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ACEDatabase Design **-** Mobile Application

**(iPhone and iPod Touch)**

Version 1.0

July 5th , 2012

# Introduction

*This document describes the High Level Database Design for the Mobile Data-Entry. Business entities and attributes are modeled as table and columns. Attributes are stored directly in the main table, except in cases where there is one-to-many relationships (multi value attributes). In such cases, separate tables are created.*

# Referenced Documents

|  |  |  |
| --- | --- | --- |
|  | **Name of the file** | **Description** |
| *1* | *Aditi\_FS\_NECC\_Mobile\_v1.0.pdf* | *Functional Requirements Specification For ACE - Mobile Application (iPhone and iPod Touch)* |
| *2* | *Technical Design Document - ACE Mobile Application.docx* | *Technical Design Document for the Mobile Application.* |

# Change Log

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Versions** | **Updated By** | **Description** | **Updated On** | **Reviewed By** | **Comments** |
| *1.0* | *Deepak M* | *Draft version of NECC Mobile Database design* | *5-July-2012* |  |  |

# Scope

*The document discusses Entity Relationship (ER) diagram and table structures for local database used by the ACE Mobile Application. This document is modified to hold ER diagram and table structures for Data.*

# Assumptions

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# Complete ER Diagram



**Database schema details**

**ACEUser:** Stores the logged in user information.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| ACEUserId | Int | Not Null | Primary key to uniquely identify the user. IDENTITY,SEED = 1, INCREMENT=1 |
| UserId | Int | Not Null | Actual ACE User Id from ACEDB. |
| SessionId | UniqueIdentifier | Not Null | Unique identifier to identify the session. |
| LoginTime | DateTime | Not null | Logged in time. |
| LastSyncTime | DateTime | Not null | Stores the last successful sync time. |

**ACEStudent:** Stores the selected Student information.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| ACEStudentId | Int | Not Null | Primary key to uniquely identify the Student. IDENTITY,SEED = 1, INCREMENT=1 |
| ACEUserId | Int | Not Null | FK - ACEUser |
| StudentId | Int | Not Null | Student Id from ACE DB. |
| Name | Varchar(150) | Not Null | Student’s abbrivated name. |
| SchoolName | Varchar(150) | Not Null | Name of school. |
| TeamName | Varchar(150) | Not Null | Name of team. |
| LastSyncTime | Varchar(150) | Not Null | Last successful sync time. |

**StuCurriculum:** Stores the curriculum information for an student.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| StuCurriculumId | Int | Not Null | Primary key to uniquely identify the Student curriculum. IDENTITY,SEED = 1, INCREMENT=1 |
| ACEStudentId | Int | Not Null | FK - ACEStudent |
| StudentCurriculumId | Int | Not Null | StuCurriculumId from ACEDB. |
| CurriculumTypeId | Int | Not Null | FK-CurriculumType |
| CurrentVersionId | Int | Null | Stores the current Version Id (Provided by WebService.) |
| LastSyncTime | Int | Not Null | Last successful sync time. |
| Name | Varchar(1000) | Not Null | Name of curriculum. |
| ObjectiveNo | Varchar(20) | Not Null | Objective Number of curriculum. |

**MstCurriculumType:** Stores the curriculum type Information (SA/TA/IT).

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| MstCurriculumId | Int | Not Null | Primary key to uniquely identify the Curriculum Type. |
| Name | Varchar(20) | Not Null | Name |

**MstTrialType:** Stores the master data for trial types used in dataentry.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| MstTrialTypeId | Int | Not Null | Primary key to uniquely identify the Trial Type. |
| Name | Varchar(20) | Not Null | Name |

**SALevel:** Stores the level information of students SA Curriculum.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| SALevelId | Int | Not Null | Primary key to uniquely identify the SA Level. IDENTITY,SEED = 1, INCREMENT=1 |
| ACESALevelId | Int | Not Null | SALevelId from ACEDB. |
| StuCurriculumId | Int | Not Null | FK-StuCurriculum |
| Name | Varchar(20) | Not Null | Name of Level. |
| CurrentVersionId | Int | Not Null | Stores the current Version Id (Provided by WebService.) |

