Hello and welcome to this presentation on Robustness and Sequence Diagrams, I, James Moran, will be giving this presentation on their use in the Game Café, let’s begin.

What are Robustness and Sequence Diagrams? For Robustness Diagrams, they are a graphical way to depict use cases, that is also a ‘sanity check’ on Use-Cases (to make sure the Use-Cases match-up to what functionality the User would want from the system), that also allows the team to uncover new classes, which would not have been previously identified for the system. Sequence Diagrams allow a team to design the system in detail, considering the methods/functions the classes in the system will have and the order that these methods/functions are executed.

In the Game Café, the Robustness Diagram is as follows: Considering Staff Members of the Game Café, they would want to manage information of Members, Bookings, eSports Events, Hardware and Software (an example of a boundary), after manging this information, check to see if it is correct and that this information is not already present in the database (examples of controls, is not correct, show an Error Dialog (another Boundary)), before adding it to the Information Database (an example of an Entity). A similar procedure is taken for if there is a ticket available for an eSports Event (with similar Boundaries, Controls and Entities).

Moving on to the Sequence Diagram, this details the ‘timeline’ for the Use-Case of a Game Café Staff Member adding information to the system’s database. They start off by finding the target category of information, that they would wish to add, then the system requests (via the Windows Form Interface) details to be entered by the User, whom enters these details, which are validated for correct format by the system, as well as checking against the database for duplicate values, if the information is of a valid format and there are no duplicates in the database, then this information will be added to the database.

Looking at the advantages and disadvantages of using Robustness and Sequence Diagrams, the advantages are that of Better Project Analysis (for Robustness Diagrams, checking for quality, to make sure the design is effective and useful, before moving onto the next stage of development) and Documentation Excellence (for Sequence Diagrams, as following through them is straightforward, being chronological). The disadvantages are that of Complexity (having to learn/know the correct UML notation to use and the possibility to try and encompass too much in either diagram) and Static Properties (for using these models, as they would not dynamically change to suit the requirements of the system, as the system requirements change/are changed).

This slide details the references used in this presentation, thank-you for taking the time to watch this presentation and goodbye for now.