



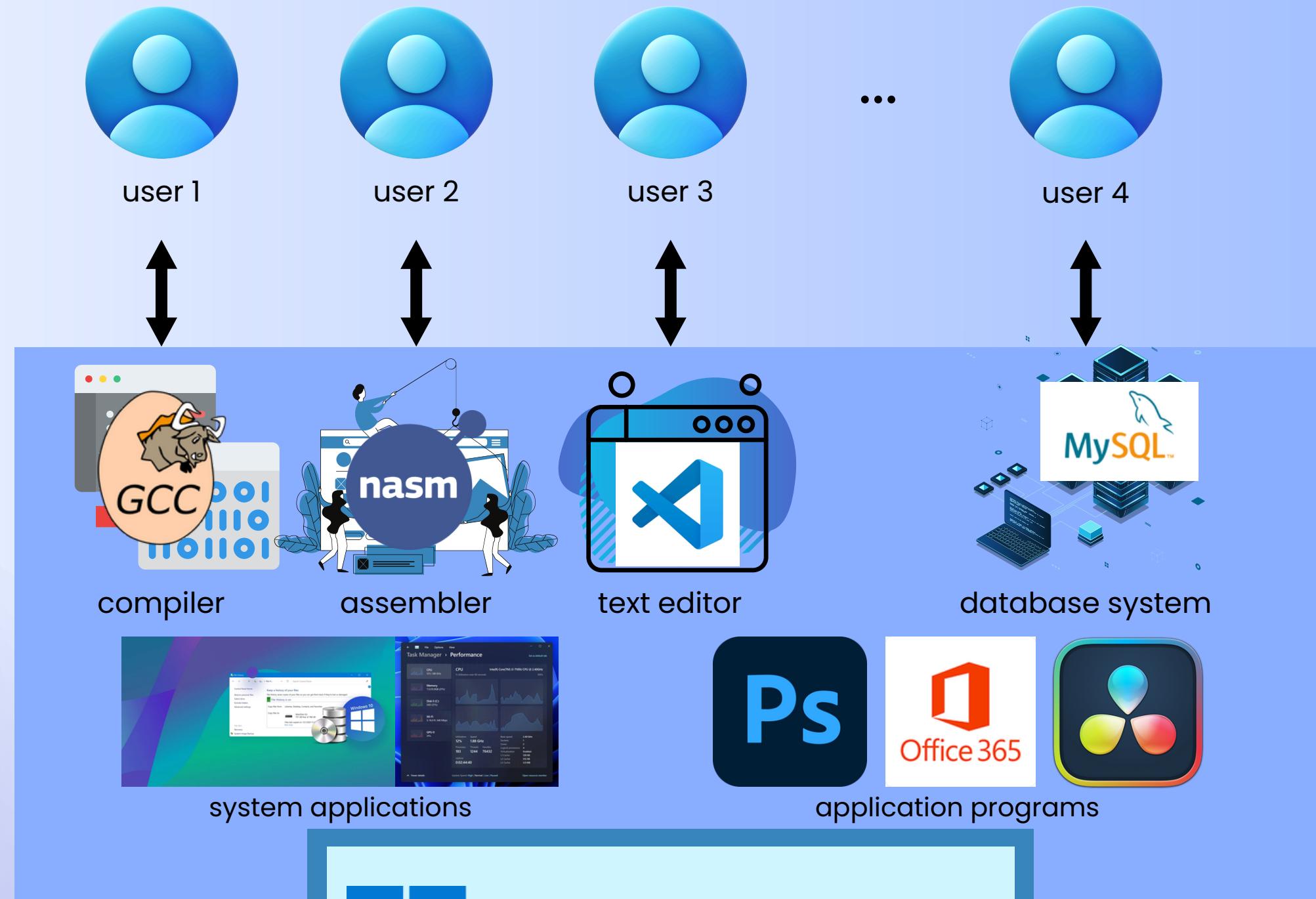
ITPE002LA

COMPUTER ORGANIZATION



Caryl Joy Cabrera | BIT33





Processor: Intel Core i7-13700K
Memory (RAM): 32GB DDR5 5200MHz

Storage:
Primary Drive: Samsung 980 Pro 1TB NVMe SSD
Secondary Drive: Western Digital 2TB Black HDD

Graphics Card: NVIDIA GeForce RTX 3060
Monitor: Dell UltraSharp U2723QE

COMPILER



GCC

GNU Compiler Collection

Installation: Can be set up on Windows using MinGW-w64 or through WSL (Windows Subsystem for Linux).

Reasoning: A versatile compiler that supports various programming languages like C and C++, which is essential for software development on multiple platforms.



ASSEMBLER NASM

Netwide Assembler

Reasoning: A popular assembler for x86 and x86-64 architectures, used for low-level programming, systems development, and educational purposes.



DATABASE SYSTEM

MySQL

Reasoning: A widely-used open-source relational database management system, suitable for web development, data management, and academic projects. It integrates well with Windows and supports multiple development languages.





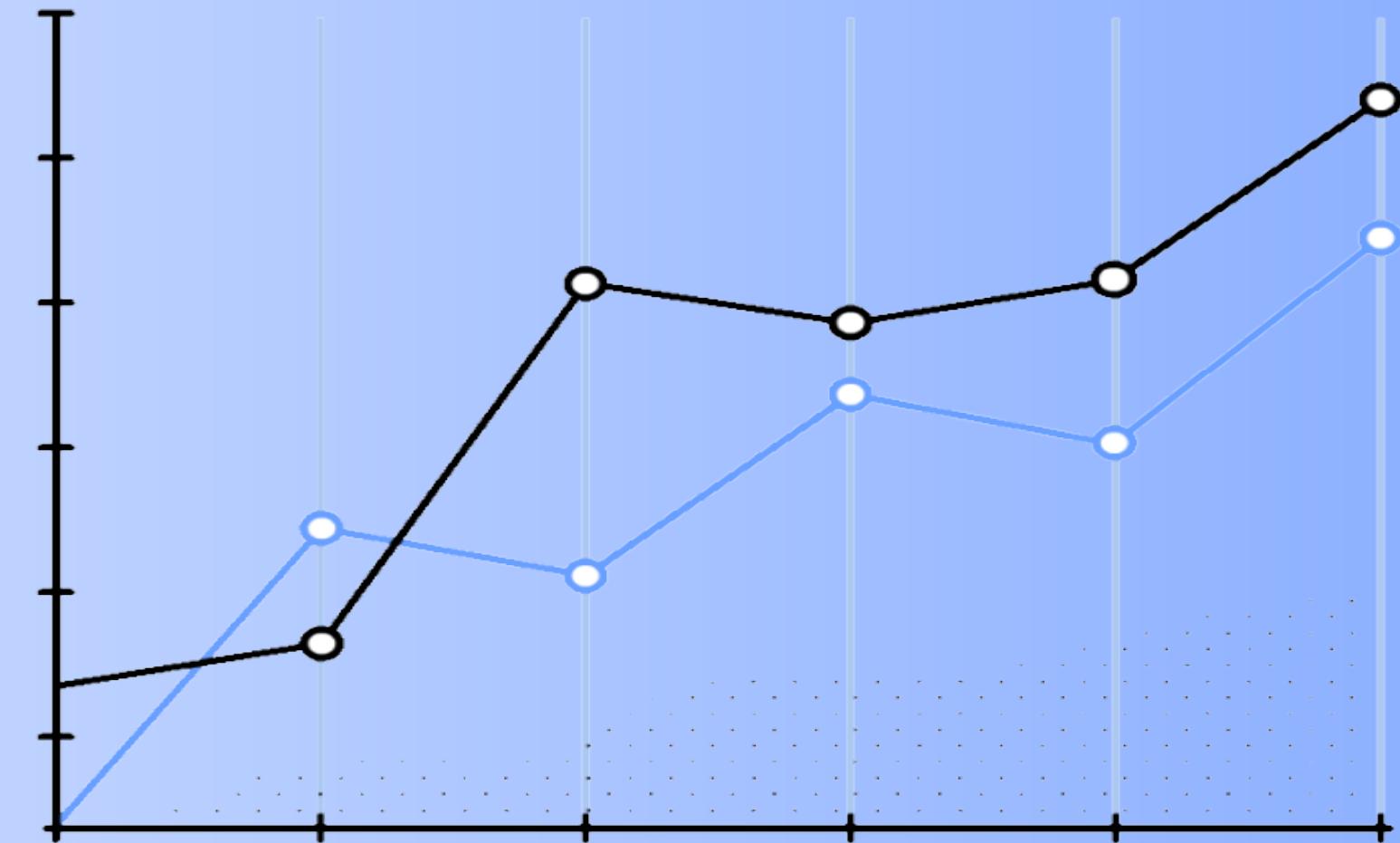
SYSTEM PROGRAMS

Windows Backup and Restore

- Reasoning: Built-in Windows tool that provides easy system backup and restore points, ensuring data safety during development.

Task Manager

- Reasoning: A built-in Windows tool for monitoring system performance, managing startup programs, and controlling running processes. Task Manager is useful for real-time resource management and troubleshooting.



APPLICATION PROGRAMS

Adobe Photoshop

- Type: Professional Image Editing Software
- Features:
 - Industry-standard tools for photo editing, digital art, and graphic design.
 - Extensive plugin support and integration with other Adobe Creative Cloud apps.
 - Suitable for UI/UX design, web graphics, and creating content for various projects.
- Development Environment: Developed by Adobe, Photoshop is a widely used tool in the creative industry, known for its powerful features and comprehensive toolset.





APPLICATION PROGRAMS

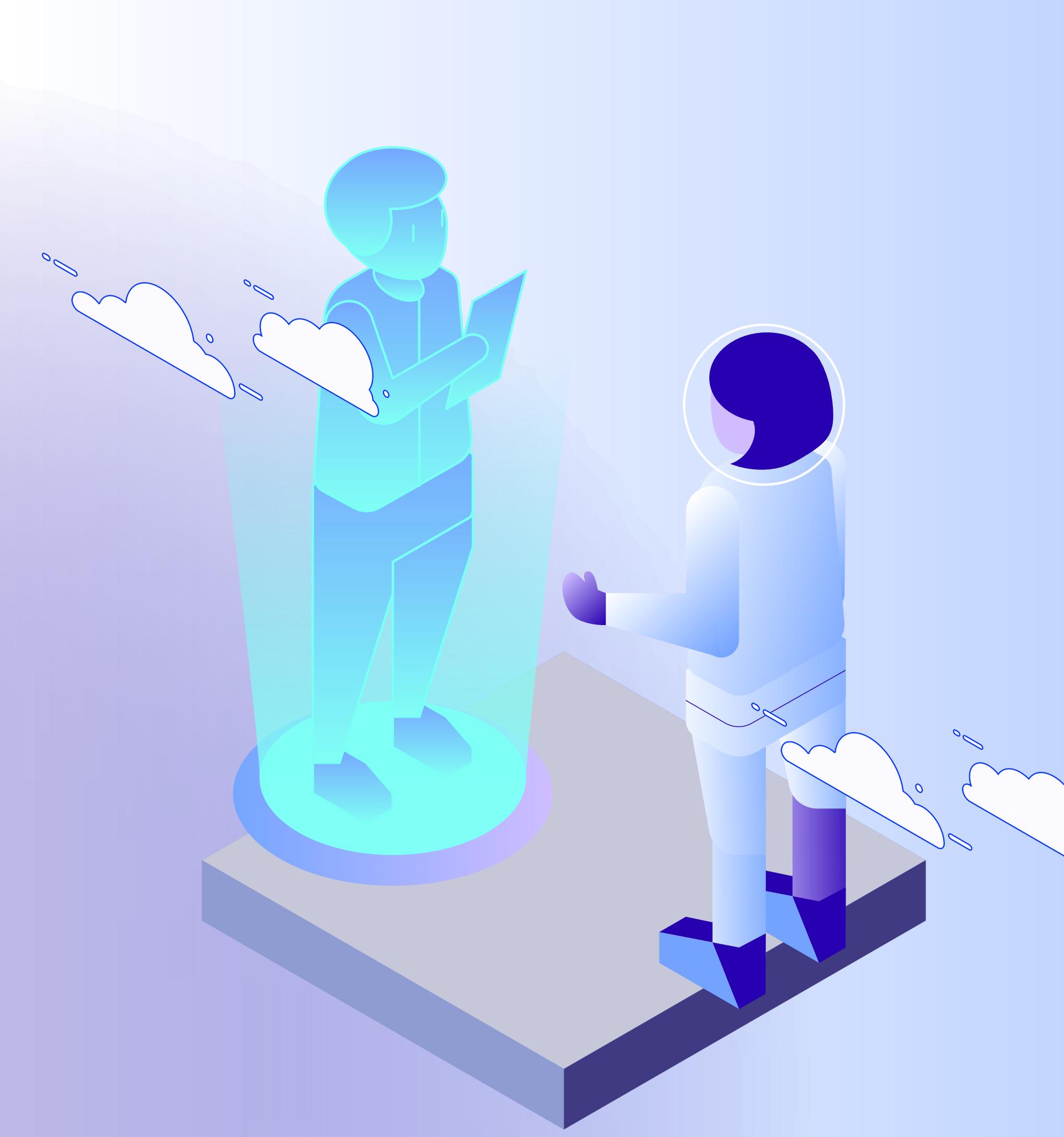
Microsoft Office 365

- Reasoning: A must-have for any student, providing tools like Word, Excel, PowerPoint, and Outlook. These applications are essential for document creation, data analysis, presentations, and email management.

DaVinci Resolve

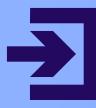
- Reasoning: A comprehensive video editing and color correction tool. It's free for most users and provides powerful tools for editing, visual effects, and audio post-production.





HARDWARE WINDOWS 11 PRO

The hardware is selected to ensure smooth performance for a wide range of tasks, from software development to database management, with additional support for creative projects like graphic design.



COMPUTER HARDWARE

Processor: Intel Core i7-13700K

- Cores: 16 (8 Performance cores + 8 Efficiency cores)
- Threads: 24
- Base Clock: 3.4 GHz
- Reasoning: High-performance processor well-suited for multitasking, software development, and running virtual machines. It provides enough power for demanding applications like compilers and databases.

Memory (RAM): 32GB DDR5 5200MHz

- Reasoning: Ample memory for running multiple development environments, databases, and virtual machines simultaneously without performance loss.



COMPUTER HARDWARE

Storage:

- Primary Drive: Samsung 980 Pro 1TB NVMe SSD
 - Usage: Fast storage for the OS, development tools, and applications, ensuring quick boot times and responsive application performance.
- Secondary Drive: Western Digital 2TB Black HDD
 - Usage: Additional storage for project files, documents, and backups.

Graphics Card: NVIDIA GeForce RTX 3060

- Reasoning: A mid-range GPU suitable for GPU-accelerated tasks, light gaming, and rendering, which may be useful for occasional 3D modeling or graphics-intensive applications.

Monitor: Dell UltraSharp U2723QE

- Size: 27-inch, 4K resolution
- Reasoning: High-resolution display that provides ample screen space for coding, database management, and multitasking, with excellent color accuracy for any design-related tasks.

