IICT(Introduction to Information Communication Technology) Lab

LAB REPORT # 2

Semester : 1st Semester

Section : C

Submitted To:

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Submitted By:

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Roll No : 22-CS-071

Task 1 :

Internal Components And Ports of a System

1. Motherboard

a. Central processing unit (CPU)
b. Provides Memory slots to Connect RAM
c. Has a CMOS attached to power to BIOS and Clock
d. Clock stores the system time and local time
e. Chipset communicate with all the connected components
f. Expansion slots/add on boards for cards like GPU
g. Provides Connectors to other devices like USB ports
h. Provides power to all of the connected devices and components
i. Consists of Data Bus , Control Bus and IO Bus
j. Provides SATA ports and Front IO port

2. Processor

a. A processor is the brain of the computer
b. It controls all of the Input output and processing
c. A fast processor results in fast processing speed
d. All the storage requires the instruction from the CPU to perform the operations
e. PCIE cards are directly connected to the processor
f. Processor consists of 3 levels cache memory
g. L1 is the Fastest cache memory
h. Modern PC processors are multicore. Each core is as fully functional as the others
i. All new generation processors support parallel processing due to multithreading.
j. Processors supports different types of memory modules like DDR1, DDR2, DDR3, DDR4, DDR5

3. Memory (RAM)

a. RAM is the primary memory
b. It the fastest memory that is replaceable
c. It comes in different sizes
d. It comes in different speed

e. It has different types
f. It has different Technology
g. It speed and size depends on the CPU
h. A faster RAM will result in better performance
i. There are 2 Types of RAM DRAM and SRAM
j. RAM is Volatile Memory

4. Hard Disk

a. Hard Disk is the secondary storage
b. It is the most affordable way of storing large data
c. It comes in different sizes
d. It comes in different speed
e. Hardis size ranges from Giga Bytes to Peta Byte
f. Hard Disk uses SATA port for data transmission
g. Speed of a Hard Disk is Determined by its RPM
h. Hard Disk are mechanical devices
i. Hard Disk are slow compared to current generation storage devices
j. Hard Disk consists of a header to read or write data on to the magnetic disk

5. USB Port

a. USB Stands for Universal Serial Bus
b. It is the most common port used
c. It enables you to connect or disconnect a device on the go
d. It has different generation
e. It provides different speed
f. Its speed ranges from1.5 Mbps to 40Gbps
g. The most oldest USB port is the USB 2.0
h. The most latest USB port is the USB 4.0
i. USB is used for data transmission between devices or computers
j. USB can also do power delivery

6. GPU

a. A GPU can be of two type Integrated or Discrete
b. Integrated GPU comes with the processor

c. Discrete GPU is to bought separately and then is connected to the system using PCIE slot
d. Integrated GPUs are slow compared to the Dscreate
e. GPU performs all of the Graphical processing
f. GPU controls the Display of the System
g. Discrete GPUs are used for Heavy Graphical processinglike gaming or graphical applications like Blenger or Game Engines
h. Integrated GPU do not have their memory and are dependent on the RAM
i. Discrete GPU have their own Memory that is faster than the RAM in most cases
j. Discrete GPU have multiple Core up to thousands to perform heavy and complex parallel processing

7. SSD

a. SSD employs NAND memory architecture similar to the flash memory
b. SDD are much expensive than HDD
c. SSD are less noisy as compared to the HDD as it involves movements of mechanical parts for data transmission between the CPU and other peripheral devices
d. SSD employs semiconductor chips to store data
e. SSD is a NAND based non-volatile memory device which support plug and play feature
f. SDD renders only fixed number of Program/erase cycles thus seems to be not so good in long term use
g. SSD offers a transmission rate of 500 – 600 MBs data per second
h. SSD have Different types M.2 SSD , SATA SSD , NVME SSD
i. NVME is the Fastest SSD types
j. SSD are replacing the HDD as the become more cheap and provide more storage space