**SASubLevel:** Stores the SubLevel information of students SA Curriculum.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| SASubLevelId | Int | Not Null | Primary key to uniquely identify the SA Level. IDENTITY,SEED = 1, INCREMENT=1 |
| SALevelId | Int | Not Null | FK-SALevel |
| ACESASubLevelId | Int | Not Null | SASubLevelId from ACEDB. |
| Skill | Varchar(50) | Not Null | Skill of SubLevel |
| Name | Varchar(50) | Not Null | Name of SubLevel. |

**SAPastSession:** Stores the past SA session information for a particular SubLevel.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| SAPastSessionId | Int | Not Null | Primary key to uniquely identify the SA Past Sessinons. IDENTITY,SEED = 1, INCREMENT=1 |
| SASubLevelId | Int | Not Null | FK-SASubLevel |
| Date | Varchar(50) | Not Null | Date |
| Step | Varchar(50) | Not Null | Step |
| Type | Varchar(50) | Not Null | Type |
| Score | Varchar(50) | Not Null | Score |
| Status | Varchar(50) | Not Null | Status |
| Order | Varchar(50) | Not Null | Order of display. |

**ActiveStudentSession:** Stores the students for which session is started.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| ActiveStudentSessionId | Int | Not Null | Primary key to uniquely identify the active student session. IDENTITY,SEED = 1, INCREMENT=1 |
| StuCurriculumId | Int | Not Null | FK-StuCurriculum |
| IsDirty | Bit | Not Null | Flag to check if its dirty |
| LastSyncTime | DateTime | Null | Last successful Sync time. |

**SAStep:** Stores the steps included in the students curriculum.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| SAStepId | Int | Not Null | Primary key to uniquely identify SA Step. IDENTITY,SEED = 1, INCREMENT=1 |
| ACESAStepId | Int | Not Null | Step Id from ACEDB |
| SALevelId | Int | Not Null | FK-SALevel |
| Name | Varchar(20) | Not Null | Name of the Step. |

**MstStatus:** Stores the master data for Status.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| MstStatusId | Int | Not Null | Primary key to uniquely identify the Status. |
| Name | Varchar(50) | Not Null | Name |

**MstSetting:** Stores the master data for Setting.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| MstSettingId | Int | Not Null | Primary key to uniquely identify the Setting. |
| Name | Varchar(50) | Not Null | Name |

**SAActiveSession:** Stores the Active Session information for an SA Curriculum.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| SAActiveSessionId | Int | Not Null | Primary key to uniquely identify the SA Active Session. IDENTITY,SEED = 1, INCREMENT=1 |
| ActiveStudentSessionId | Int | Not Null | FK-ActiveStudentSession |
| MstSettingId | Int | Not Null | FK-MstSetting |
| MstStatusId | Int | Not Null | FK-MstStatus |
| SASubLevelId | Int | Not Null | FK-SASubLevel |
| MstTrialTypeId | Int | Not Null | FK-MstTrialType |
| StepId | Int | Not Null | FK-SAStep |
| TotalPlus | Int | Not Null | Total value of Plus |
| TotalPlusP | Int | Not Null | Total value of PlusP |
| TotalMinus | Int | Not Null | Total value of Minus |
| TotalMinusP | Int | Not Null | Total value of MinusP |
| TotalNR | Int | Not Null | Total value of NR |
| Date | DateTime | Not Null | Date time of the session |
| Staff | Varchar(50) | Not Null | Staff Name |
| Order | Int | Not Null | Order of dataentry |
| IsSummarized | Bit | Not Null | Specifies whether trials are summarized |
| IsFinished | Bit | Not Null | Specifies whether data entry/session has finished. |

