2012

User´s Manual

Take Row v0.9.5

A quick reference guide to use Take Row Application on your Blackberry® device

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Software User's Manual
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Introduction

Student's attendance in the classroom is a matter which concerns to any professor who teaches in any level of education, however, the longer the number of students is, the greater will be the time that takes teachers into reviewing its student attendance, and the shorter the time spent to teach their classes.

This is why a software tool was developed trying to enable teachers to review their student attendance in a more automated manner; this is to allow teachers to take more advantage and maximize the time in the classroom. The above was made looking for a technology reliable enough and that it was within the reach of the majority of the pupils of any school.

If this tool is correctly and properly used by both students and teachers, there will be a great advantage for both of them, because optimizing the process of taking assistance using a technology that is available to the majority of users, will cause students do not have to invest anything to be able to be included in this process.

What will the software do?

Simply, it will revise the student attendance by inspecting the presence of their cellphones using Bluetooth ® technology, which is available nowadays in most cellphones. At the moment of passing assistance, the application will try to connect via Bluetooth ® with the student device, if the attempt is successful, it will mark the student's attendance as attended, and if the application does not detect the presence of the student phone, it will mark their attendance as "missed".

You also can take assistance conventionally, i.e. by hand. To do this, it was implemented an additional screen where the main student information will be displayed (name and number of registration) where, through the use of buttons, attendance of the student can be registered as "attended" or "missed".

At the end of each process of taking attendance (using Bluetooth connections or doing it by hand) the application will generate a report in an XML formatted file. This fill will contain essential data like the name of the class, the id of the class, if any, the class group, and the date the report was generated, as well as the student information and its attendance status. Further in this manual, the structure of this XML file will be explained in detail.

What it will not do.

This tool will not generate the XML document containing the main information of the students (StudetnsInfo.xml), this document will have to be created by an application external to Take Row v0.9.5. More details of the structure which must have this file will be explained in this document, so that it can be interpreted correctly by our application. If the file does not have the correct format, the application will not be able to function correctly.

In the same way, this version of the application will not detect some devices such as IPhones, Laptops, or desktops, due to the compatibility of the Bluetooth serial port, as well as some features of deployed software.
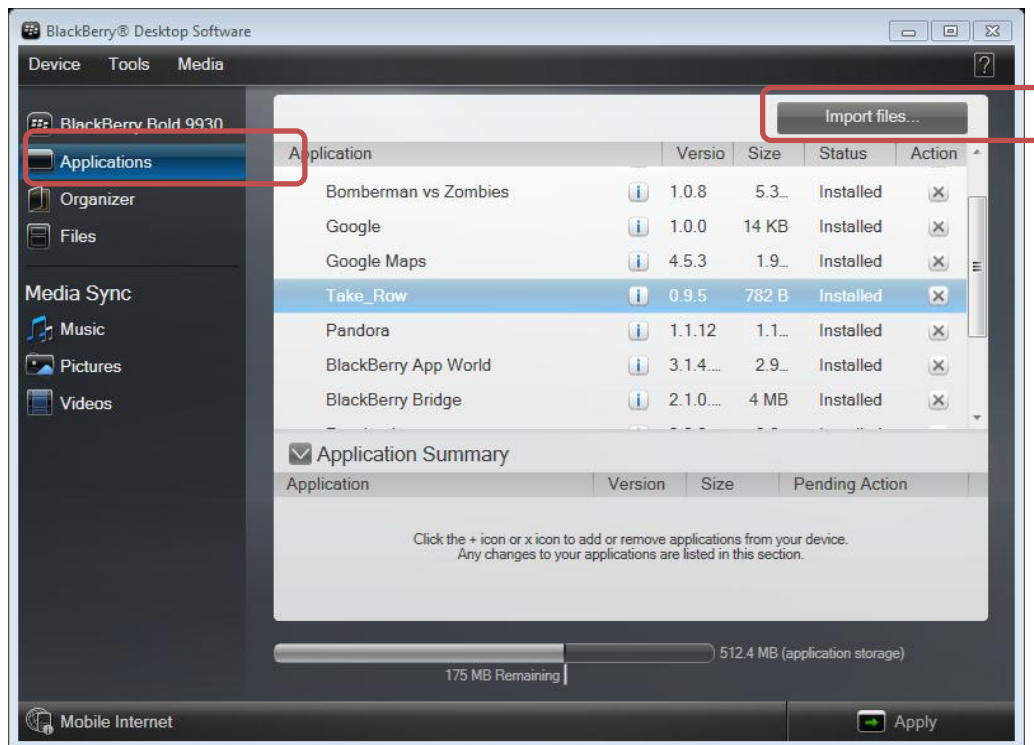
This version of the software will not run under Blackberry® devices with an operative system lower than OS Blackberry® 4.5.0.

