Math Matters

Admin Guide
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Admin utility is used for creating player accounts from existing student information from school database. Player database is specific to 3D Games project and does not in any way alter the school database. Administrator of the school is responsible for importing student information from school database into player database using this admin utility.

The first step in importing student data into player database is to export the student information into comma separated format in a text file with the following column order:

```
studentid,lastname,firstname,grade,gender,schoolId,teacherId
```

This file needs to be text file not word document. Using admin utility we can use this file to import student information as detailed in next sections. Once the student information is created, player account is created automatically by admin utility for each student with the username is same as studentid and password is first four characters of lastname followed by studentid.

A guest account is also created with guest as password to allow students/any one with no account setup yet. Since player performance is logged to database as soon as the player answered questions etc., multiple logins with same user name could potentially overwrite the performance information in database.

The admin utility also has features for viewing student statistics and to get report of student performance. As explained below with the help of diagrams.
ACCESSING ADMIN UTILITY

Open a browser in IE or FireFox and type in the following command (this must be accessed on the server, so please write this down and send it to your Server Administrator):

http://localhost:9090/mmadmin/jsp/index.jsp

This brings up the Admin Login screen as shown below:

![Admin Login Screen]

By default both username and password are set to ‘mmadmin’ which can be changed by using the links above. Login to admin utility by entering the username and password and clicking on Login button.

If the login is successful it will display the homepage as below with several options to select as required.
PLAYER ADMINISTRATION FUNCTIONS

PLAYER ADMINISTRATION

- Import Student Data
- Show Current Users
- Add New Games
- Export Performance Data
- Display Statistics
- Display Report

Logout
All player administration functions are explained in detail in following sections.

**Import Student Data into Player Database**

This operation imports student information from a text file with records exported comma separated columns in the following order (Please note that there are no spaces).

```
studentId, schoolId, lastname, firstname, grade, gender, schoolId, teacherId
```

The order of the columns is very important since the player records are created using this information which is copied into respective columns.

To start import operation click on ‘Import Student Data’ which displays the following screen for the import function.

Click **Browse** to browse to the text file that contains previously exported student information from school database.

OR
Type in the full path of the file including file name which contains the student information.

Then click on **Import** button.

Upon successful import of the data, it goes back to home page again for selecting different option(s).

**Note:**

Multiple imports of the same text file will not create duplicate records as Admin Utility filters students who already have player accounts.
Show Current Users

This option displays all the users currently imported and assigned player accounts in the player database. This can be used to quickly glance at the students list. Click on the link **Show Current Users** on the home page to display current users.

The link ‘Home’ on right side of the screen can be used to navigate back to homepage.

Clicking on any **PlayerID** in above screen shows details of the users and also an option to delete the user just in case the student is no longer active.
Check or uncheck to assign games to the player’s profile followed by a click on Update User button to make changes to the profile.

Click the Delete User to delete the user from the database which brings up a pop message to make sure that the user not deleted accidentally.

Click Ok or Cancel to confirm delete action
Add New Games

Add New Games is not a frequently used operation and is meant for future enhancement and addition of games manually.

Click on the link Add New Games on the home page which displays the Game Administration screen with a listing of games currently existing in the database.

Key in the name of the new game, its description, type, and grade level

Click Save to add the game to the list of games
Exporting Performance Data

The function exports relevant data to a file or database. The following information exported to specified (Please note that there are no spaces):

@studentid,schoolid,gamename,status,gamescore,averageattempts,avgtime

Click on the link Export Performance Data on the home page which displays the Export Performance Data screen as below.

Data can be exported to file (in comma separated form or to another database given the details of database.

To export data to a file, check the checkbox and then click Browse to browse to the text file you want to export the performance data (alternatively type in the full path to the file including the file name). Click the Export button.

To export to another database just key in the database information and click Export button.
Display Statistics

Player statistics include question answer performance along with time takes for answering questions. Click on the link Display Statistics on the home page to go to Player Statistics screen. There is option to sort the results based on score and average time taken.

Click on a PlayerID to view detailed statistics for the player as below. There is option to sort the results based on score and average time taken. Sort can be done both ascending and descending order.
## Detailed Statistics for 121

<table>
<thead>
<tr>
<th>GameName</th>
<th>Question</th>
<th>Result</th>
<th>Score</th>
<th>Number of Attempts</th>
<th>Total Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Towers of Zahlen</td>
<td>TZ1</td>
<td>correct</td>
<td>0</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Towers of Zahlen</td>
<td>TZ2</td>
<td>correct</td>
<td>0</td>
<td>3</td>
<td>40</td>
</tr>
<tr>
<td>Towers of Zahlen</td>
<td>TZ3</td>
<td>incorrect</td>
<td>0</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Towers of Zahlen</td>
<td>TZ4</td>
<td>incorrect</td>
<td>0</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Towers of Zahlen</td>
<td>TZ5</td>
<td>incorrect</td>
<td>0</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Towers of Zahlen</td>
<td>TZ6</td>
<td>correct</td>
<td>0</td>
<td>1</td>
<td>30</td>
</tr>
</tbody>
</table>
Display report

This option is used to show a performance report of the student. Click on the link **Display report link** on the home page to get the **Player report** screen.

Enter PlayerID and School ID to get the player report. The screen below shows report in requested format.
Math Matters in Careers an FLDOE Partnership Grant (ECSD and UWF)

Date: Wed Sep 26 18:31:55 GMT 2007  
School ID: sch12  
Student ID: 1201

<table>
<thead>
<tr>
<th>GameName</th>
<th>Math Question Type</th>
<th>Number of Questions</th>
<th>Number of Attempts</th>
<th>Total Time (secs)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>TheProviders</td>
<td></td>
<td>5</td>
<td>15</td>
<td>616</td>
<td>70</td>
</tr>
</tbody>
</table>
Logout

Click on the Home link to go back to the home page from any screen you are in which displays the Player Administration screen

Click on Logout to exit the admin utility application
Database Schema

The database schema for the Math Matters database consists of tables with vital information to authenticate a player before starting the game. This function is critical to generate a performance report for each player, and to retrieve any state information (if the player stopped at a specific level in previous session). The database schema design is outlined in the diagram below:
Details of each table are provided below:

**Student**
This table contains information about the student. The information (only limited columns) is imported from the university database using Admin utility in **Read Only** mode. The process helps to validate the player as a student in the university, and to generate an accurate performance report.

**Games**
This table contains a list of the games, their description, and the grade level the game is designed for. When a user creates an account, games are assigned to the player based on the player’s grade level.

**Player**
This table contains player information. A player is a student, and the information in the table is used to authenticate his username and password, and to assign games to his profile. Other tables in the schema refer to this table for player information. Admin utility creates a player, and assigns the player a username and a password.

**PlayerToGame**
This table lists games assigned to each player based on his grade level.

**QuestionBank**
This table contains questions available for all grade levels. During runtime the games retrieve questions from this table. Currently this table contains questions as well as their answers, but this may change if we program to generate the questions dynamically.

**GameToQuestion**
This table stores the mapping between games and their questions, and is retrieved based on the player and grade level.

**PlayerLog**
All the activity during the game is logged in this table. This information helps to analyze the player’s performance at the end of the games. It includes number of attempts made to answer the questions, and if the answer to the question is correct.

**GameState**
This table stores the state of the game information from where the player exits the game. This makes it easy for the student to return to the game and start playing from where he last quit it.