**Pushing and Pulling Files**

**Note**

You must have USB debugging enabled on your device in order to perform this step. See [these instructions](https://www.phonearena.com/news/How-to-enable-USB-debugging-on-Android_id53909) for help.

There are several times during app development where you will need to push and pull files to and from your device.

* The **push** command is used to push the entire app directory to the device.
* The **pull** command is used to pull the database or exported CSVs from the device to the desktop computer.

**Tip**

Exported CSVs can be used to set up tables.init to load test data.

**Grunt** tasks have been written in Gruntfile.js that perform these operations for you.

These commands can be run anywhere within the Application Designer directory.

* **grunt adbpush**: Pushes everything under the app directory to the device.
* **grunt adbpull-db**: Pulls the database from the device to the PC.
* **grunt adbpull-csv**: Pull the exported CSVs from the device to the PC.

The pull commands will place the pulled content in the app/output/directory.

The database is a **SQLite** database and can be viewed using **SQLite Browser**. This tool can also be used to view the content of the database used by **Chrome** on your computer (the location of that file is OS dependent).

If you pull the CSV files, they will be under the output/csv/ directory. You can then copy them to the config/assets/csv/ directory and set up the tables.init file to read them in order to provision test data for your development effort. If you need any of this data in production, you will want to sync to a server then export the CSV files and copy them to the config/assets/csv/ directory so that they have all of their metadata field values populated.

**Tip**

Running **grunt adbpull** will perform all the pull tasks.

### Troubleshooting

There are several issues that may occur while trying to push your survey onto your device. Below are some common issues and tip and tricks to help:

* Try checking **adb –version**. If the version does not show, make sure that Android SDK is appropriately installed on your computer because this is what installs the Android Debug Bridge (adb) software.
* Check device settings to ensure USB debugging is enabled and device is liked as a media device (not camera or other settings)
* Make sure your app-designer only has the necessary working files. Any random files or older versions of your survey saved within app-designer will cause the push to fail.
* Do not have any Excel forms open on your computer. If you do, this will cause errors with $filename or ~$filename in the filepath when pushing.
  + Enter adb devices in command line
    - Should show a device detected
  + Enter adb devices in command line