

SEP Python Assignment

Q3)

Platform as a service (PaaS), Software as a service (SaaS) and Infrastructure as a service (IaaS) represent three types of cloud computing services that are offered to businesses. IaaS is the most customizable and flexible out of the three, offering virtualized computing resources over the internet which the client can use and personalize as they wish. These often have a pay per mile model where the cost is dependent on the amount of resources used by the client, which also makes it the most scalable compared to others. PaaS provides the customer with a set of tools and software which can be used build applications and products. This is more scaled down compared to IaaS since the user is only granted access to use the platform, not customize it to business needs. SaaS represent software that is packaged with its own functionality ready for its end-user to access over the internet. SaaS is more user-friendly where PaaS might need employees with technical skills to utilize.

Q4)

ETL (Extract, Transform and Load) and ELT (Extract, Load, and Transform) are standard data integration processes. The difference lies in whether data is transformed before or loading it into a database.

	Pros	Cons
ETL	<ul style="list-style-type: none">• Easier for privacy compliance, removing sensitive information before loading• Well established, having well developed ETL tools and platforms	<ul style="list-style-type: none">• Unable to handle unstructured data• Slower with larger data sources• Slow load speed
ELT	<ul style="list-style-type: none">• Ability to save data without having the time to transform it first, making it faster• Low-maintenance due to cloud based automated solutions• Faster loading process	<ul style="list-style-type: none">• Newer method with less support• Cannot censor private information before load

Use ELT when you have larger quantities of perhaps unstructured data, use ETL when you have more time to transform and might need to remove sensitive data before loading.