8. Thunderbolt

a. The original Thunderbolt was introduced in 2011 with a speed of 10 Gbp
b. Thunderbolt was developed by intel
c. It is the technology that provide a greate
d. Thunderbolt uses USB Type C port
e. The current Gen provides speed up to 40Gbps

f. provides 15W power to run accessories
g. Supports 2 x 4K/60Hz monitors
h. One Thunderbolt™ port can replace all other USB-C ports on a system for the simplest, most reliable, and fastest connectivity for video, data, and power
i. Thunderbolt is only provided by Intel and Apple
j. A thunderbolt can even be attached to a thunderbolt Docking station to provide more connectivity

9. NIC

a. NICs are of three types Etherten , Wireless and Fiber NICs
b. NICs are connected to the System using PCIE slots
c. Wireless network card is fitted into the motherboard slot but it doesn't need any network cable to make connection with the computer to the internet. These types of NIC cards are introduced for Wi-Fi enabled connections
d. It plays role as translator that helps to convert data into digital signal
e. Network card provides both communication methods like as wired and wireless
f. It acts as middleware in between computer and data network
g. This network card uses both OSI model layer such as physical and data link layer
h. Network card generally provide ethernet connectivity of maximum 1 Gbps
i. Network card can also be used for fiber optical cable connection
j. 40G fiber NIC card has a 40G QSFP+ interface that supports 40Gbps transmission bandwidth on fiber optical cable

10. Displayport

a. High resolution displays and multiple displays with a single cable
b. Self-latching connector
c. Multiple video streams over single physical connection
d. Scalability, reduced wire count and embedded clocking
e. Supports multi-channel audio and 3D stereo
f. DisplayPort and Mini DisplayPort connectors have a small form factor, allowing them to fit compact devices, such as notebooks and tablets

g. DisplayPort can be combined with other standards, such as USB, in a single connector
h. Supports adapters for legacy displays
i. Supports HDCP content protection

Task 2 :

Plugging in the power and data cables of all I/O

1. Mouse

- A mouse uses only a usb A port both for data and power
- It gets its power from the motherboard
- Mouse is connected to the system by inserting the USB A cable of the mouse in the USB A port of the motherboard

2. Keyboard

- A keyboard uses only a usb port both for data and power
- It gets its power from the motherboard
- Keyboard is connected to the system by inserting the USB cable of the mouse in the USB port of the motherboard

3. Monitor

- A monitor uses a VGA , HDMI , Display port for data and a separate power cable to provide power to its components
- Monitor is connected to the system by inserting one end of a VGA , HDMI , Display port cable in the system and the other in the monitor
- To power the monitor a power cable is connected to the monitor

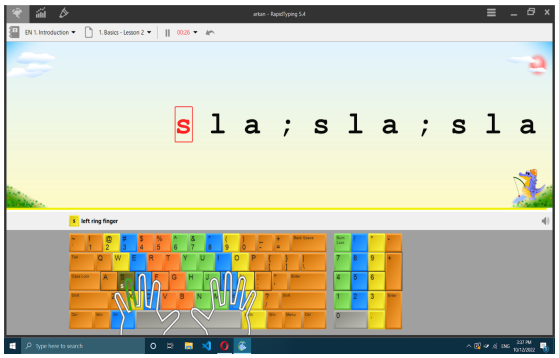
4. Scanner

- A Scanner uses a USB B port for data and a power cable for power
- The scanner must be powered on to work
- The data is transmitted through the usb cable to the system

5. Printer

- A Printer uses a USB B port for data and a power cable for power
- The printer must be powered on to work
- The data is transmitted through the usb cable to the printer

Task 3 :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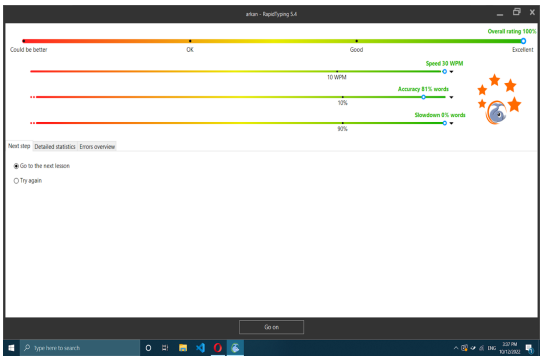
left ring finger