**SAActiveTrial:** Stores the active trial information for an SA curriculum session.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| SAActiveTrialId | Int | Not Null | Primary key to uniquely identify SA trial. IDENTITY,SEED = 1, INCREMENT=1 |
| SAActiveSessionId | Int | Not Null | FK-SAActiveSession |
| TrialNumber | Int | Not Null | Trial number |
| Plus | Bit | Not Null | Specifies whether user selected plus for current trial |
| PlusP | Bit | Not Null | Specifies whether user selected plusP for current trial |
| Minus | Bit | Not Null | Specifies whether user selected Minus for current trial |
| MinusP | Bit | Not Null | Specifies whether user selected MinusP for current trial |
| NR | Bit | Not Null | Specifies whether user selected NR for current trial |

**ITContext:** Stores the context information of students IT Curriculum.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| ITContextId | Int | Not Null | Primary key to uniquely identify IT context. IDENTITY,SEED = 1, INCREMENT=1 |
| ACEITContextId | Int | Not Null | Context Id from ACEDB |
| StuCurriculumId | Int | Not Null | FK-StuCurriculum |
| Name | Varchar(50) | Not Null | Name of the Context. |

**ITMIP:** Stores the most intrusive prompts of students IT Curriculum.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| ITMIPID | Int | Not Null | Primary key to uniquely identify IT mip. IDENTITY,SEED = 1, INCREMENT=1 |
| ACEITMIPId | Int | Not Null | MIP Id from ACEDB |
| StuCurriculumId | Int | Not Null | FK-StuCurriculum |
| Name | Varchar(50) | Not Null | Name of the Context. |

**ITPastSession:** Stores the past session information for an IT Curriculum.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| ITPastSessionId | Int | Not Null | Primary key to uniquely identify IT session. IDENTITY,SEED = 1, INCREMENT=1 |
| ITContextID | Int | Not Null | FK-ITContext |
| WeekEnding | Varchar(50) | Not Null | Week Ending |
| TrialType | Varchar(50) | Not Null | Trial Type |
| Opportunities | Varchar(50) | Not Null | Opportunities |
| MIP | Varchar(50) | Not Null | MIP |
| Order | Varchar(50) | Not Null | Display order |

**ITActvieSession:** Stores the active session information of students IT curriculum.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| ITActiveSessionId | Int | Not Null | Primary key to uniquely identify the active IT session. IDENTITY,SEED = 1, INCREMENT=1 |
| ActiveStudentSessionId | Int | Not Null | FK-ActiveStudentSession |
| MstTiralTypeId | Int | Not Null | FK-MstTiralType |
| ITContextId | Int | Not Null | FK-ITContextId |
| ITMIPId | Int | Not Null | FK-ITMIP |
| MstStatusId | Int | Not Null | FK-MstStatus |
| StepId | Int | Not Null | -- |
| TotalPlus | Int | Not Null | Total value of Plus |
| TotalPlusP | Int | Not Null | Total value of PlusP |
| TotalMinus | Int | Not Null | Total value of Minus |
| TotalNR | Int | Not Null | Total value of NR |
| Staff | Varchar(50) | Not Null | Staff name |
| IsSummarized | Bit | Not Null | Specifies whether trials are summarized |
| IsFinished | Bit | Not Null | Specifies whether data entry/session has finished. |

**ITActiveTrial:** Stores active trial information of current IT session.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| ITActiveTrialId | Int | Not Null | Primary key to uniquely identify IT trial. IDENTITY,SEED = 1, INCREMENT=1 |
| ITActiveSessionId | Int | Not Null | FK-ITActiveSession |
| TrialNumber | Varchar(50) | Not Null | Trial Number |
| Plus | Bit | Not Null | Specifies whether Plus has been selected for current trial |
| PlusP | Bit | Not Null | Specifies whether PlusP has been selected for current trial |
| Minus | Bit | Not Null | Specifies whether Minus has been selected for current trial |
| NR | Varchar(50) | Not Null | Specifies whether NR has been selected for current trial |

