**Database Prototyping Games Rental System**

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|  |  |  |
| --- | --- | --- |
| 1 | Introduction | 2 |
| 2 | Analysis & Design |  |
| 3 | Development |  |
| 4 | Testing |  |
| 5 | Evaluation / Critical Review |  |

**Introduction**

Objectives

* Analyse the current system’s strengths and weaknesses
* Design a new system utilising the current system’s strengths and improving any weaknesses as well as adding any additional features that the client requests.

Background information

* The Spock Games rental shop requires a new system for recording rentals.
* The ability to store games, memberships, rentals and track which customer has what game is essential to the business. Knowing the popularity of games is also essential so that the company can order extra copies of games accordingly. Additional functionality such as reports on what members have overdue rentals is requested, though initial emphasis will be on improving the current system flaws first.

Method of Approach

* The core functionality of being able to add and edit members, games and make and return rentals will be focused first since that is the primary purpose of the system.
* Once this is achieved we will make adjustments based on client feedback and implement additional functionality such as reports and the catalogue.

Project plan

* *Attach project plan.*

**Analysis & Design**

Data Modelling – Logical Data Model and supporting table definitions

* *Attach ERD and Normalisation.*

Definition of key requirements (should refer to Functional requirements)

Needs of different users (Manager, Shop Assistant, Member)

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| **Functional Requirement** | **Implementation** | **Accessed by** |
| Add/Amend a Member | A form to update a table holding member details and a form to search and amend existing members entries. | Manager  Shop assistant |
| Add/Amend a Game | A form to update a table holding game details and a form to search and amend existing game entries. | Manager  Shop assistant |
| Add/Amend Game Copy | A form to update a table holding details relating only to a specific copy of a specific game and the ability to add to a notes field on the return of a game. | Manager  Shop assistant |
| Issue a Game Copy rental | Attach the member’s details to a specific game copy to indicate that they currently have possession of said copy. | Manager  Shop assistant |
| Renew a Game Copy rental | Add two weeks to the duration of a specific Game Copy rental which would increase the cost of the loan whilst avoiding late fees. | Manager  Shop assistant |
| Return a Game Copy rental | Remove the member’s details from a specific game copy to indicate that they have returned the item. Any additional costs need to be displayed and the ability to note any damages should be made available. | Manager  Shop assistant |
| Manage an overdue Game Copy rental | Additional charges are displayed so that the employee knows to bill the member on return of the game. The ability to change the maximum number of concurrent rentals should be available. | Manager  Shop assistant |
| Reserve a Game Copy | If a game’s copies are all currently being rented then the member’s details should be linked with the game details in a rental table. | Manager  Shop assistant |
| Cancel/delete a Reservation | Reserved games should be able to be removed in the event of a member deciding that they no longer want a game that they have reserved. | Manager  Shop assistant |
| Create a Rental History record | When a rental is returned to the store then the current rental details should populate the historical rentals table. | Manager  Shop assistant |
| Add/amend Catalogue information | Forms to add screenshots, reviews and user ratings based on an existing game entry. Forms to search for and amend existing screenshots, reviews and user ratings. | Manager  Shop assistant |
| Add/Amend a Rental Rate | A form to update a table holding rental rates and a form to search and amend existing rental rate entries. | Manager |
| Add/Amend a Distribution Company | A form to update a table holding developer information and a form to search and amend existing developer entries. | Manager  Shop assistant |
| Add/Amend a Supplier | A form to update a table holding supplier information and a form to search and amend existing supplier entries. | Manager  Shop assistant |
| Search Catalogue based on criteria | A form to search for game specific details, screenshots, reviews, user ratings etc. based on game title, developer, genre etc. | Manager  Shop assistant  Member |
| View Games and/or Game Copies | A form to produce a report listing every game in the game table, specific games based on user search criteria (title, developer, genre etc.)  A form to produce a report listing every game copy of a specifically searched game. | Manager  Shop assistant  Member |
| View/Report Rentals | A button to produce a report of game copies that are currently being rented by members. | Manager  Shop assistant |
| View/Report Rental History | A form to produce a report of game copies that have previously been rented by members. *An option to input specific dates.* | Manager  Shop assistant |
| View/Report Members | A form to produce a report of every member. *Options to search by name, location etc.* | Manager  Shop assistant |
| View/Report Reservations | A form to produce a report of games that have been reserved by a member and details of said member. | Manager  Shop assistant |
| View/Report overdue Rentals | A button to produce a report of games that are currently held by a member but should have been returned to the store. *List current additional cost?* | Manager  Shop assistant |
| View/Report Members overdue | A button to produce a report of members that currently hold a game that should have been returned to the store. *List current additional cost?* | Manager  Shop assistant |
| View/Report popular Games | A button to produce a report of games that have been rented in the last 30 days. *Sort by most rented?* | Manager |

**Development**

Features of Access used including outline details of Forms, queries, etc.

Problems encountered and any deviations from the design with reasons

Management of the development process *(keep a diary as you do this)*

**Testing**

Outline of methods and results

*Add test table*

**Evaluation / Critical Review**

Suitability and completeness of the solution

Further requirements (what else you would like to do & what you would do

differently)

Group involvement and evaluation of the Project Management