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How to install Take Row v0.9.5

To install Take Row v0.9.5 on your Blackberry® device, you will need to download and install Blackberry® Desktop Software, which can be downloaded from the following link: BlackBerry Desktop Software .

 Once Blackberry® Desktop Software is installed on your PC, locate Take Row v0.9.5 on your PC directories and go to the Application to load it on your device.

The second step is to save the file "StudentsInfo.xml" containing information of all your groups on your device, to do so, install a copy of your XML file on the following directory of your Blackberry® device (Refer to Appendix A for information about this file format):

"//device/home/user/documents//"

For further information on how to install and manage Blackberry® apps on your device, please refer to one of the following articles:

1. Guide to installing applications on the blackberry
2. Load an Application onto Your BlackBerry

Initial screen

In the initial window you will find a list of class groups, and three buttons with different functionalities.

The first element of the initial screen is a list that will allow to select the class group, if more than one are registered, which will take attendance, once the class group is selected and initiated the process of taking assistance, either manual or automatic way, this group cannot be changed until an XLM report with the results of the process is generated.

"Take Row" will start the main process of the application, to take row using Bluetooth® serial port connections, once this button is pressed, the process will not stop after it checks for every single device registered.

"Take Row Manually" will check student attendance in a more conventional manner; it will show student information one by one, and the user will select the attendance status of the current student.
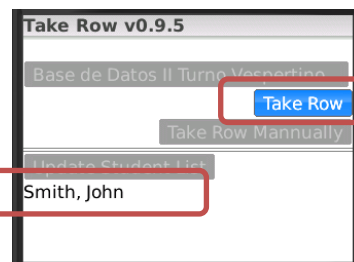
"Update Student List" will simply update information of students of the current selected group. This function will be used mostly the first time the user runs Take Row v0.9.5 to register information of the device of the students of the class.

Take Row

This is the main process of Take Row v0.9.5, and it will detect the presence of the student cellphones, previously registered using the "Update Student List" button. One by one, all students on the list that have a registered device will be tracked via Bluetooth® ports by Take Row v0.9.5.

Each time the application attempts to connect to a student device, the name of the student   will be displayed on the bottom of the main screen. The name will remain on the screen as long as the application is trying to connect to his or her device.

If the attempt to connect to another device is successful, it

will mark the student that registered that device as "attended", otherwise it will mark attendance status as "missed", and it will try to connect to the next available device.

In order to get better accurateness, this process will be repeated three times automatically, but once a device is detected, the application will not try to reconnect to it. If a student has not registered his or her device, the application will only show the student name for one second, and after that time, it will try the next student registered.
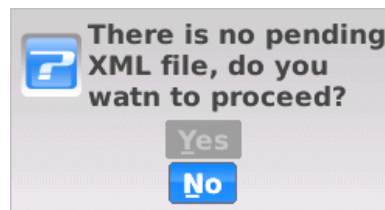
Once the "Take Row" is initiated, the user will not be able to stop it, unless he or she closes the application using the "ESC" ⟨⟩ button, or also by selecting "close" option from the window's menu. If an attempt to close the application, while an attendance process is running, the user will be prompted to proceed or not.

If the user locks the cellphone or clicks the "END" ☎ button, the application will continue running on background and it can be restored at any time.

Generating the XML report

After the "Take Row" process is completely done, the user will have the option to save the collected information in an XML file by clicking the Create XML file" menu option. Whenever the user tries to generate an XML report and attendance has not been checked or the file has been already generated, he or she will be prompted to create the file or not.

If the user does not create the XML file after checking attendance, "Take Row" v0.9.5 will generate the file automatically after the user closes the application.