Overall rating 100%
Could be better
OK
Good
Excellent
Speed 30 WPM
10 WPM
Accuracy 81% words
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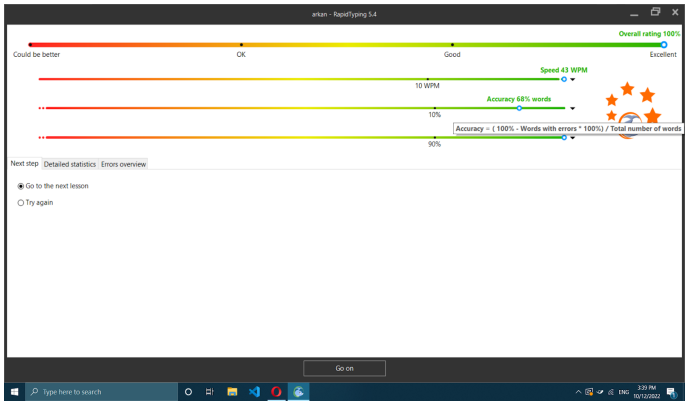
Slowdown 0% words
90%
Next step
Detailed statistics
Errors overview
Go to the next lesson
Try again
Go on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Could be better
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Detailed statistics
Errors overview
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Try again
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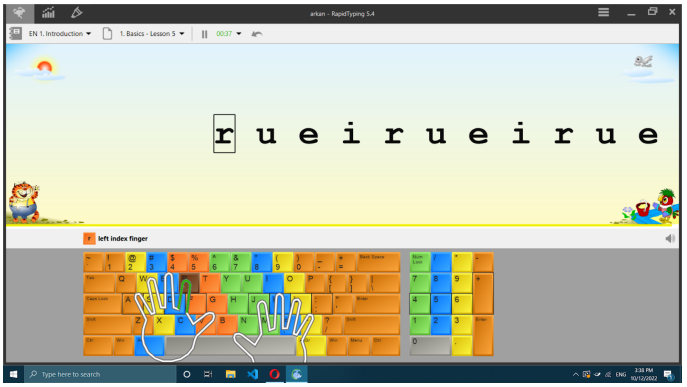
