Session 12 - Case Studies

## OOP - The Interactive Odyssey

Put on your author hat and start telling stories. Your goal is to produce an interactive digital storybook with various characters and plots that will captivate readers. Build a system where characters in the story can interact and have different outcomes by using polymorphism and encapsulation. Character objects should contain the interactions between the characters, and polymorphism will enable characters to react differently to the reader's choices, providing a personalised reading experience for each user.

* Create character classes with encapsulated interactions and outcomes.
* Implement polymorphism to allow characters to respond differently to user choices.
* Develop an interactive storybook that offers readers a personalised and engaging narrative.

### **Topics to be consolidated**

* OOP - Polymorphism and Encapsulation
* Define polymorphism and demonstrate its behaviour through method overriding and inheritance.
* Explain the concept of abstraction and how it fits into OOP.
* Apply SOLID principles (Single Responsibility, Open-Closed, Liskov Substitution, Interface Segregation, and Dependency Inversion) to class design.
* Analyse how OOP can be used to write DRY code