

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) :

A personal computer or laptop with Windows/Linux OS to check hardware configuration, and necessary system tools (Task Manager, Command Prompt, or Settings) to retrieve processor, memory, storage, and OS details.

Theory:

- a) Processor Model** – Identifies the specific type and generation of the CPU, which determines processing capability and features.
- b) RAM Size** – The amount of Random Access Memory available, affecting how many tasks/programs can run simultaneously.
- c) Processor Frequency** – The speed at which the CPU executes instructions, measured in GHz; higher values generally mean faster performance.
- d) Cache Memory Size** – Small, high-speed memory inside the CPU used to store frequently accessed data for faster processing.
- e) SSD and HDD Capacities** – Total storage space; SSDs are faster and more efficient, while HDDs offer higher capacity at lower cost.
- f) Operating System (32-bit or 64-bit)** – Indicates OS architecture; 64-bit supports more RAM and can handle larger data sizes than 32-bit.
- g) Hyper-threading Support** – A CPU technology that allows each physical core to handle two tasks (threads) at once, improving multitasking

Configuration of My Systems

1. Mobile (Realme 12X)

- a) Processor Model – MediaTek Dimensity 6100+
- b) RAM Size – 6 GB
- c) Processor Frequency – Up to 2.6 GHz
- d) Cache Memory Size – L3 Cache: 2 MB
- e) SSD and HDD Capacities – 128 GB internal storage
- f) Operating System (32-bit or 64-bit) – Android 14, 64-bit OS
- g) Hyper-threading Support – Not applicable (uses ARM big.LITTLE architecture instead of hyper-threading)

2. Laptop (Dell Vostro 3510)

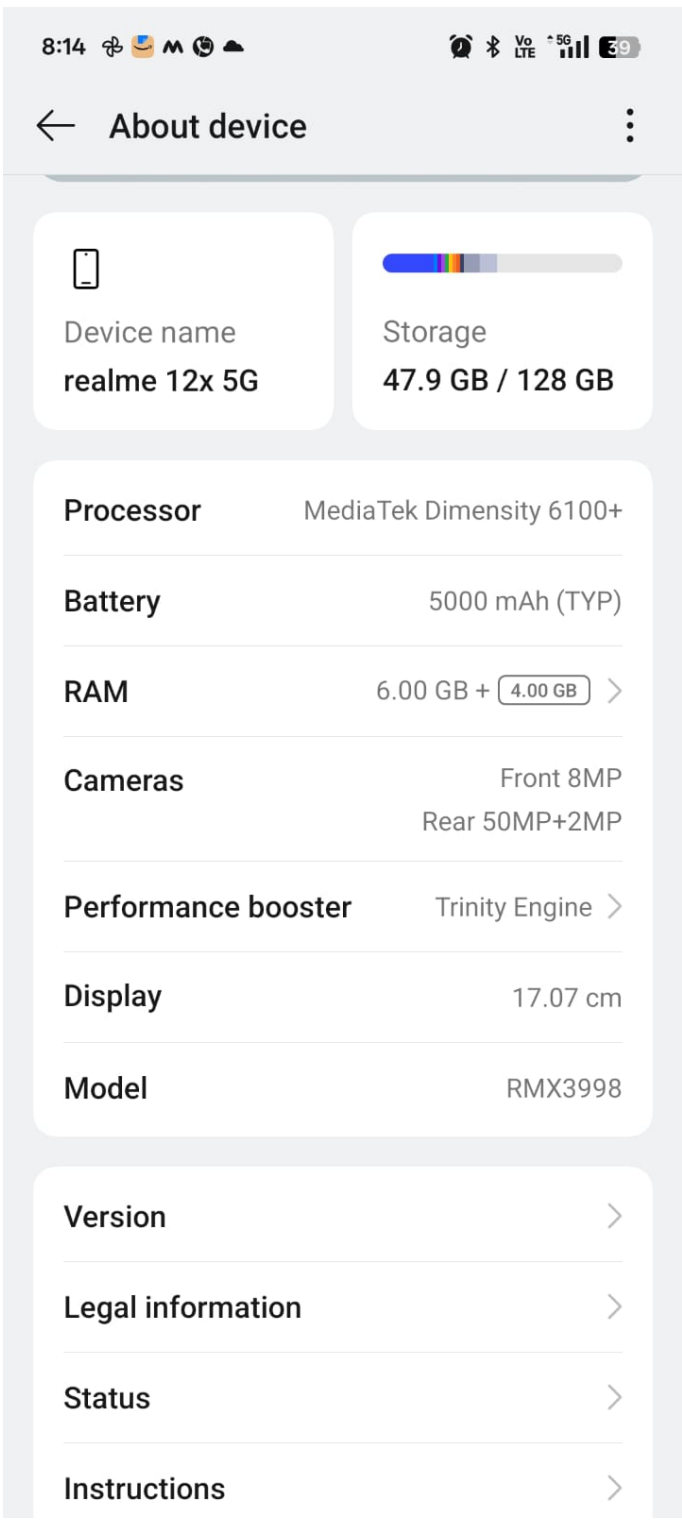
- a) Processor Model – 11th Gen Intel(R) Core(TM) i5-1135G7
- b) RAM Size – 8.00 GB
- c) Processor Frequency – 2.40 GHz base
- d) Cache Memory Size – L3 cache:8MB, L2 cache: 2 MB
- e) SSD and HDD Capacities – 512 GB SSD
- f) Operating System (32-bit or 64-bit) – 64-bit operating system, x64-based process
- g) Hyper-threading Support – Supported; allows each core to handle two threads for better multitasking

