Operating systems in industry

A logo with blue dots

Description automatically generatedThe table shows some examples of types of operating systems and some of their common uses.

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| **Batch OS** | **Multitasking/**  **Time-sharing OS** | **Real-time OS** | **Network OS** | **Mobile OS** |
| **The IBM Operating System/360 (OS/360)** | **macOS** | **Aircraft control systems** | **Microsoft Windows Server** | **Android** |
| Widely used on the IBM 1401 computer system in the 1960s, the IBM 1401 Payroll Processing System was the software application. It was often used for batch processing tasks, including:   * Payroll processing * Calculating employee payslips and generating payroll reports * Outputting reports at the end of each processing run | Allows multiple applications to run at the same time so you can switch between applications seamlessly.  A time-sharing technique is used to allocate system resources such as processor time and memory to each running application. | The system uses a priority-based scheduling algorithm to efficiently handle tasks such as:   * Monitoring engine performance * Controlling flight surfaces * Communicating with other systems   This algorithm ensures prompt execution of critical functions and effective resource allocation. | Manages and coordinates the resources and activities of multiple computers in a network. Provides features such as:   * File sharing * Printer management * User access levels | Designed for touchscreen mobile devices. Provides features such as:   * Customising the home screen and the look of the user interface * Multitasking users can run multiple apps at the same time * Notifications can be used to get alerts from various apps * Security is inbuilt which scans apps for malware and other threats |

# Task 1

# Match the description of the industry example to the most appropriate operating system for their needs.

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| **Type of operating system** |  | **Example** |
| Batch OS |  | A high-street bank chain provides monthly statements for customers which are always generated on the last day of the month. Customers can request whether these are printed and sent via post or sent electronically via email. |
| Multitasking/ time-sharing OS |  | A videographer works for a media production company and uses their PC to edit and produce video content for specific products. |
| Real-time OS |  | A car manufacturing company uses robotics to weld joints on the car body. The robots are on a production line and perform a set number of welds before the car moves on to the next robot where the next stage of the production process is completed. |
| Network OS |  | An estate agency has branches in five towns within a county. The branches share information about clients looking for houses and properties that are currently on the market. Each branch needs access to central documents and resources. |
| Mobile OS |  | A parcel delivery company provides their drivers with smartphones in order for them to provide proof of delivery and update the delivery status of parcels throughout the day. |

# Task 2

A hairdressing salon has a receptionist who works on a front desk to take calls and manage bookings. The front desk has a desktop PC that is used to access the booking system for appointments.

Explain **one** suitable operating system for the front desk PC.

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| A multitasking/time-sharing operating system is most likely to be used on the desktop PC in the salon.  This means that multiple applications can run at the same time on the single PC. In the salon, this may mean the booking system can be open at the same time as an online calendar that stores the days particular hairdressers are in or are on annual leave. This improves productivity and efficiency as users can perform multiple tasks at the same time. |