Reflection Task

Experiences:

In my research about the “Hardware Implementation of Boolean Function Using NAND Gates”. I have learned a lot from my tutor and also I did my self research and put them all together to expose its importance. Each part of it plays its own specific role. This research also expand my knowledge which made me do more self research to think out of the box.

Challenges:

My thinking power of understanding what it really used for and how far it would get to be done was one of my greatest challenges of thinking to build this research. Also learning new concepts like optimization, cryptography, application, etc.. was so tough.

Development:

My research into implementing Boolean functions using NAND gates taught me a lot about digital circuit design. My comprehension of the several operations that logic gates can be combined to perform has improved. Investigating optimisation methods also made clear how meticulous preparation is needed when designing high-performance systems.

Knowledge (GLO1):

I now know more about Boolean algebra and digital circuits thanks to this research. I discovered that the special characteristics of NAND gates let you build any kind of logic function. Comprehending these principles establishes the groundwork for more intricate subjects in the field of electrical engineering.

Communication (GLO2):

Technical topics can be effectively communicated to people by using examples such as building gates out of NANDs. Peer feedback helped me become a better teacher of technology concepts.

Digital Skills (GLO3):

My digital literacy was enhanced by simulating NAND circuits. Applying logic concepts to devices like programmable microcontrollers gives me greater confidence.

Critical Thinking (GLO4):

My critical analysis was generated by comparing optimisation techniques. My comprehension of engineering trade-offs has been enhanced by taking into account different design restrictions.

Problem Solving (GLO5):

Simplifying implementations and troubleshooting circuit designs promoted rational, systematic problem-solving. I tackled hard topics in small and understandable ways by grasping the concept and explaining using my words.

Self-management (GLO6):
My devotion to learning, time management, and self-direction all improved as a result of my own research. Taking charge improved my academic performance.

Teamwork (GLO7):
Although I am an individual, I understand the value of teamwork in situations where multidisciplinary cooperation is needed, such as integrated circuit fabrication.

Global awareness (GLO8):
Observing logic's many applications—from AI to security—made me realise how accessible and sustainable technology might be to improve the world.
Studying NAND gates provided a solid educational basis and reaffirmed a number of graduate skills essential for a job in technology.