**Agile Questions**

1. What are the SCRUM events?

The SCRUM events are sprint, sprint planning, Daily scrum, sprint review and sprint retrospective

1. What are the SCRUM artefacts?

The three scrum artefacts are product backlog, sprint backlog and increment

1. What is your understanding of Agile delivery? What are the benefits and drawbacks?

It allows for an iterative approach ensuring a quality product is produced, additionally, it allows for better communication between a team and team moral. Scope creep so the project doesn’t get finished in the first iteration

1. How does Agile compare with other methodologies like waterfall?

Agile is a more iterative process, so it allows for adaptation and allows for improvement, where as waterfall is a sequential process and work is completed in a linear process, changes can be difficult with a waterfall methodology.

1. Are there any drawbacks to Agile?

No Methodology is perfect, so naturally has draw backs, requires a high level of collaboration so communication is vital.

1. In what situations would another methodology work better over Agile? Can you give an example?

The waterfall method may work better as it has a handsoff approach, so if communication with the customer wasn’t possible or preferable during the review phase this may be a better method.

1. What are user stories?

A user story is a way of specifying a task in the structure As a…, I want…, so that…

1. How can we prioritise our product backlog?

Organise the tasks from high priority to low priority, define criteria for prioritization such as , revenues, market fit, complexity, confidence, risk, cost

1. What information radiators can we use during retrospectives?
2. What is the purpose of a review?

To measure the teams progress and to gain feedback

1. What is the definition of ready?

Things that need to be done before planning shorts

1. What is a definition of done?

An item of the product backlog has been completed, varies group to group

1. Why is it important to have good acceptance criteria for user stories?

Gets the team to think through how a feature or piece of functionality will work from the user’s perspective. Removes ambiguity from requirements.

1. What is the INVEST criteria for good user stories?

INVEST stands from Independent, negotiable, valuable, estimatable, small and testable

1. Why is it a good idea to use the INVEST criteria?
2. What do you need to consider when gathering requirements?

Invest principle, involve stakeholders regularly, create user epics

**Data Concepts**

1. What is ETL?

A data pipeline – Extract, transform, load.

1. What is ELT?

Extract, Load, Transform (Analytics),

1. When might you want to use ELT over ETL?

ELT is used for AI, it is good to teach an AI system to learn what to extract from a data base.

1. What is a json file? What does it look like?

Json – Java script object notation, It contains a key value pairs.

1. What is OLAP? Online Analytic processing, Design to extract business intelligence from OTLP, Semantic data model describes meaning of data elements, data integrated from multiple sources and aggregated together across multiple dimensions
2. What is OLTP?

Online transaction processing, Database transaction, any time a purchaseis made a new row is produced. Heavy write, low read

1. What are ACID principles?

Atomicity, Consistency, Isolation, Durability

1. What are the two schools of thought when it comes to Data +Warehouse Design?

Inmon Architecture (Top – Down Approach) Data mants created second , Kimball Architecture (Bottum-Up approach) Data mants created first

1. What's the difference between a Database and a Data Warehouse?

A database is designed to record date whereas the data warehouse is designed to analyse data. A data warehouse can contain data from single or multiple sources.

1. Explain the Inmon Architecture for Data Warehouse Design

(Top – Down Approach) Data mants created second

1. Explain the Kimball Architecture for Data Warehouse Design

(Bottum-Up approach) Data mants created first

1. What is Dimensional Modeling?

It is a data storage technique optimized for data storage in a Data warehouse, its purpose is to allow faster retrieval of data

1. What are the differences between databases, data warehouses, and data lakes?

Database and data warehouse can only store data that has been structured. A data Lake on the other hand can contain any type of data, structure or unstructured.