# Data engineering DENG

Designing, building, operationalising, securing and monitoring data pipelines and data stores.

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| **Guidance Notes:**  Activities may include, but are not limited to:   * identifying data sources, data processing concepts and methods * evaluating, designing and implementing on-premise, cloud-based and hybrid data engineering solutions * structuring and storing data for uses including, but not limited to, analytics, machine learning, data mining, sharing with applications and organisations * harvesting structured and unstructured data * integrating, consolidating and cleansing data * migrating and converting data * applying ethical principles in handling data * ensuring appropriate storage of data in line with relevant legislation * building in security, compliance, scalability, efficiency, reliability, fidelity, flexibility and portability. |

## Level 2

Assist in developing and implementing data pipelines and data stores.   
Performs administrative tasks to provide accessibility, retrievability, security and protection of data.

## Level 3

Follows standard approaches and established design patterns to create and implement simple data pipelines and data stores to acquire and prepare data.   
Applies data engineering standards and tools to create and maintain data pipelines and extract, transform and load data.   
Carries out routine data quality checks and remediation.

## Level 4

Designs, implements, and maintains complex data engineering solutions to acquire and prepare data.   
Creates and maintains data pipelines to connect data within and between data stores, applications and organisations.   
Carries out complex data quality checking and remediation.

## Level 5

Plans and drives the development of data engineering solutions ensuring that solutions balance functional and non-functional requirements.   
Monitors application of data standards and architectures including security and compliance.   
Contributes to organisational policies, standards, and guidelines for data engineering.

## Level 6

Leads the selection and development of data engineering methods, tools and techniques.   
Develops organisational policies, standards, and guidelines for the development and secure operation of data services and products.   
Ensures adherence to technical strategies and architectures.   
Plans and leads data engineering activities for strategic, large and complex programmes.