The name of the generated file will be formatted as follows:

Class Name   +   Group Name   +   Date Created   +   Hour Created   +   ".xml"

Where **Date Created** will be read as: **Year-Month-Day**;

And **Hour Created** will be read as: **Hours_Minutes_Secconds**.

Such as:

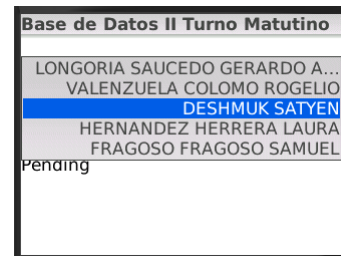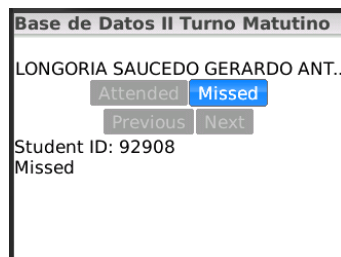"Base de Datos II Mat 2012-11-13 17_54_23.xml"

Take Row Manually Screen

"Take Row Manually" screen will be used to check student attendance in a more conventional way. In this screen the user will have three options in order to filter student list.

These three options will be: "Take Row to all students", "Take Row to Missed Students", and "Take Row to Students with no device registered". The user will have to decide which option is he, or she, going to use depending on the results of the Bluetooth® process. It is advised to the user to use firstly the Bluetooth® process, before using one of the mentioned options.

There are three main controls used on this screen, the first is a list control which shows the student list. Using this control, the user will be able to select students to change their attendance status. To do so, there are the next two controls, The "Attended" button, and the "Missed" button.
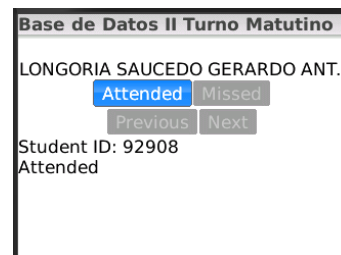
Right after the user clicks one of these buttons the selected choice will be saved in the device memory, until it is saved in a XML report, or after the user finishes the application. Meanwhile, each time the attendance status of any student is changed, the next student name, if any student is left, will be shown on the control list to set the new attendance status.
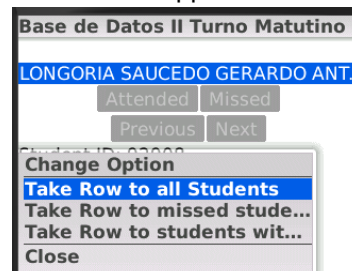
The student can also select the student name in the list, either by selecting the name directly in the control list, or by clicking the "Next" or "Previous" buttons.

Filter List Option

After checking attendance using Bluetooth® ports, sometimes it can happen that some students either forget their cell, or that they have never registered their devices. The "Take Row Manually" process was implemented thinking in this kind of contingencies. And to do so, as mentioned before, the user will have three options to check attendance manually.

The first option will be "Take Row to all Students", with which the user will check attendance status of all student
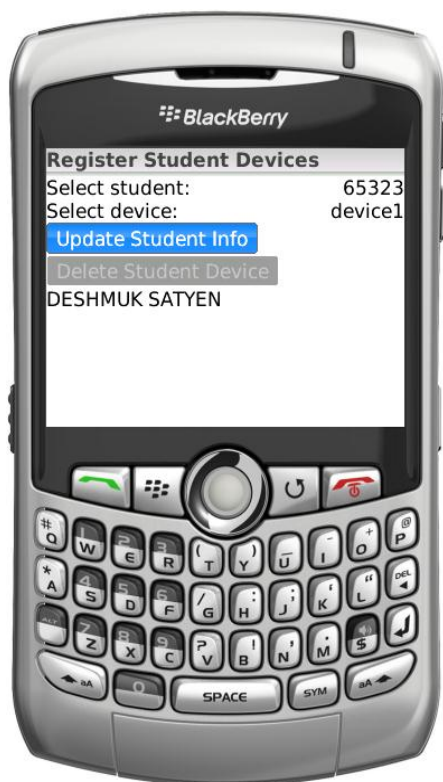
registered on the list, this means that no filter will be applied to this process and all students will be added to the student control list. The information collected on this process will replace any information collected by a previous process that was already used by the user.

