

**<<VIETNAM’S HISTORY>>**

**Software Design Document**

– Hanoi, August 2019 –

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**I. Overview**

**1. Code Packages/Namespaces**

**2. Database Schema**



***Table descriptions & package class naming conventions are as below***

|  |  |  |
| --- | --- | --- |
| **No** | **Table** | **Description** |
| 01 | **<tblUsers>** | * Description: Contains information of all accounts logged into the web * Primary keys: UserID |
| 02 | **<tblRoles>** | * Primary keys: RoleID * Description: Contain information between role with user |
| 03 | **<tblNotifications>** | * Description:Contain all informations of notification and commentator * Primary keys: NotificationID * Foreign keys: UserID |
| 04 | **<tblHistoricalSites>** | * Description: *Contain all informations of historical sites*   - Primary keys: HistoricalSiteID  - Foreign keys: PeriodID |
| 05 | **<tblHistoricalItem>** | * Description: *Contain all informations of historical items* * Primary keys: HistoricalItemID * Foreign keys: PeriodID |
| 06 | **<tblArticles>** | * Primary keys: ArticleID * Description: Contains article content and it’s status such as pending or approved * Foreign keys: UserID |
| 07 | **<tblCharacters>** | * Primary keys: CharacterID * Foreign keys: PeriodID * Description: Contains information of Character’s, historical figures’s data |
| 08 | **<tblBooks>** | * Primary keys: BookID * Description: Contains information of history books data |
| 09 | **<tblVideos>** | * Primary keys: VideoID * Description: Contains information of History video data |
| 10 | **<tblComments>** | * Primary keys: CommentsID * Foreign keys: UserID, ArticleID * Description: Contains information of Comments that Users evaluate articles, posts. |
| 11 | **<tblPeriod>** | * Primary keys: PeriodID * Description: Contains information of each period of each categories |
| 12 | **<tblRepliesComment>** | * Primary keys: ReplyID * Foreign keys: CommentID, UserID * Description: Contains information of replied comments of any comment. |
| 13 | **<tblVotes>** | * Primary keys: VoteID * Foreign keys: ArticleID, UserID * Description: Contains votes of any comment. |
| 14 | **<tblTags>** | * Primary keys: TagID * Foreign keys: ArticleID, UserID * Description: Contains tags of an article |
| 15 | **<tblTagArticle>** | * Primary keys: ArticleID, TagID * Foreign keys: ArticleID, TagID * Description: Contains ArticleID and UserID to present many to many relationship between tblTags and tblArticles |
| 16 | **<tblPeriodArticle>** | * Primary keys: ArticleID, PeriodID * Foreign keys: ArticleID, PeriodID * Description: The table is created by Period and Article. |
| 17 | **<tblPeriodVideo>** | * Primary keys: VideoID, PeriodID * Foreign keys: VideoID, PeriodID * Description: The table is created by Users and Roles. |
| 18 | **<tblHistoricalSiteImages>** | * Primary keys: ImageID * Foreign keys: HistoricalSiteID * Description: The table is created to save historical site’s image. |
| 19 | **<tblUsersRoles>** | * Primary keys: UserID, RoleID * Foreign keys: UserID, RoleID * Description: The table is created by tblUsers and tblRoles. |

**II. Code Designs**

**III. Database Tables**

**1. Table tblUser**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | UserID | int |  | \* | \* | PK |  |
| 2 | Mail | varchar | 50 | \* | \* |  |  |
| 3 | Password | varchar | MAX |  | \* |  |  |
| 4 | Achievement | ntext |  |  |  |  |  |
| 5 | Point | int |  |  | \* |  |  |
| 6 | Fullname | nvarchar | 50 |  | \* |  |  |
| 7 | CreateDate | date |  |  |  |  |  |
| 8 | Reported | int |  |  |  |  |  |
| 9 | Enabled | bit |  |  | \* |  |  |
| 10 | VerificationCode | varchar | 64 | \* |  |  |  |
| 11 | Avatar | varchar | 200 |  |  |  |  |

**2. Table tblRoles**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | RoleID | int |  | \* | \* | PK |  |
| 2 | RoleName | varchar | 10 |  | \* |  |  |

**3. Table tblNotifications**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | NotificationID | int |  | \* | \* | PK |  |
| 2 | Message | ntext |  |  | \* |  |  |
| 3 | CreatedDate | date |  |  | \* |  |  |
| 4 | UserID | int |  |  | \* | FK |  |
| 5 | Enabled | bit |  |  | \* |  |  |

**4. Table tblHistoricalSites**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | HistoricalSiteID | int |  | \* | \* | PK |  |
| 2 | Location | ntext |  |  |  |  |  |
| 3 | Description | ntext |  |  |  |  |  |
| 4 | Photo | varchar | 200 |  |  |  |  |
| 5 | Enabled | bit |  |  | \* |  |  |
| 6 | HistoricalSiteName | nvarchar | 200 | \* | \* |  |  |
| 7 | Detail | nvarchar | MAX |  | \* |  |  |
| 8 | PeriodID | int |  |  | \* | FK |  |

**5. Table tblHistoricalItems**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | HistoricalItemID | int |  | \* | \* | PK |  |
| 2 | Type | ntext |  |  |  |  |  |
| 3 | Name | ntext |  | \* | \* |  |  |
| 4 | Nation | ntext |  |  |  |  |  |
| 5 | Description | ntext |  |  |  |  |  |
| 6 | Photo | varchar | 200 |  |  |  |  |
| 7 | Enabled | bit |  |  | \* |  |  |
| 8 | PeriodID | int |  |  |  | FK |  |

