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| **CMP205 Application Design**  **Comic Book Store Project**  **Application Design Report** |
| Instructions:  - This is a template that you will fill to complete your assignment report.  - Please read **Assessment Brief Unit 2.pdf** and **Comic Book Store.pdf** before attempting this.  - The gray text is meant as guidelines. You are to replace it with your own.  - Please do not replace sections/subsections titles.  - **Delete this instructions part and any gray text before converting to pdf for submission.**  - After you complete this report, save it as pdf, and submit it along with the application.  - **Please remember to cite and reference any pictures or resources you use in your project/report if taken from sources other than yourself**. |
| **BEN FLEUTY 1900040** |

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| **Design (40%)** |
| **Analysis**  First, I split the information in the brief into functional and non-functional requirements. This information allowed me to plan out the program effectively as I could see everything that I needed to do at once.  From this planning I deducted that I would need several classes to effectively store all the data the application needs.  Classes:   * User   + Customer   + Staff * Order * Basket * Product   The base user class contains attributes that Customer and Staff share, such as name, address, email, etc. I opted to implement using interfaces instead of inheritance as it allows for more flexible code to be written. For example, a GetUser function can be used to get either a customer or a member of staff as IUser will be returned along with any class-specific data.  Relationships:  One user has one or many orders  One order has one basket  One basket has one or many products  **Model**    **User Interface** |
| Login  Register  Landing Page / Product Search Page – Registered User  Landing Page / Product Search Page – Guest User  Basket – Empty  Basket – With Items  Search Example – “lorem” in Title OR Description    View Orders Page  Checkout Page  Checkout as Guest – Address input  Checkout Confirmation – Staff required    Product View Window  Staff Landing Page  Entity Editor – Select Entity  Customer Record Editor |
| Order Record Viewer  Staff Record Editor  Product Record Editor |
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| **Implementation (40%)** |
| **C# Source Code**  Please indicate here whether you are submitting C# code. If you do not submit source code, your grade will be negatively affected.  Please include the files in a .zip file separate from the report. Make sure to follow good programming practices by writing neat, efficient and documented code.  Remember that this application has to link to the previously designed database of Unit 1 and there are different ways of implementing this. Your final submitted code may not resemble the initially designed class diagram to the letter.  **Executable File**  Please indicate here whether you are including an .exe file. If you are, check it works first.  If you do not submit an executable, your grade will be negatively affected. I must be able to test your application.  **Sample Input**  Include here sample user input so I can test your application. If you do not, I may contact you after submission about this so please monitor your email. Note that if I cannot test your project, your grade will be negatively affected.  **Functionality** (maximum 1 page)  Explain briefly how the application operates overall.  Example: the “Add” button or “New” menu item collects data from edit boxes into a new customer object and inserts a record with this data in the CUSTOMER table. |

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| **Reflection (20%)** |
| **This section should be written in the third person using academic language.**  **Development Methodology** (maximum 1 page)  Describe the overall software development methodology (waterfall, agile, etc.) you adopted to produce this project. You should justify your choice of method and include the steps you followed during that process and how they align with your project progression.  **Evaluation** (½ page)  Discuss how you evaluated your designs and any changes made to the designs as a result of this evaluation. Conclude with a brief account on your final application and how it compares to your initial design. |
| **Personal Reflections** (maximum ½ page)  Include your personal reflections on the entire experience (both units) and how you feel about what you have done and achieved. You may also mention any difficulties or problems you encountered at the different stages of your methodology and explain if and how you managed to resolve them. For this section, you may write in the first person but should still use formal language. |