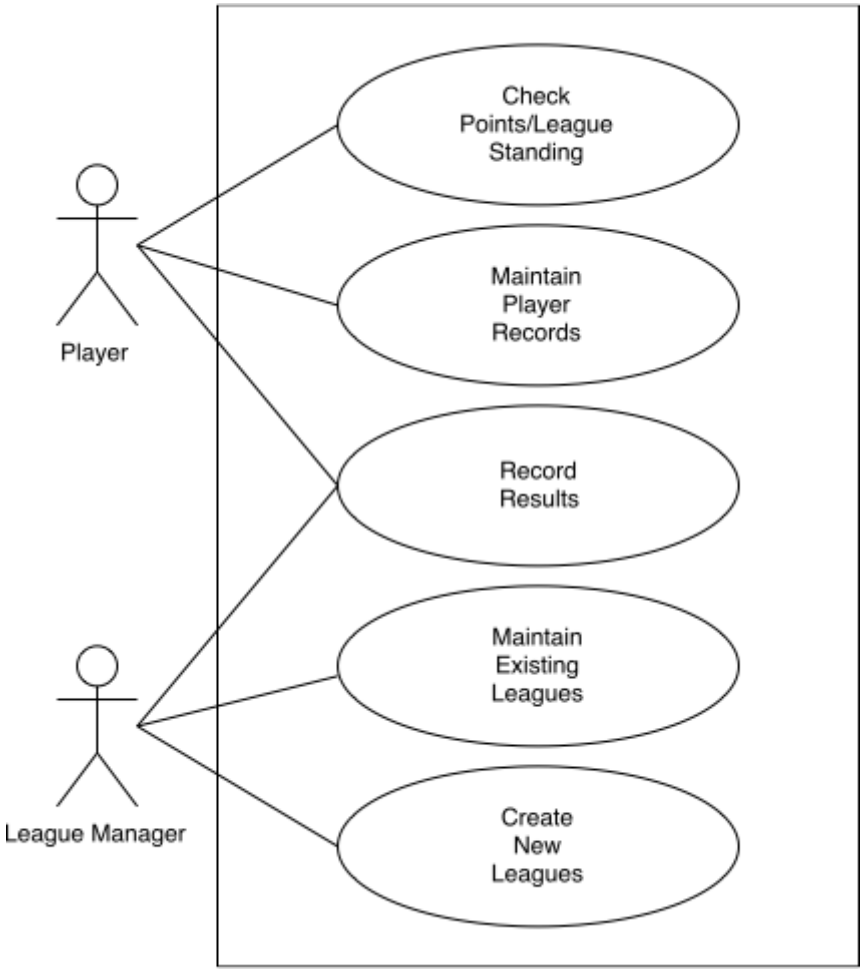
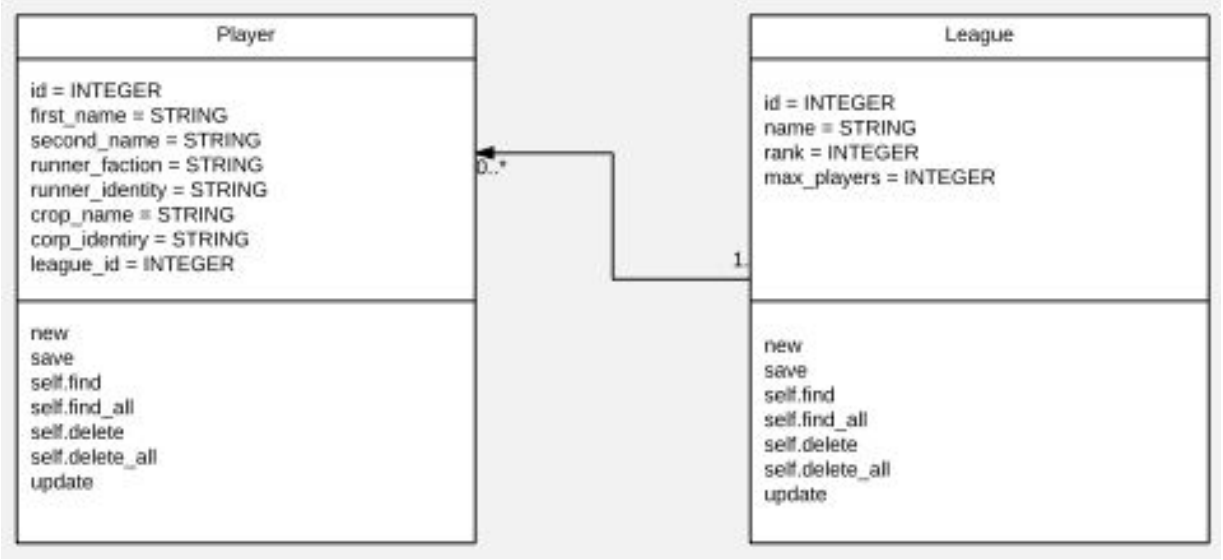
Chris Donnelly - Analysis and Design Unit (SQA PDA: Software Development) - E14