**6. Table tblArticles**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | ArticleID | int |  | \* | \* | PK |  |
| 2 | Title | nvarchar | 200 |  | \* |  |  |
| 3 | Context | nvarchar | MAX |  | \* |  |  |
| 4 | Photo | varchar | 200 |  |  |  |  |
| 5 | CreatedDate | date |  |  | \* |  |  |
| 6 | UserID | int |  |  | \* | FK |  |
| 7 | Status | bit |  |  | \* |  |  |
| 8 | ArticleView | int |  |  |  |  |  |
| 9 | Enabled | bit |  |  | \* |  |  |

**7. Table tblCharacters**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | CharacterID | int |  | \* | \* | PK |  |
| 2 | CharacterName | nvarchar | MAX | \* | \* |  |  |
| 3 | Story | nvarchar | MAX |  | \* |  |  |
| 4 | Estate | nvarchar | MAX |  |  |  |  |
| 5 | Enabled | bit |  |  | \* |  |  |
| 6 | Description | nvarchar | MAX |  | \* |  |  |
| 7 | Image | nvarchar | MAX |  |  |  |  |
| 8 | PeriodID | int |  |  | \* | FK |  |

**8. Table tblBooks**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | BookID | int |  | \* | \* | PK |  |
| 2 | Title | nvarchar | 100 | \* | \* |  |  |
| 3 | Author | nvarchar | 50 |  | \* |  |  |
| 4 | Category | nvarchar | 50 |  |  |  |  |
| 5 | Description | nvarchar | MAX |  | \* |  |  |
| 6 | PageNumber | int | 50 |  |  |  |  |
| 7 | YearOfPublication | varchar | 5 |  |  |  |  |
| 8 | CreatedDate | date |  |  | \* |  |  |
| 9 | Publisher | nvarchar | MAX |  | \* |  |  |
| 10 | Price | float | 64 |  |  |  |  |
| 11 | Cover | varchar | 200 | \* | \* |  |  |
| 12 | Enabled | bit |  |  | \* |  |  |

**9. Table tblVideos**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | VideoID | int |  | \* | \* | PK |  |
| 2 | Title | ntext |  | \* | \* |  |  |
| 3 | Video | varchar | 200 | \* | \* |  |  |
| 4 | Description | ntext |  |  |  |  |  |
| 5 | CreatedDate | date |  |  | \* |  |  |
| 6 | Enabled | bit |  |  | \* |  |  |

**10. Table tblComments**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | CommentID | int |  | \* | \* | PK |  |
| 2 | CreatedDate | date |  |  | \* |  |  |
| 3 | UserID | int |  |  | \* | FK |  |
| 4 | ArticleID | int |  |  | \* | FK |  |
| 5 | Enabled | bit |  |  | \* |  |  |
| 6 | CommentText | ntext |  |  | \* |  |  |

**11. Table tblPeriod**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | PeriodID | int |  | \* | \* | PK |  |
| 2 | PeriodName | nvarchar | 50 | \* | \* |  |  |
| 3 | Enabled | bit |  |  | \* |  |  |
| 4 | Image | ntext |  |  |  |  |  |
| 5 | Description | nvarchar | MAX |  |  |  |  |
| 6 | year | nvarchar | 50 |  |  |  |  |

**12. Table tblRepliesComment**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | ReplyID | int |  | \* | \* | PK |  |
| 2 | CommentText | ntext |  |  | \* |  |  |
| 3 | CreatedDate | date |  |  | \* |  |  |
| 4 | Enabled | bit |  |  | \* |  |  |
| 5 | CommentID | int |  |  | \* | FK |  |
| 6 | ArticleID | int |  |  | \* | FK |  |
| 7 | UserID | int |  |  | \* | FK |  |

**13. Table tblVotes**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | VoteID | int |  | \* | \* | PK |  |
| 2 | UserID | int |  |  | \* | FK |  |
| 3 | ArticleID | int |  |  | \* | FK |  |
| 4 | VoteLevel | int |  |  | \* |  |  |

**14. Table tblTags**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | TagID | int |  | \* | \* | PK |  |
| 2 | TagName | nvarchar | 100 | \* | \* |  |  |

**15. Table tblTagArticle**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | ArticleID | int |  |  | \* | FK |  |
| 2 | TagID | int |  |  | \* |  |  |

**16. Table tblPeriodArticle**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | PeriodID | int |  | \* | \* | PK |  |
| 2 | ArticleID | int |  | \* | \* | PK |  |

**17. Table tblPeriodVideo**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | PeriodID | int |  | \* | \* | PK |  |
| 2 | VideoID | int |  | \* | \* | PK |  |

**18. Table tblHistoricalSiteImages**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | ImageID | int |  | \* | \* | PK |  |
| 2 | HistoricalSiteID | int |  |  | \* | FK |  |
| 3 | Description | nvarchar | MAX |  | \* |  |  |
| 4 | Link | nvarchar | MAX |  | \* |  |  |

**19. Table tblUsersRoles**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Unique** | **Not Null** | **PK/FK** | **Notes** |
| 1 | UserID | int |  |  | \* | FK |  |
| 2 | RoleID | int |  |  | \* | FK |  |