

## DSW TUTORIAL 4

### 1. What are your views on the importance for a multi-tier programming approach

Multi-tier is a programming approach that involves dividing software components in different layers called tiers, each of the tiers has specific functionalities. (*Wikipedia*, n.d.)

For instance, in a three-tier architecture, a system is divided in 3 main layers which are: the presentation layer, business logic layer and data layer. By dividing the system in different layers, each layer has more security and makes it difficult for hackers to access sensitive data. Each of the tiers can be secured using different methods. It is easier to add one or more components to each the tiers thus improving scalability.

Multi-tier is important because by dividing the system into tiers, it becomes easier to maintain the system. Adding, modifying each tier can be done without affecting other tiers. (Alexandra, 2017)

### 2. What are your views on the importance for enabling the fourth industrial revolution (4IR) era?

The 4IR refers to the current trend of technology advancement and is characterised by a fusion of technology between physical, digital, and biological. Robotics, Artificial Intelligence (AI), Internet of Things (IoT), Augmented Reality (AR), Analytics, and Robotic Process Automation (RPA) are some of the 4IR technologies. These concepts are important for enabling the fourth industrial revolution era because it has the power to transform the way we live, work and interact with others. This will clearly lead to improved efficiency, productivity and the way we live. 4IR can clearly solve big problems that we face such as climate change, healthcare and problems with education. (A. K. M. Fazlul Hoque, n.d.)

## References

A. K. M. Fazlul Hoque. (n.d.). *4th Industrial Revolution: Impact and Challenges*. Retrieved April 24, 2023, from [https://www.researchgate.net/publication/337830441\\_4th\\_Industrial\\_Revolution-Impact\\_and\\_Challenges](https://www.researchgate.net/publication/337830441_4th_Industrial_Revolution-Impact_and_Challenges)

Alexandra. (2017, May 19). *Stackify*. <https://stackify.com/n-tier-architecture/>

*Wikipedia*. (n.d.). Retrieved April 24, 2023, from [https://en.wikipedia.org/wiki/Multitier\\_programming#:~:text=This%20approach%20has%20the%20benefit,independently%20of%20the%20other%20layers.](https://en.wikipedia.org/wiki/Multitier_programming#:~:text=This%20approach%20has%20the%20benefit,independently%20of%20the%20other%20layers.)