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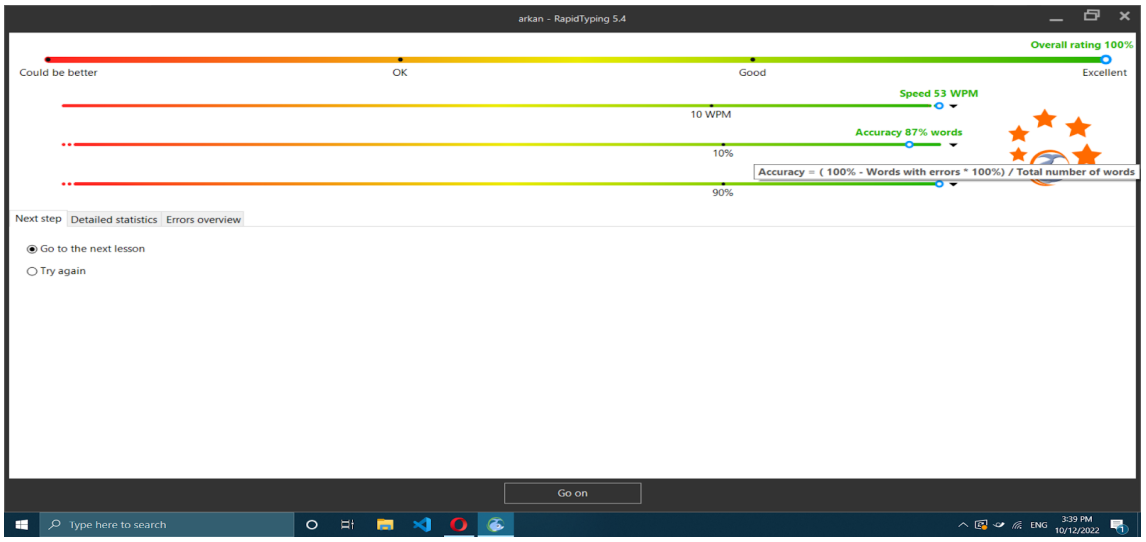
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Could be better
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Excellent
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90%
Next step
Detailed statistics
Errors overview
Go to the next lesson
Try again
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ENG
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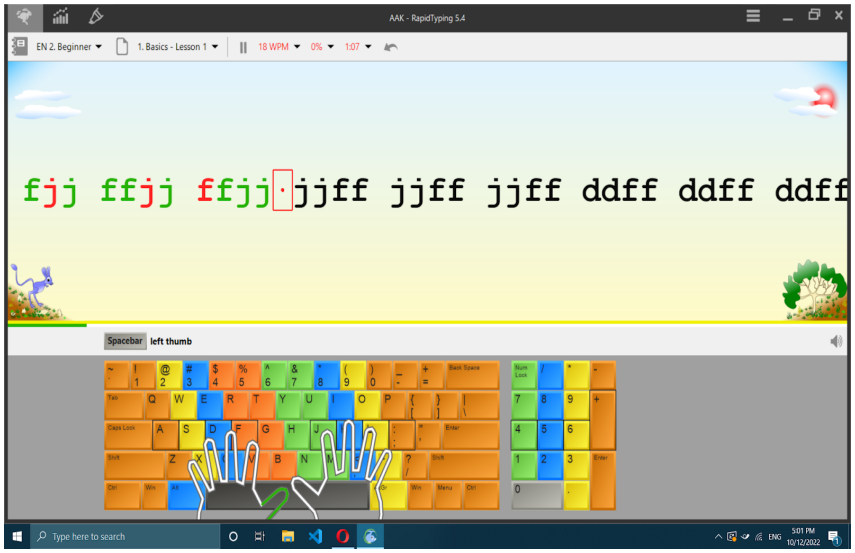
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1. Basics - Lesson 1