**TACurriculum:** Stores the TA curriculum information.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| TACurriculumID | Int | Not Null | Primary key to uniquely identify TA curriculum. IDENTITY,SEED = 1, INCREMENT=1 |
| StuCurriculumId | Int | Not Null | FK-StuCurriculum |
| MstChainingSequenceId | Int | Not Null | FK-MstChainingSequence |

**MstChainingSequence:** Stores the chaining sequence information of ta curriculum.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| MstChainingSequenceId | Int | Not Null | Primary key to uniquely identify chaining sequence. |
| Name | Varchar(20) | Not Null | Name |

**TAPromptStep:** Stores the Prompt steps of a student’s TA curriculum.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| TAPromptStepId | Int | Not Null | Primary key to uniquely identify TA curriculum. IDENTITY,SEED = 1, INCREMENT=1 |
| TACurriculumId | Int | Not Null | FK-TACurriculum |
| ACETAPromptStepId | Int | Not Null | Prompt Step Id from ACEDB |
| Name | Varchar(20) | Not Null | Name |

**TAStep:** Stores the steps of a student’s TA curriculum.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| TAStepId | Int | Not Null | Primary key to uniquely identify TA curriculum. IDENTITY,SEED = 1, INCREMENT=1 |
| TACurriculumId | Int | Not Null | FK-TACurriculum |
| ACETAStepId | Int | Not Null | Step Id from ACEDB |
| Name | Varchar(20) | Not Null | Name |
| Description | Varchar(2000) | Not Null | Description |
| Order | Int | Not Null | Display Order |
|  |  |  |  |

**TAPastSession:** Stores the past session details of students TA curriculum.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| TAPastSessionId | Int | Not Null | Primary key to uniquely identify past TA past session. IDENTITY,SEED = 1, INCREMENT=1 |
| TACurriculumId | Int | Not Null | FK-TACurriculum |
| Date | Varchar(20) | Not Null | Entry Date |
| TrialType | Varchar(20) | Not Null | TiralType |
| StepIndependent | Varchar(20) | Not Null | Stores FSI/TSI/LSI |
| TrainingStep | Varchar(20) | Not Null | Training Step |
| PromptStep | Varchar(20) | Not Null | Prompt Step |
| Order | Int | Not Null | Display Order |

**TAActiveSession:** Stores the active session details of students TA Curriculum.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| TAActiveSessionId | Int | Not Null | Primary key to uniquely identify past current TA session. IDENTITY,SEED = 1, INCREMENT=1 |
| ActiveStudentSessionId | Int | Not Null | FK-ActiveStudentSession |
| TACurriculumId | Int | Not Null | FK-TACurriculum |
| MstTrialTypeId | Int | Not Null | FK-MstTrialTypeId |
| TATrainingStepId | Int | Not Null | FK-TAStep |
| MstPromptStepId | Int | Not Null | FK-MstPromptStep |
| Staff | Varchar(50) | Not Null | Staff Name |
| TAStepIndependentId | Int | Not Null | FK-TAStep |
| MstSettingId | Int | Not Null | FK-MstSetting |
| MstStatusId | Int | Not Null | FK-MstStatus |
| NoOfTrials | Int | Not Null | Total number of trials |
| IsSummarized | Bit | Not Null | Specifies whether the trails are summarized |
| IsFinished | Bit | Not Null | Specifies whether dataentry/session has finished. |

**TAActiveTrial:** Stores the current active TA trial information.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Null Option** | **Description** |
| TAActiveTrialId | Int | Not Null | Primary key to uniquely identify past TA active trial . IDENTITY,SEED = 1, INCREMENT=1 |
| TAActiveSessionId | Int | Not Null | FK-TAActiveSessionId |
| TAStepId | Int | Not Null | FK-TAStepId |
| TAPromptStepId | Int | Not Null | FK-TAPromptStepId |