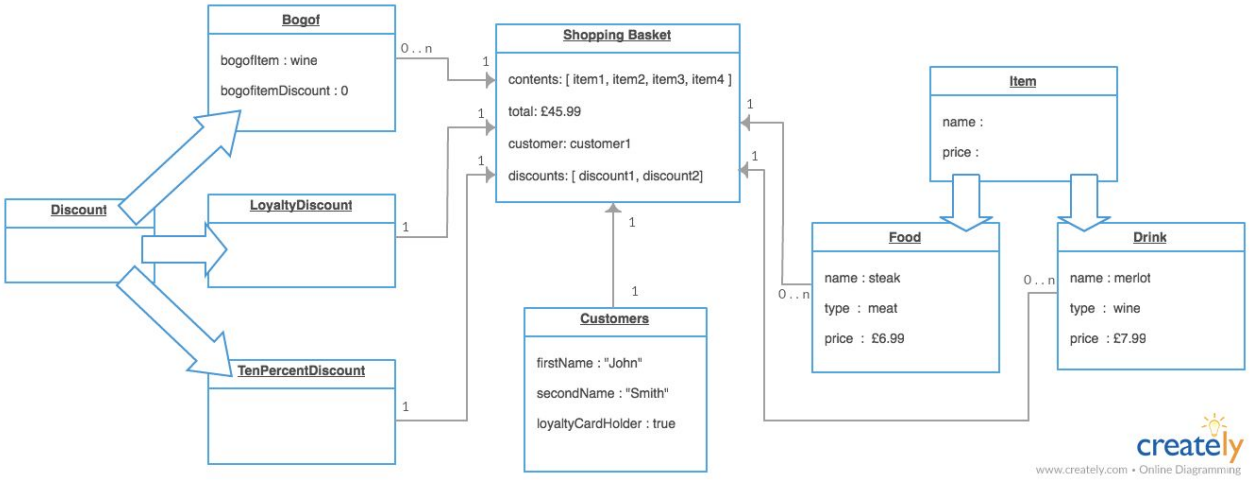
Unit A & D - A.D 1 - A Use Case Diagram



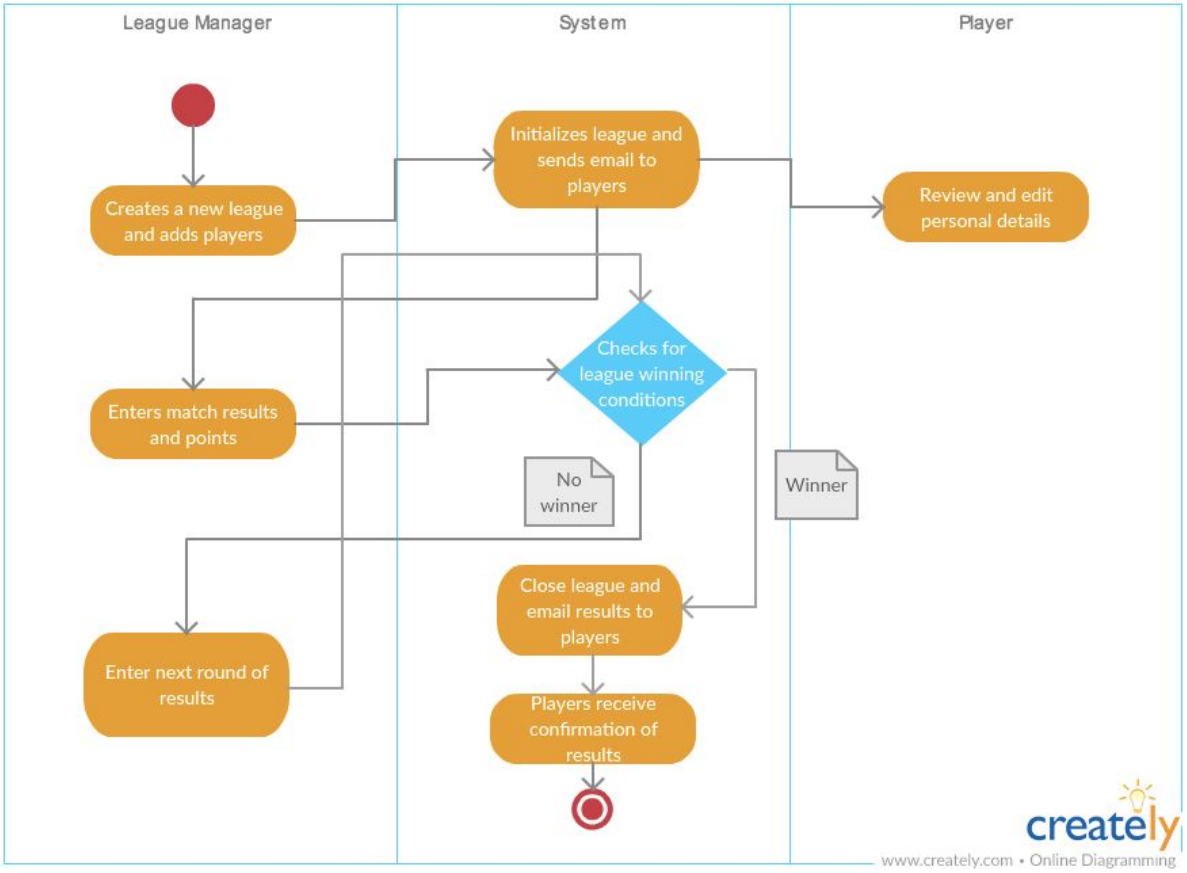
Unit A & D - A.D 2 - A Class Diagram



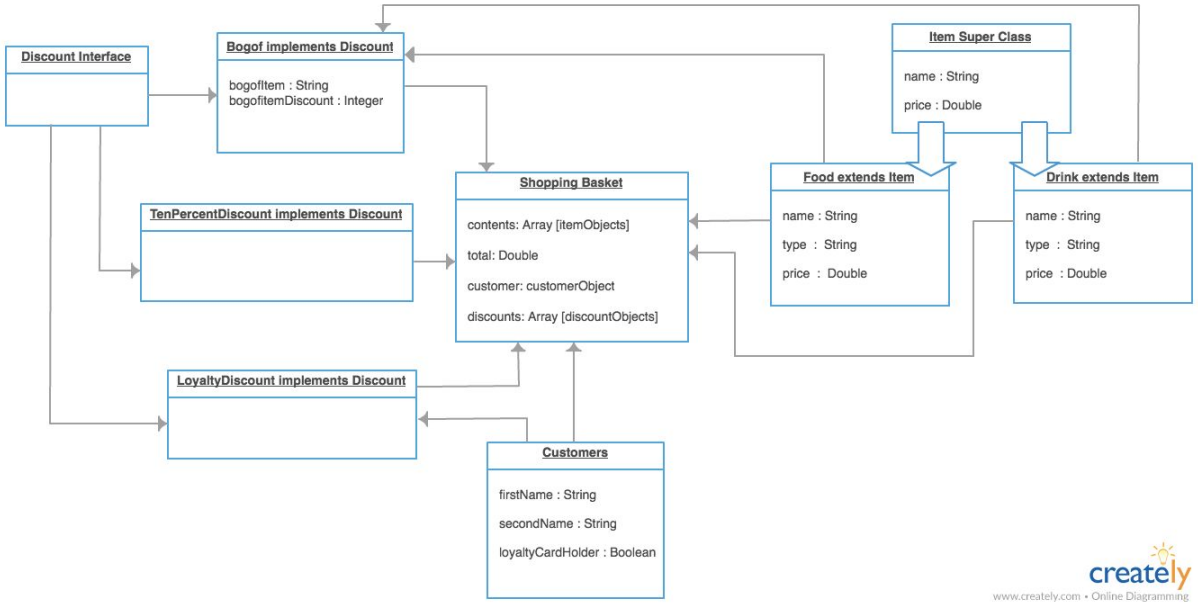
Unit A & D - A.D 3 - An Object Diagram



Unit A & D - A.D 4 - An Activity Diagram



Unit A & D - A.D 5 - An Inheritance Diagram



Unit A & D - A.D 6 - An Implementations Constraints Plan

Constraint	**Possible Effect of Constraint on Product**	**Solution**
Hardware and software platforms	Browser support differences may impact on the layout and performance of the program. We require the program UI to be consistent across all platforms/browsers to ensure user experience does not vary. The program should function regardless of the user's OS. If it does not we will limit the target audience for the product.	We will ensure all HTML and CSS is backwards browser compatible to expected standards. We will select a technology stack that will be OS neutral and work across either windows, mac or linux platforms.
Performance requirements	The program must make efficient use of data storage and retrieval as well optimising the processing power required for data searches. This could potentially affect the usability of the program and user experience if commands are executed slowly or data exceeds storage capacity.	We will design our search algorithms taking into account time complexity and efficiency. We will use a relational database to ensure the most appropriate and efficient data storage structure for the information we are dealing with.
Persistent storage and transactions	The project requires the persistence of data provided by users to meet its core function. If we do not provide	We will provide a server side storage solution for persisting user data.

	or design storage, either locally or server side, the project will fail to meet it's core objectives.	Transactions fall outside the scope of this project.
Usability	The selected colour palette could affect the user experience. The project involves large amounts of data input and display. Poor UI design could limit the usability of the software for users with specific requirements.	We will consider colour blindness, hard of sight and other accessibility factors in the design process. We will ensure that semantic HTML and alt tag information is used throughout the site.
Budgets	This project is to be delivered on a fixed budget. This could impact the resources available to complete the project affecting the end functionality of the software and ability to meet project goals.	We will specify a minimum viable product that can be delivered within the budget and meet user requirements. Further functionality will be costed appropriately to allow for expansion of the software.
Time	This project has to be delivered within a week. This will impact the scope of the project and implementation of features and functionality. This could affect the viability of the product to meet client requirements.	We will adopt an agile methodology using scrum to ensure the project remains on track and evaluate progress at regular intervals. The MVP will be defined in accordance with what can be achieved in the time allocated.