**Stakeholder and User Description, Identify the appropriate Process Model, Comparative study with Agile Model.**

**Problem Description: (Process Step)**

1. **Stakeholder and it’s categories: -**

**Meaning of Stakeholder: -** A stakeholder is a party that has an interest in a company and can either affect or be affected by the business.

**It is categorized into two parts: -**

1. **Internal Stakeholder: -** Investors are internal stakeholders who are significantly impacted by the associated concern and its performance. Internal stakeholders are people whose interest in a company comes through a direct relationship, such as employment, ownership, or investment.
2. **External Stakeholder: -** External stakeholders do not have a direct relationship with the company. External stakeholders are those who do not directly work with a company but are affected somehow by the actions and outcomes of the business. Suppliers, creditors, and public groups.

**B)** **Stakeholders in Bitcoin Price Prediction using AI and Machine Learning: -**

**i) Internal Stakeholders are** Academia Universities, Bitcoin Advocacy Groups, Bitcoin ATMs, Bitcoin Developers, Bitcoin Lenders, Research and Development initiatives Groups, Speculators, Wallets.

**ii) External Stakeholders are** Associations Trade and industry associations, Customers, Freelancers, Investors, Merchants, Miners, Mining Hardware providers, Mining Pools, Tax regulators, Traders, Government Treasuries.

**2. Waterfall Model: -**

**Introduction: -**

This model is also known as **linear-sequential life cycle model**. The Waterfall Model was the first Process Model to be introduced.  It is very simple to understand and use. In a waterfall model, each phase must be completed before the next phase can begin and there is no overlapping in any phases. It illustrates the software development process in a linear sequential flow. This means that any phase in the development process begins only if the previous phase is complete.

**Diagram: -**

Requirements

Design

Implementation

Verification

Maintenance

**3-Comparative study with Agile Model: -**

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| **Waterfall** **Model** | **Agile** **Model** |
| 1. Waterfall helps complete one single project. | **1-**Agile helps complete many small projects. |
| 1. Waterfall is a linear and sequential approach. | **2-**Agile is an incremental and iterative approach. |
| 1. Waterfall divides a project into phases. | **3-**Agile separates a project into sprints. |
| 1. Waterfall avoids scope changes once the project starts. | **4-**Agile allows requirement changes at any time. |
| 1. Waterfall requires a project manager who plays an essential role in every phase. | **5-**Agile enables the entire team to manage the project without a dedicated project manager. |
| 1. Requirements are prepared once at the start in Waterfall. | **6-**Requirements are prepared every day in Agile. |
| 1. Testing phase comes only after the build phase in Waterfall. | **7-**Testing is performed concurrently with development in Agile. |