**Capstone Project, Stage 2: Video Game Merch Store**

### **1. Functional Requirements**

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| Requirement desciption: |

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| The user shall be able to register and log in. |
| The user shall be able to view the product catalog. |
| The user shall be able to filter and sort products by name, price, and popularity. |
| The user shall be able to view product details. |
| The user shall be able to add products to favorites. |
| The admin shall be able to add, edit, and delete products. |

### **2. Non-Functional Requirements**

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| Requirement desciption: |

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| The website shall respond to user requests within 2 seconds. |
| The system shall support up to 50 concurrent users. |
| The system shall provide basic security for login and role management. |
| The system shall be optimized for desktop browser usage. |

### **3. Use Cases**

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| Use Case Name | Role | Description |
| User Registration | Guest | Register with email and password. |
| User Login | Guest | Login using credentials. |
| View Products | Registered User | Browse available products. |
| Filter and Sort | Registered User | Sort by name, price, or popularity. |
| View Product Details | Registered User | Open the detailed view of a product. |
| Add to Favorites | Registered User | Add a product to the favorites list. |
| Admin Product Management | Administrator | Admin can create, update, delete products. |

### **4. Classes and Relationships**

* User
* Admin
* Item
* Favorite
* AuthSession
* Game

**Relationships:**

* **User - Favorite**: One user can have multiple favorites (1:M)
* **Favorite - Item**: One favorite relates to one item (M:1)
* **User - AuthSession**: One user can have 1 active session (1:1)
* **User - Game**: One user can view many games (M:N)
* **Item - Game**: One item can be related to one game (M:1)