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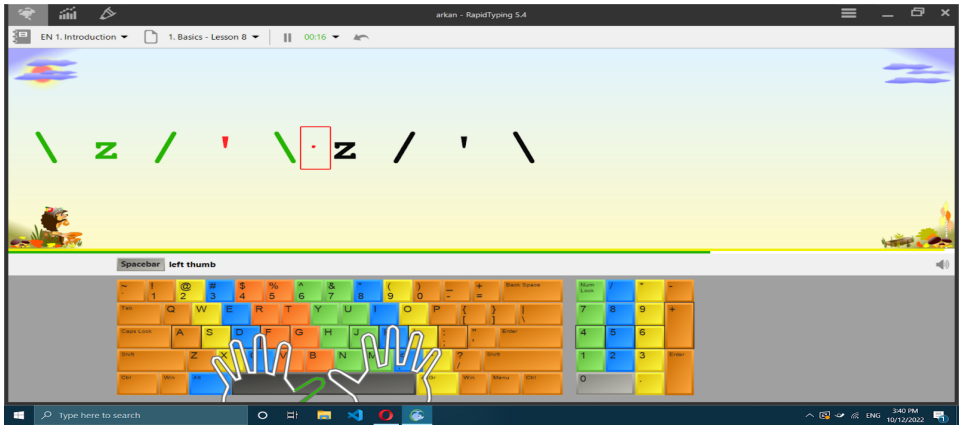
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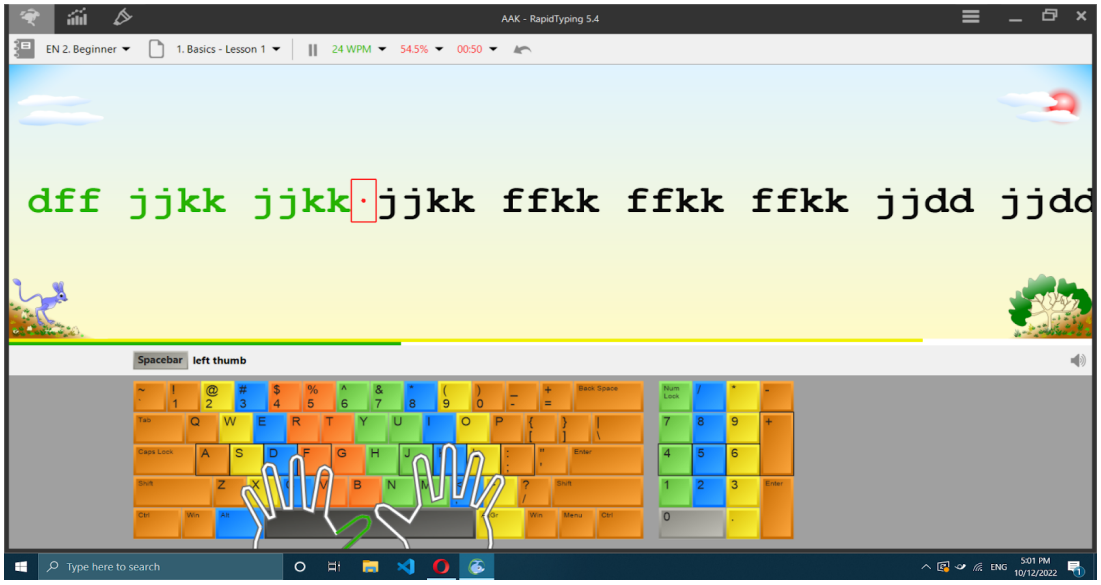
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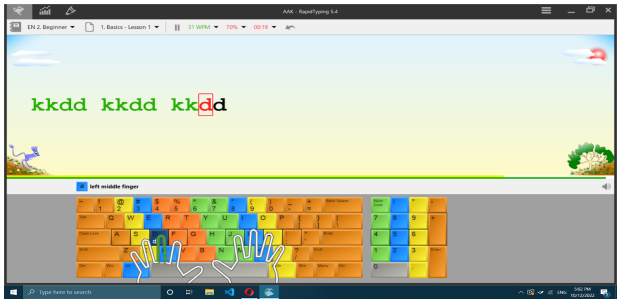
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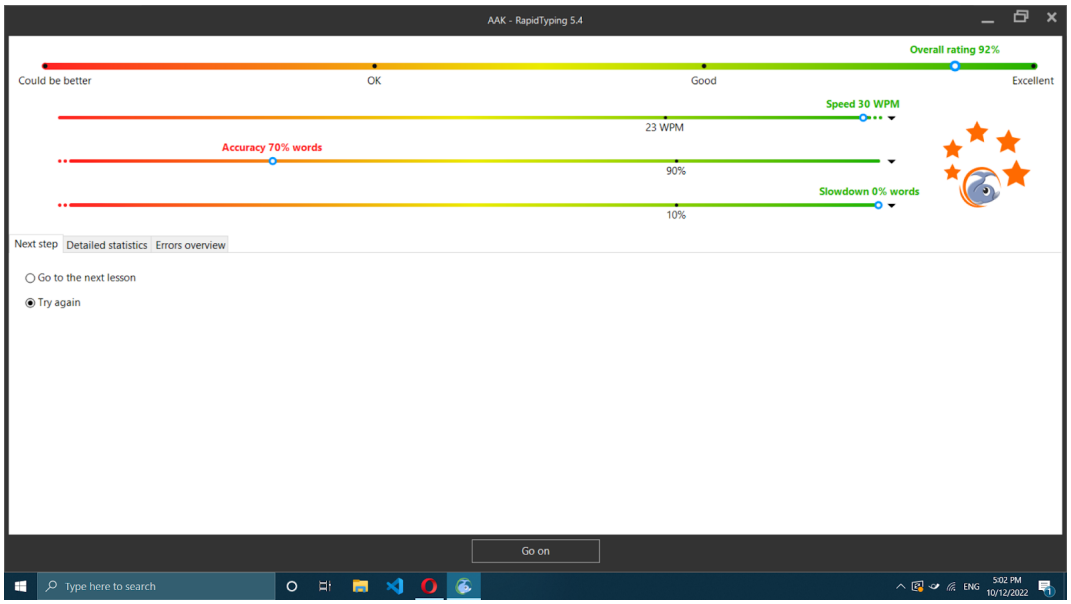
AAK - RapidTyping 5.4
Overall rating 92%
Could be better
OK
Good
Excellent
Speed 30 WPM
23 WPM
Accuracy 70% words
90%
Slowdown 0% words
10%
Next step
Detailed statistics
Errors overview
Go to the next lesson
Try again
Go on
Type here to search
ENG
5:02 PM
10/12/2022