The second option, "Take Row to Missed Students", will check attendance of students whose attendance status is either missed or pending. With this option, if a student that has already registered his or her device, for any reason, is not carrying it with him or her, the user can change this student attendance status from "missed" to "attended". It will also check attendance of students that has no device registered yet, changing these student status from "Pending" to "Attended" or "Missed", depending on the student attendance. As well as the first process, any information collected during this process, will replace any information collected on previous processes.

A third option was define to check attendance of only the students that has no device register. This option will load the student name control list with the name of the students that have not registered their device, no matter the status of their attendance. As well as the last two processes, any information collected during this process, will replace any information collected on previous processes.

Register Student Devices Screen

On this screen, the user will be able to register or update student information regarding to their device names. To do so, the user will select the student Id number from the first control. Whenever a student Id is selected here, the name of the student will be shown under the last button of this screen ("Delete Student Device").

After the desired student is selected, the user needs to select the device name from the next control list. To load this control list, the user needs first to pair his or her phone with all the devices that are going to be registered as student devices. For further information on how to pair your device with another device, the user should refer to the device user´s manual.

When the device and the student Id are already selected, click the "Update Student Info" to register the selected device to the selected student.
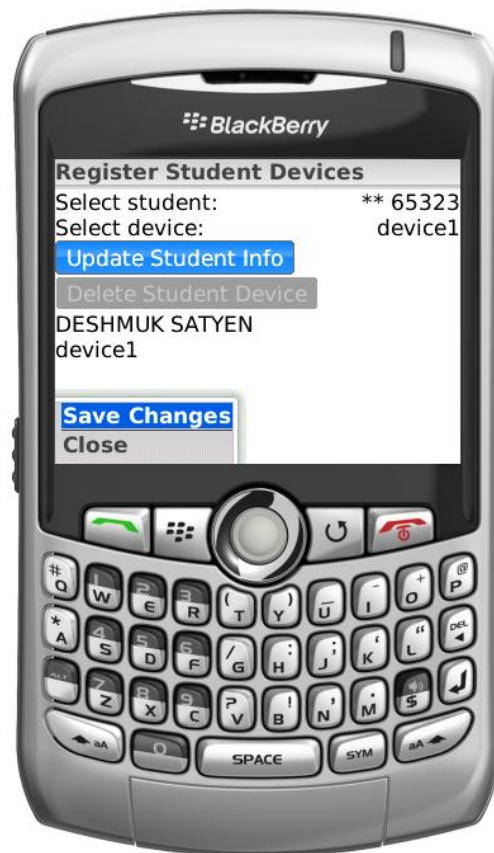
Register Student Devices
Select student: ** 65323
Select device: device1
Update Student Info
Delete Student Device
DESHMUK SATYEN
device1

Whenever a student Id is paired with a device name, two stars will be placed before her or his student id number, and the name of the device will be shown under the student name every time the student is selected from the student list.

To delete or clear student device information, click "Delete Student Device" button, this will release the device registered from the student.

Once the device is registered to a student, if it is necessary to change this device, the user first has to delete the device from the student, and then proceed to select the desired device to update information.

At any time, the user can save any changes made to the list. If the user makes any change to the list and attempts to close this screen without saving the changes, he or she will be prompted to save or discard these changes.

