YCCE

Vision

"To become the most preferred institution providing innovative, research and value based, professional education for the society at large".

Mission

YCCE is committed to

- Attract best talent and create learning ambience
- Practice Innovative teaching-learning & research
- Integrate Industry-Institute Collaborations
- Nurture students towards holistic development and choicest career

Department

Vision of the Department

To be a well-known center for pursuing computer education through innovative pedagogy, value-based education and industry collaboration.

Mission of the Department

To establish learning ambience for ushering in computer engineering professionals in core and multidisciplinary arena by developing problem-solving skills through emerging technologies.

Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

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Department of Computer Science and Engineering (IOT)

23CT1402	Lab: Operating Systems
Name of the Student: Parth Bhedurkar	**Semester/ Section: 5 A**
Roll No: 52	**Enrollment Number: 23071495**

Sr. No.	COs	POs											PSOs	
		Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	PSO 1	PSO2
1	CO1	Demonstrate the ability to execute Linux process management, memory management, and shell commands to manage system resources efficiently.	3	3	3	-		-	-	-	-	-	3	3	
2	CO2	Develop programs utilizing system calls, thread programming, and page replacement algorithms to simulate and analyze operating system functionalities.	3	3	3	-	-	-	-	-	-	-	3	3	
3	CO3	Design and implement process scheduling, memory allocation, and deadlock detection algorithms to address real-world operating system challenges.	3	3	3	-		-	-	-	-	-	3	3	
		Avg		3	3	-		-	-	-	-	-	3	3	

Practical No. 1

Aim: Explore Configuration details of Computer System Hardware and Operating System of your personal computer/Laptop with respect to -

a) Processor model
b) RAM size
c) Processor frequency
d) Cache memory size
e) SSD and HDD capacities
f) Operating system (32-bit or 64-bit)
g) Hyper-threading support: Indicate if the processor supports hyper-threading and provide a brief explanation.

Requirement (Hardware/Software) :

Theory: *Brief Explanation of* each of the following parameter of Configuration of Computer System Hardware and Operating System w.r.t,

a) Processor model :-

b) RAM size :-

c) Processor frequency :

d) Cache memory size :

e) SSD and HDD capacities :

f) Operating system (32-bit or 64-bit) :

g) Hyper-threading support: Indicate if the processor supports hyper-threading and provide a brief explanation. *:-*

Configuration of Your system *(Desktop, Laptop and Mobile):*
***Desktop:* Processor model:**
AMD Ryzen 7 5700G with Radeon Graphics

RAM size:
16.0 GB (15.4 GB usable)

Processor frequency:
3.80 GHz

Cache memory size:
Not shown in the screenshot — but according to AMD's official specs for the Ryzen 7 5700G:

- L1 Cache: 512 KB
- L2 Cache: 4 MB
- L3 Cache: 16 MB

SSD and HDD capacities:

- Total storage: 477 GB (likely an SSD in this case, as Veriton M200-P500 models generally ship with SSDs)
- Used: 71 GB
- Free: 406 GB

Operating system (32-bit or 64-bit):
64-bit operating system, x64-based processor

Hyper-threading support:
The AMD Ryzen 7 5700G supports Simultaneous Multithreading (SMT)**,** which is AMD's equivalent to Intel's Hyper-Threading.

- It has 8 physical cores and 16 threads**.**

***Laptop:* Processor model:**
Intel® Core™ i3-8130U CPU

RAM size:
4.00 GB

Processor frequency:
2.20 GHz (Base clock)

Cache memory size:
From Intel's official specifications for the i3-8130U:

SSD and HDD capacities:

- Total storage: 1.14 TB (likely a combination of HDD + SSD or a single large HDD/SSD)
- Used: 457 GB
- Free: ~683 GB

Operating system (32-bit or 64-bit):
64-bit operating system, x64-based processor

Hyper-threading support:
Yes — the Intel Core i3-8130U supports Hyper-Threading Technology.

- It has 2 physical cores and 4 threads.

