISO. (It is also known as an **ISO Burner**). Click the “Tools” button on the menu, and then select the “Burn Image” option. Or you can directly press “Burn” on the toolbar.



Step 3: Choose an ISO image file you want

After that, the “Burn” dialogue will be pop-up. Press the “...” then choose an ISO file that you want to **burn** to your CD, DVD, Blu-ray Disc. you can also tick the “Eject when finished” or “Verification” option.



Step 4: Get a new CD/DVD/Blu-ray Disc with new image files and you can also cancel the process

Click “Burn” to begin burning. After a few minutes, WinISO will successfully **burn the ISO** image file to your CD/DVD/Blu-ray Disc.

Tip: You can press “Erase” to stop burning at any time if you need.

WinISO is an all-in-one ISO utility tool, it’s an **ISO burner** can fulfill your demands. With several clicks to finish off burning ISO process.

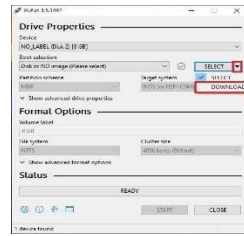
Rufus (The Reliable USB Formatting Utility, with Source) is a free and open-source portable application for Microsoft Windows that can be used to format and create bootable USB flash drives or Live USBs.

How to Create a Bootable USB using Rufus

Step1: Open up Rufus and plug your clean USB stick into your computer.

Step 2: Rufus will automatically detect your USB. Click on **Device** and choose the USB you want to use from the drop-down menu.

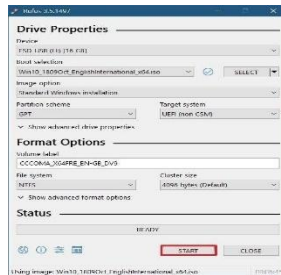
Step 3: Make sure the **Boot Selection** option is set to **Disk or ISO image** then click **Select**. Rufus will open a file explorer browser window; locate the ISO image you want to burn onto the USB and select it.



Note: In the latest version of Rufus (3.5), there's now an option to download the ISO image for Windows 8.1 or 10 directly through Rufus, if you don't already have a copy saved. Just click on the drop-down arrow next to the **Select** button and choose **Download** instead. This will open a dialogue box where you can choose which Windows version you want to download.

Step 4: You'll generally want to create a **Standard Windows installation**, and Rufus will automatically detect the correct **Partition Scheme** based on your device, so keep the default settings as they are. However, you can also change these if you want.

Step 5: Give the **Volume label** a name of your choice, or leave it as it is, and once again leave the default settings for **File system** and **Cluster size**. Now click **Start**



Note: if the USB you're using isn't large enough, you'll get an error message you letting you know. In this case, you'll need to start again with a different larger USB.

Step 6: You'll get a warning saying that any data on the USB will be destroyed (this is normal). Click **OK** and Rufus will start creating the ISO image on the USB.

Step 7: Once Rufus has finished creating the ISO image on the USB, you can close it and your bootable USB is ready to go!



LEARN MORE

Learning Task 3:

Directions: Find the following words bellow and give a brief definition of it.

I S A I S O I M A G E J D E C
 Y N O I S A T A A P S U N S X
 S F R D A R O T I N O M E U S
 T T E R H O A B C P K N V O U
 A W S N K H B S V N R O E M F
 L A L I E L J U I Z Y R S W U
 L R A M N U X E E L J T S S R
 A E S M K I T L Z K C H W J E
 T D R B A A K B S B B B O R N
 I G E P E B X A U V S R D E R
 O E V H A R B T Z D U I N T U
 N E I G K P S O L L K D I N B
 T I N V X K F O L Q B G W I O
 N P U C V Z G B A N N E B R S
 C O M P A C T D I S C G C P I

- | | | | |
|-----------------|-----------------|------------------|---------|
| 1. Compact Disc | 4. ISO burner | 7. Windows seven | 10. USB |
| 2. Bootable USB | 5. Rufus | 8. Software | |
| 3. WinISO | 6. Installation | 9. ISO image | |

Learning Task 4:

Directions: Try this! Answer the following question.

1. How to Create a Bootable USB using Rufus?
2. How do I burn ISO to CD/DVD/Blu-ray Disc with WinISO?



EVALUATE NOW

SUMMATIVE ASSESSMENT:

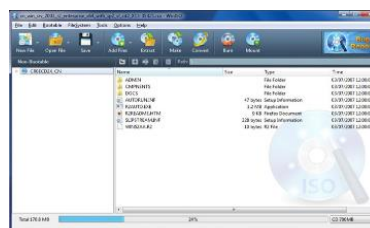
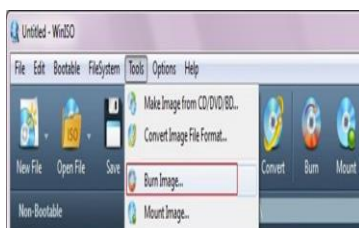
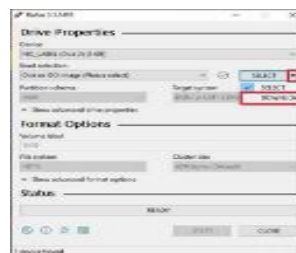
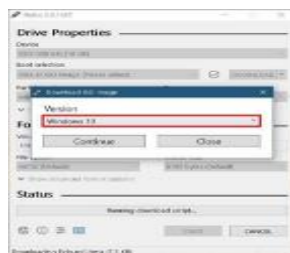
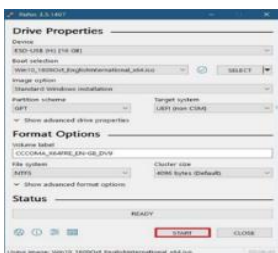
A. WRITTEN TASK:

Read the statement carefully. Choose the letter of the correct answer.

1. What does Rufus stand for?
 - a. Reformat USB Formatting Utility, with Source
 - b. Reliable USB Formatting Utility, with Source
 - c. Reliable Universal Formatting Unified, with Source
 - d. Reformat Universal Formatting Unified, with Source
2. Which of the following are optical disc for ISO image?
 - a. RAM & ROM
 - b. BIOS & CMOS
 - c. CD & DVD
 - d. None
3. Which of the following are the steps for burning ISO to CD/DVD/Blu-ray Disc with WinISO?
 - I. Download and Run WinISO
 - II. Click "Burn"
 - III. Choose an ISO image file you want
 - IV. Get a new CD/DVD/Blu-ray Disc with new image files and you can also cancel the process
 - a. I, III, IV, II
 - b. III, IV, II, I
 - c. II, III, IV, I
 - d. I, II, III, IV
4. Which of the following is a free and open-source portable application for Microsoft Windows that can be used to format and create bootable USB flash drives or Live USBs?
 - a. ISO image
 - b. ZIP
 - c. WinISO
 - d. Rufus
5. Which of the following is not a system requirement for WinISO?
 - a. CPU 1.0GHz above
 - b. 512MB memory
 - c. Windows 10
 - d. At least 100MB hard disk space
6. Which of the following is the system requirement for WinISO?
 - a. AVR
 - b. Windows 7
 - c. Motherboard
 - d. UPS
7. Which of the following is a kind of professional utility tool that can serve as an ISO Burner?
 - a. WinISO
 - b. ZIP
 - c. Executable
 - d. Microsoft
8. Which is an open vendor-neutral file system for computer data storage for a broad range of media?
 - a. ISO image
 - b. ZIP
 - c. UDF
 - d. RAM
9. What does UDF stands for?
 - a. Universal Device Format
 - b. Unify Disk Format
 - c. Unify Device Format
 - d. Universal Disk Format
10. Which is an archive file that contains all the information found on an optical disc, such as a CD or DVD?
 - a. ISO image
 - b. ISO drive
 - c. Document
 - d. Recycle bin

B. PERFORMANCE TASK

Directions: Based on your knowledge of creating ISO image and RUFUS. Given the pictures below. Arrange the step-by-step procedure using the other copy of the procedure cut and paste it in the bond paper.



Performance Rubrics			
Criteria	5 points	3 points	1 point
Correctness/ Accuracy	All tasks are done correctly	Almost all tasks are done correctly	Some of the tasks are done correctly
Completeness	Complete information	With 1-2 information missing	With 3-4 information missing
Attractiveness/ Neatness	Layout is highly attractive in terms of design, layout and neatness	Layout is attractive in terms of design, layout and neatness	Layout is appealing, although it may be a little messy
Time Management	Finish the task on the given time	Finish the task after the given time	Unable to finish the given task

Rating Scale: Points Earned	Numerical Rating	Descriptive Rating
16 - 20	91 – 100	Very Good
11 - 15	86 – 90	Good
6 - 10	81 – 85	Fair
1 - 5	75 - 80	Needs Improvement

References:

- <http://www.geeks.com/techtips/2006/techtips-24aug06.htm>
- Computer Fundamentals, Makati City: STI Technology Institute Inc.; Copyright 1997
- Sawyer, Stackey G./ Williams, Brian K., Using Information Technology, A Practical Introduction to Computers and Communications International Ed. MC Graw-Hill Higher Education;2000
- <http://www.winiso.com/support/tutorials/burn-iso.html>
- <https://incomputersolutions.com/qa/what-are-the-application-packages-in-computer.html>
- <https://www.informationq.com/application-and-types-of-computer-applications/>
- <https://www.computerhope.com/jargon/d/desktop-environment.htm>
- [https://en.wikipedia.org/wiki/Rufus_\(software\)](https://en.wikipedia.org/wiki/Rufus_(software))