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Appendix A

The file described on
How to install Take Row
will have to have the
next format structure:

```
<StudentsInfo>
 <Class>
  <classid>""</classid>
  <classname>""</classid>
  <group>""</group>
  <Students>
   <Student>
    <id>""</id>
    <name>""</name>
    <devicename>""</devicename>
   </Student>
  </Students>
 <Class>
</StudentsInfo>
```

```xml
<?xml version="1.0" encoding="UTF-8"?>
<StudentsInfo>
  - <Class>
      <classid>IEC 1902</classid>
      <classname>Base de Datos II</classname>
      <group>B</group>
    - <Students>
      - <Student>
          <id>68605</id>
          <name>LONGORIA CRUZ ANTONIO URIEL</name>
          <devicename>Alexxuz</devicename>
        </Student>
      - <Student>
          <id>73405</id>
          <name>FEMAT ESPARZA EVERARDO</name>
          <devicename>noDeviceFound</devicename>
        </Student>
      - <Student>
          <id>80857</id>
          <name>RODRIGUEZ QUIROZ RODOLFO</name>
          <devicename>noDeviceFound</devicename>
        </Student>
      - <Student>
          <id>82321</id>
          <name>LOZANO MARTINEZ ANDRES SILVINO</name>
          <devicename>noDeviceFound</devicename>
        </Student>
      - <Student>
          <id>88381</id>
          <name>CARREON BELTRAN HUGO ELISEO</name>
          <devicename>noDeviceFound</devicename>
        </Student>
      - <Student>
          <id>89446</id>
          <name>MONARREZ GARCIA GUSTAVO</name>
          <devicename>noDeviceFound</devicename>
        </Student>
      - <Student>
          <id>92908</id>
          <name>CALDERA AGUIRRE HECTOR</name>
          <devicename>JUNKIE</devicename>
        </Student>
      - <Student>
          <id>93034</id>
          <name>RENTERIA LIMON RUTH</name>
          <devicename>Autotrack1</devicename>
        </Student>
        Student>
      </Students>
    </Class>
</StudentsInfo>
```

Appendix B

The file generated by the application to report student attendance will have the next format structure:

```
<AttendanceList>
 <Class>
  <classid>""</classid>
  <classname>""</classid>
  <group>""</group>
  <Students>
   <Student>
    <id>""</id>
    <name>""</name>
    <attendance>""</attendance>
   </Student>
  </Students>
 <Class>
</ AttendanceList >
```

```xml
<?xml version="1.0" encoding="UTF-8"?>
<AttendanceList>
 - <Class>
       <date>2012-11-13</date>
       <classid>IEC 1902</classid>
       <classname>Base de Datos II</classname>
       <group>B</group>
    - <Students>
       - <student>
            <id>98012</id>
            <name>GONZALEZ MOLINA MELINA ALEJANDRA</name>
            <attendance>Missed</attendance>
         </student>
       - <student>
            <id>98396</id>
            <name>BUENDIA DELGADO LUIS GERARDO</name>
            <attendance>Missed</attendance>
         </student>
       - <student>
            <id>98456</id>
            <name>RODRIGUEZ RUBIO EDGAR EDUARDO</name>
            <attendance>Missed</attendance>
         </student>
       - <student>
            <id>98608</id>
            <name>GARCIA SALINAS ULISES</name>
            <attendance>Missed</attendance>
         </student>
       - <student>
            <id>98643</id>
            <name>MORENO RODRIGUEZ JORGE LUIS</name>
            <attendance>Missed</attendance>
         </student>
       - <student>
            <id>98651</id>
            <name>CHAVEZ FERNANDEZ VALERIA</name>
            <attendance>Missed</attendance>
         </student>
       - <student>
            <id>98669</id>
            <name>MONTALVO HAROS ISAI</name>
            <attendance>Missed</attendance>
         </student>
       - <student>
            <id>98677</id>
            <name>CONTRERAS PANTOJA JESUS ALEJANDRO</name>
            <attendance>Missed</attendance>
         </student>
      </Students>
   </Class>
</AttendanceList>
```

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Appendix C

Troubleshoot Take Row v0.9.5 problems

Troubleshooting Take Row v0.9.5 problems can be a challenge because there are so many possible causes.

I'm receiving a message that says Bluetooth® is not supported on this device:

- Make sure that:
    - Your device allows Bluetooth connections.
    - Your Bluetooth module is turned on.
- Check if your Bluetooth module is working properly on your device.

    For more information, go to Blackberry - Soporte Técnico on the Blackberry website.
    - Refer to your device user manual for more troubleshooting on your Bluetooth module.

I can't start the application; I'm receiving a message with an exception error:

- Make sure that:
    - There is a copy of an XML file containing your student information.
    - Your XML file has the proper name and it is installed on a proper directory.

    Refer to How to install Take Row v0.9.5 on this document for more information about a proper name and directory to copy this file.
- Check if your XML file has a proper format to be used on this application.

    Refer to Appendix A on this document for more information about XML file.