Mobile : **Processor model:**
MediaTek Dimensity 1300, Octa-core

RAM size:
8 GB

Processor frequency:
The Dimensity 1300 has:

- 1x Cortex-A78 core @ 3.0 GHz
- 3x Cortex-A78 cores @ 2.6 GHz
- 4x Cortex-A55 cores @ 2.0 GHz

Cache memory size:
From official specs:

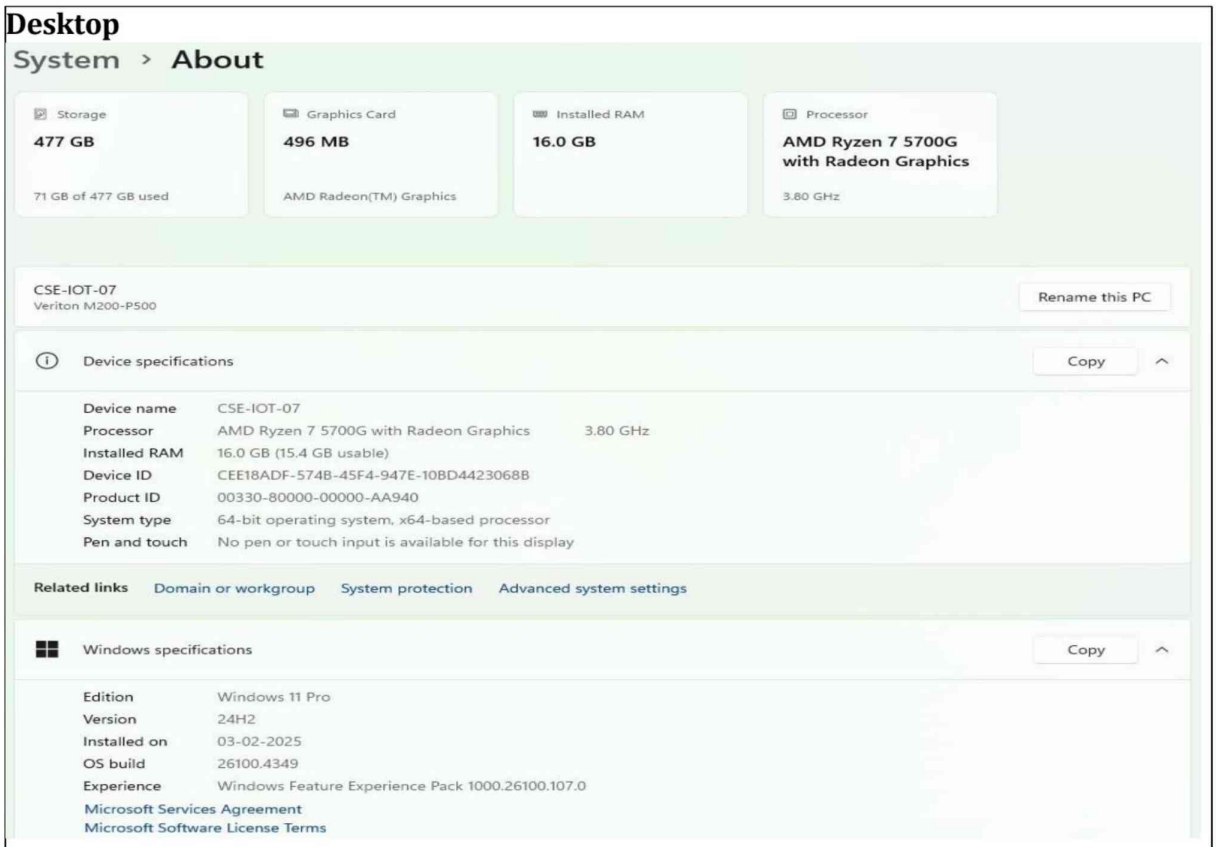
- L1 Cache: 64 KB per core
- L2 Cache: 512 KB per core (performance cores), 256 KB (efficiency cores)
- L3 Cache: 4 MB shared

