

Which parts of today's activity were IaaS, PaaS or SaaS? Justify your answer.

Today's activity mainly involved **Infrastructure as a Service (IaaS)** and **Platform as a Service (PaaS)**. The creation of an Azure Virtual Machine, virtual network, storage disk and network security rules represented IaaS. Microsoft provided the physical servers, networking equipment, storage and virtualisation technology. However, we were responsible for selecting and managing the operating system, configuring the virtual machine, installing software, controlling access and maintaining its security.

Azure App Service represented PaaS because we deployed and ran an application without managing the underlying physical server or operating system. Microsoft automatically managed the infrastructure, operating system, runtime environment, maintenance and platform updates. Our main responsibility was to configure, deploy and monitor the application. This made App Service easier and quicker to use than manually preparing a virtual machine.

SaaS was not a major part of the practical deployment because we did not create or manage a complete ready-made software product. Applications such as Microsoft 365, Outlook or Google Drive are examples of SaaS because users simply access the finished software through a browser while the provider manages everything behind it. Therefore, the virtual machine activity was IaaS, App Service was PaaS, and no major SaaS solution was deployed during the activity.

Why does Microsoft offer a free credit specifically to students rather than everyone?

Microsoft offers free Azure credit specifically to students because many students do not have enough money to pay for cloud services while learning. The credit allows them to gain practical experience with virtual machines, databases, storage, networking and application hosting without facing financial pressure.

This supports education and helps students connect theoretical knowledge with real cloud technology.

Microsoft also benefits from this programme because students who learn Azure today may use it later in their professional careers. After graduation, they may work as developers, cloud engineers or cybersecurity professionals and recommend Azure within their organisations. Providing student credit therefore helps Microsoft develop future skilled users and build long-term customer relationships. The offer is limited to verified students to control costs and reduce misuse. If free credit were given to everyone, people could create multiple accounts, waste expensive cloud resources or use them for commercial and unauthorised activities.

If your class's App Service had instead been deployed on a paid tier, what would you check in Cost Management to catch a billing problem early?

If the class's App Service had been deployed on a paid tier, I would regularly check **Cost Management + Billing** in the Azure portal. First, I would review **Cost Analysis** and filter it by the App Service, resource group and date to identify how much the service was costing each day. I would compare the actual cost with the forecasted monthly cost and look for any sudden or unexpected increase.

I would also confirm that the correct App Service Plan and pricing tier had been selected. A higher tier or additional automatically scaled instances could increase the bill significantly. Related charges from storage, databases, monitoring and outbound data transfer should also be reviewed.

Finally, I would create a budget with alerts at levels such as 50%, 75%, 90% and 100%. I would enable cost-anomaly notifications so that unusual spending could be investigated quickly. These checks would help identify an incorrect configuration, forgotten resource or unexpected scaling activity before it produced a large bill.

Give one advantage and one risk of the Pay-As-You-Go pricing model compared with buying and owning physical servers.

One advantage of the **Pay-As-You-Go** model is that an organisation does not need to spend a large amount of money purchasing physical servers in advance. It can start using cloud resources immediately, increase or decrease them according to demand, and pay only for the resources used. This reduces initial capital expenditure and provides greater flexibility.

One risk is that cloud costs can become unpredictable if resources are not monitored properly. For example, a forgotten virtual machine, automatic scaling, excessive storage or unexpected network traffic could produce a high bill. Physical servers require a larger initial investment, but their hardware cost is generally more predictable after purchase. Therefore, Pay-As-You-Go offers flexibility and lower starting costs, but it requires regular monitoring, budgets and cost alerts to prevent unexpected spending.