3. Desktop:

- a) Processor Model – AMD Ryzen 7 5700G with Radeon Graphics
- b) RAM Size – 16 GB DDR4
- c) Processor Frequency – 2.9 GHz base, up to 4.8 GHz turbo
- d) Cache Memory Size – L1: 512 KB, L2: 2 MB, L3: 16 MB
- e) SSD and HDD Capacities – 1 TB SSD + 2 TB HDD
- f) Operating System (32-bit or 64-bit) – Windows 11 Education, 64-bit OS
- g) Hyper-threading Support – Supported; enables simultaneous execution of two threads per core

Output(screenshot):

1) Mobile



2) Laptop:

Find a setting

System > About

Storage

477 GB

341 GB of 477 GB used

Graphics Card

128 MB

Intel(R) Iris(R) Xe Graphics

Installed RAM

8.00 GB

Processor

11th Gen Intel(R) Core(TM) i5-1135G7 @ 2.40GHz

2.42 GHz

dellvastro3510

Vostro 15 3510

Rename this PC

Device specifications

Copy

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Device name

dellvastro3510

Processor

11th Gen Intel(R) Core(TM) i5-1135G7 @ 2.40GHz (2.42 GHz)

Installed RAM

8.00 GB (7.74 GB usable)

Device ID

AC940266-5D0D-4EF3-9943-A677305FD271

Product ID

00356-24661-64388-AAOEM

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](#)

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Windows specifications

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Edition

Windows 11 Home Single Language


3) Desktop:

System > About

 Storage


477 GB

75 GB of 477 GB used

 Graphics Card


496 MB

AMD Radeon(TM) Graphics

 Installed RAM

16.0 GB

Speed: 3200 MHz


 Processor

AMD Ryzen 7 5700G with Radeon Graphics

3.80 GHz

CSE-IOT-L3-15
Veriton M200-P500

Rename this PC

 Device specifications

Copy

Device name

CSE-IOT-L3-15

Processor

AMD Ryzen 7 5700G with Radeon Graphics3.80 GHz

Installed RAM

16.0 GB (15.4 GB usable)

Device ID

B42681B7-5F03-4442-BFF6-C3BFDCA2E0DF

Product ID

00328-20020-00000-AA232

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

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 Windows specifications

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Edition

Windows 11 Education

Version

24H2

Installed on

3/26/2025

OS build

26100.4351

Experience

Windows Feature Experience Pack 1000.26100.107.0

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Conclusion:

Understanding system configuration helps compare device performance and choose the right one for tasks. Specifications like CPU, RAM, storage, and OS play a key role in efficiency.