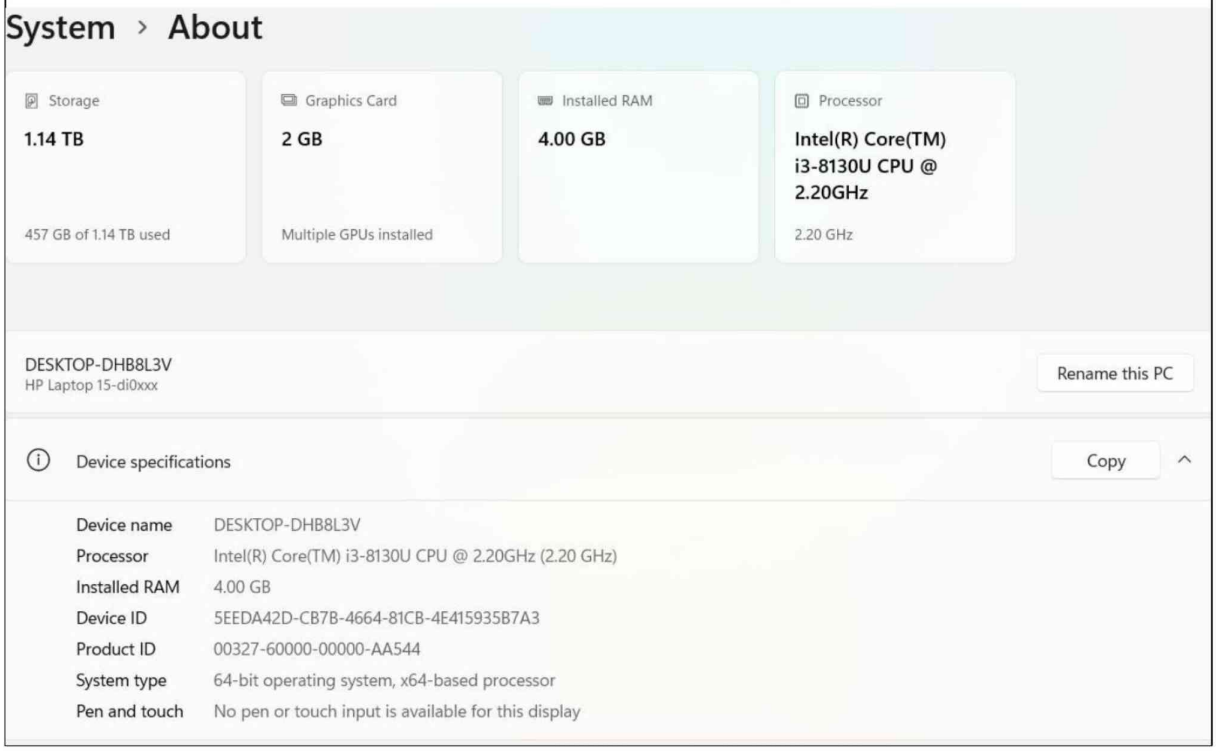
Storage capacity:
128 GB total (109 GB currently used)

Operating system:
OxygenOS 14.0 (Android 14 base), 64-bit architecture

OUTPUT (SCREEN SHOT) :

Desktop


System › About
Storage
477 GB
71 GB of 477 GB used
Graphics Card
496 MB
AMD Radeon(TM) Graphics
Installed RAM
16.0 GB
Processor
AMD Ryzen 7 5700G with Radeon Graphics
3.80 GHz
CSE-IOT-07
Veriton M200-P500
Rename this PC
Device specifications
Copy
Device name CSE-IOT-07
Processor AMD Ryzen 7 5700G with Radeon Graphics 3.80 GHz
Installed RAM 16.0 GB (15.4 GB usable)
Device ID CEE18ADF-574B-45F4-947E-10BD4423068B
Product ID 00330-80000-00000-AA940
System type 64-bit operating system, x64-based processor
Pen and touch No pen or touch input is available for this display
Related links Domain or workgroup System protection Advanced system settings
Windows specifications
Copy
Edition Windows 11 Pro
Version 24H2
Installed on 03-02-2025
OS build 26100.4349
Experience Windows Feature Experience Pack 1000.26100.107.0
Microsoft Services Agreement
Microsoft Software License Terms


System › About
Storage
1.14 TB
457 GB of 1.14 TB used
Graphics Card
2 GB
Multiple GPUs installed
Installed RAM
4.00 GB
Processor
Intel(R) Core(TM) i3-8130U CPU @ 2.20GHz
2.20 GHz
DESKTOP-DHB8L3V
HP Laptop 15-di0xxx
Rename this PC
Device specifications
Copy
Device name DESKTOP-DHB8L3V
Processor Intel(R) Core(TM) i3-8130U CPU @ 2.20GHz (2.20 GHz)
Installed RAM 4.00 GB
Device ID 5EEDA42D-CB7B-4664-81CB-4E415935B7A3
Product ID 00327-60000-00000-AA544
System type 64-bit operating system, x64-based processor
Pen and touch No pen or touch input is available for this display

Conclusion: From the analysis of the desktop, laptop, and smartphone configurations, it is clear that each device is designed for different performance needs: