

# Application Requirements

## (Enactus) Android eLibrary



Version 1.0 - Jan 12, 2019

## **Contents**

Section 1 Purpose.....	2
Section 2 Use Case .....	2
Section 3 General Application Requirements .....	2
3.1 Major System Requirements .....	2
3.2 Major Software Dependencies .....	3
3.3 Recommended System Specifications .....	3
Section 4 Installation and GUI (Graphics User Interface) .....	3
4.1 Installation .....	3
4.2 System Interfaces.....	7
Section 5 Android eLibrary Application Programmer .....	11

## Section 1 Purpose

The purpose of the Application Requirements document is to specify the overall application requirements that will explain the requirements of the application. The document will also establish the use case, security, capacity and system architecture requirements, as well as, system acceptance criteria agreed upon by the project sponsor and key stakeholders.

## Section 2 Use Case

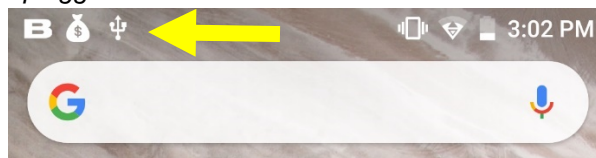
The purpose of this application is to allow users with Android devices to read, copy, and save files from the (Enactus) eLibrary flash drive. Much like a personal computer, to view the files you will need a PDF reader, video player, and compressed (zipped) file explorer.

## Section 3 General Application Requirements

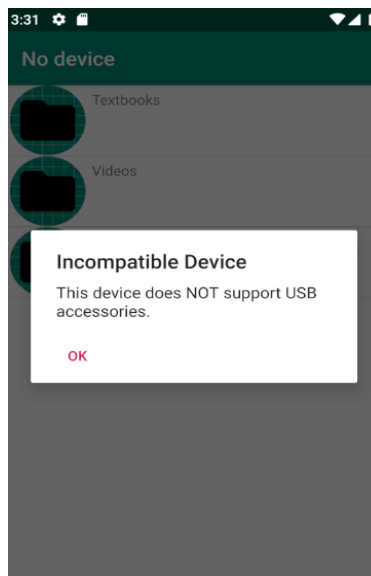
### 3.1 Major System Requirements

*Specified below are the major system requirements in terms of technical requirements to operate.*

- *Must run Android Operating System version 5.0+*
- *Must support USB devices*
  - o *USB device support is shown by the USB logo displayed when an USB device is plugged in*



- *No alert is displayed if the device does NOT support USB devices*
- *Must support USB Host API by the Android Kernel*
  - o *The application will display an alert notification if the android device does not support USB Host API.*



- *Must output at least 5 volts via the USB port.*
  - o *This is the minimum volts required to turn on a flash drive.*
- *Must have at least 30 Megabytes available for installation.*

### 3.2 Major Software Dependencies

*Specified below are the software dependencies required for the application to operate properly.*

- *Must have a video player capable of playing .mp4 videos.*
  - o *For example, VLC Player, Google Photos, or any inbuilt player.*
- *Must have a PDF reader capable of opening .pdf files.*
  - o *For example, Adobe Acrobat, Google Drive, or OneDrive.*
  - o *Optionally, a PDF reader that can interpret hyperlinks (Adobe Acrobat).*
- *Must have a compressed (zipped) file explorer*
  - o *For example, WinRaR, ZArchiver, 7zip, or 7zipper.*
  - o *Must be one that can open password protected files (WinRar or ZArchiver).*

### 3.3 Recommended System Specifications

*Specified below are the recommended system specifications to achieve the best operating outcome.*

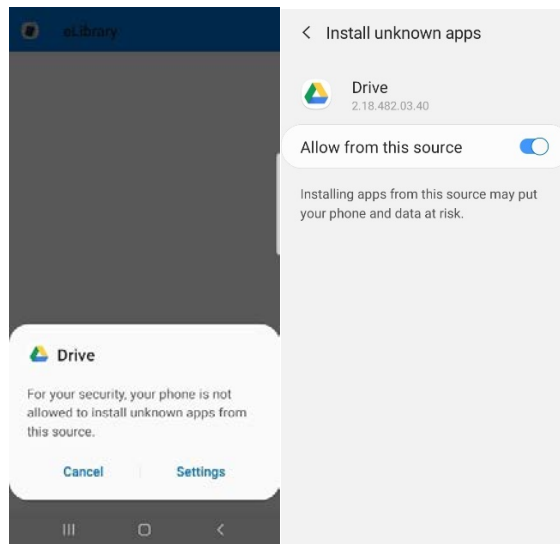
- Android 5.0
- 512 Megabytes of Ram
- 1 Gigabyte of Storage
- USB 2.0 port
- OTG (On-The-Go) Functionality
  - o USB device support.

## Section 4 Installation and GUI (Graphics User Interface)

### 4.1 Installation

*These are the steps, in order, necessary to install the eLibrary on Android.*

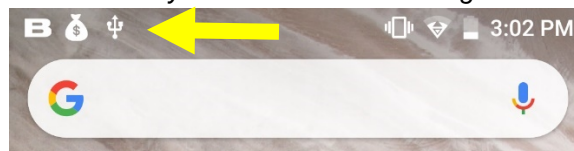
1. *Install Major Software Dependencies*
  - a. *Any video player*
    - i. *Recommended: VLC Player*
  - b. *Any PDF reader*
    - i. *Recommended: Adobe Acrobat*
  - c. *Any compressed (zipped) file explorer*
    - i. *Recommended: WinRaR*
  - d. *Note: You may have to allow installation from unknown apps in your phone's settings.*



i.

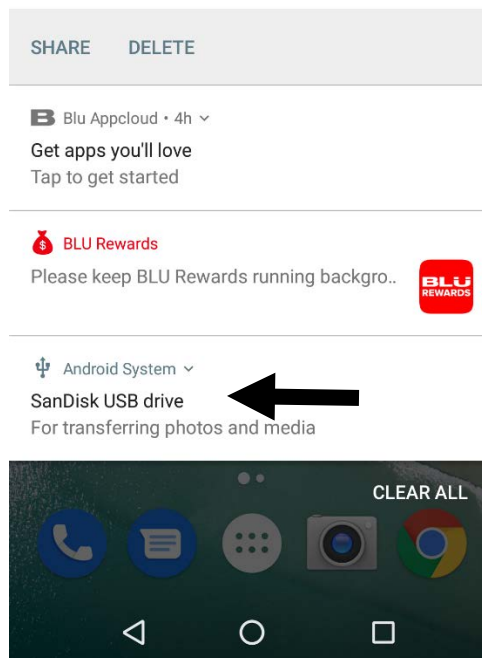
2. Install the eLibrary application

- a. Plug in the flash drive to the USB port
- b. In the notification bar you should see a USB logo



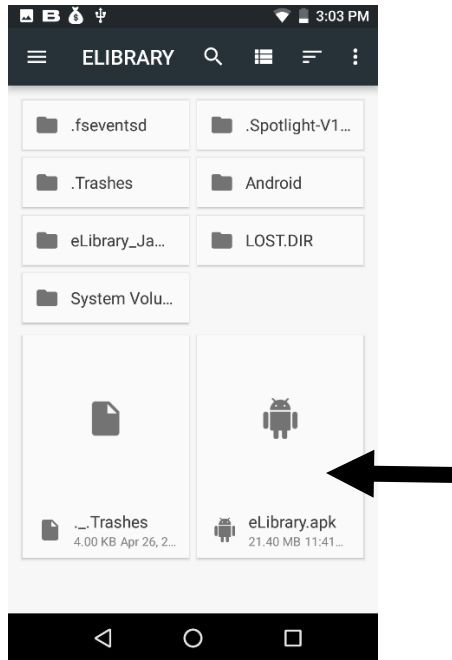
i.

- c. Drag down the notification bar and tap the USB notification

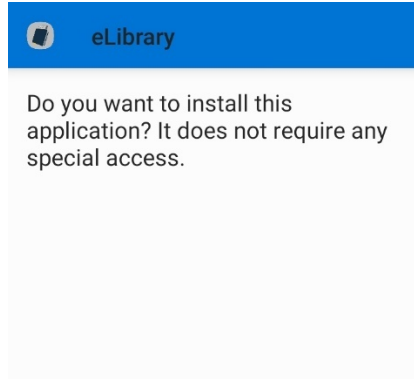


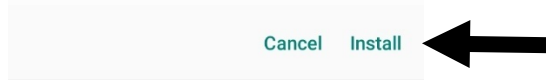
i.

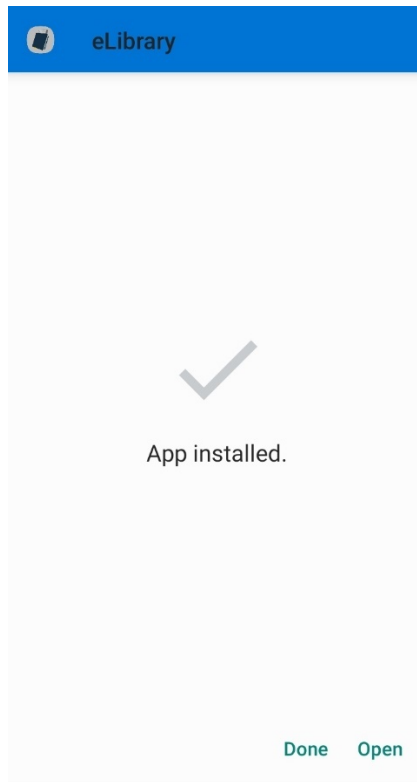
- d. Locate the "eLibrary.apk" installation file on the Flash Drive



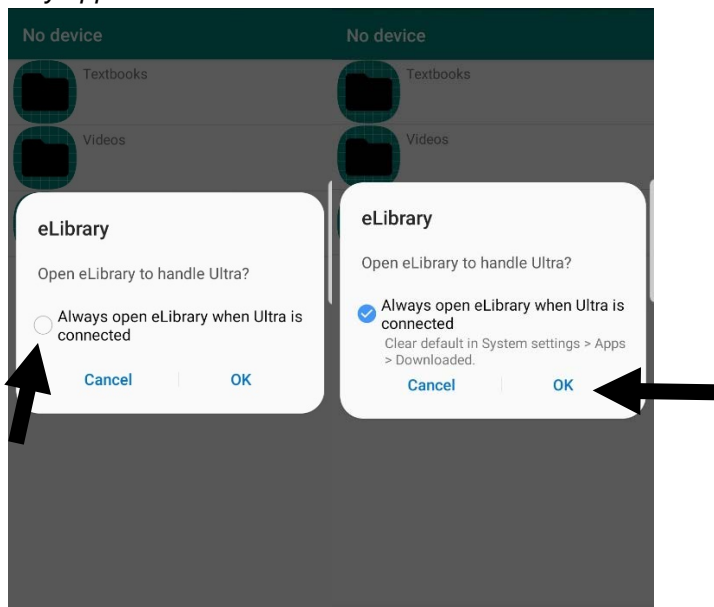
- i.
- e. Tap the file to begin installation and tap install and then open. (Note: you may get an unknown app warning [See Section 3.4.1.d])



- i.
- 



- ii.
- f. Check the box to ALWAYS open eLibrary when the USB device is connected and tap OK.
  - i. Note: Depending on the operating system version, this dialog below may appear from 1 to 3 times.



- ii.
- 3. The eLibrary is now successfully installed. An application will now appear in the launcher and on the home screen. When the flash drive is plugged in, the device should automatically launch the eLibrary application.



a.

## 4.2 System Interfaces

The user interface of the Android eLibrary is similar to the desktop/web application. This app utilizes scrolling list views to display the eLibrary's content. When the flash drive is plugged in, the application should automatically open to the main menu of the eLibrary. Simply tap list items to display their content. Files opened are cached to internal storage and are deleted when the device runs out of room or the application is closed. Files can be downloaded to internal storage if you want them to remain, even after the application is closed.

- Icons

- o Icons are used to easily distinguish file types and folders. Note: Icons may appear slightly different depending on operating system. For example, Android 5.0 icons are square.

- o Folder



- o Book (.pdf)



- o Video (.mp4)





- o Teacher's Resource (.7z)




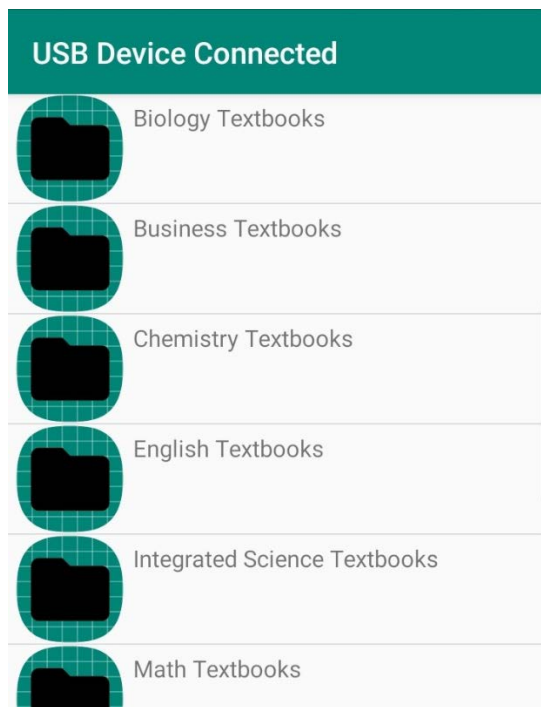
- Download/Delete a file



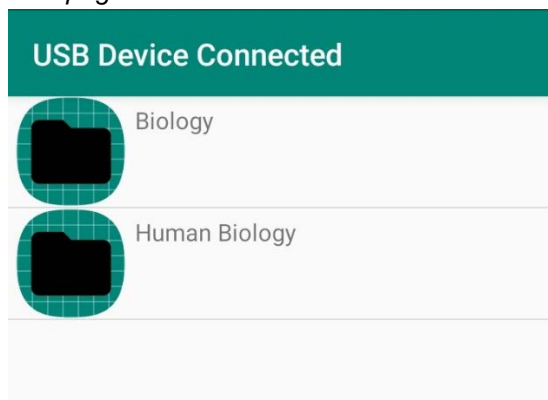
- *Download Button*
  - *Tap the download button to save a file to internal storage.*
  - 
  - *An SD Card is prioritized as the save location, if an SD Card is present.*
- *Delete Button*
  - *Tap the delete button to delete a file from internal storage.*
  - 
- *Drive Status*
  - *The Navigation Bar located in the top left displays whether the USB drive is connected. If it is disconnected it will say "No device". If it is connected it will say "USB Device Connected".*



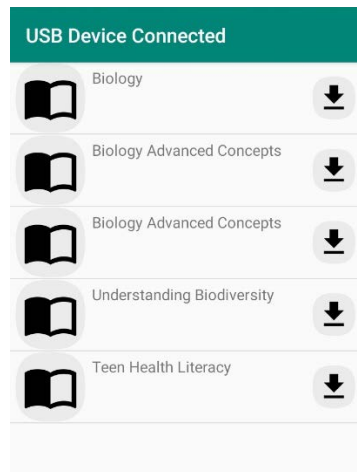
- 
- *Main Menu*
  - *This page is the first level of the list view.*
  - 
  - *Tap a folder to display its sub folders. For example, "Textbooks".*
- *Sub Menu*
  - *This page is the second level of the list view.*




- Tap a folder to display its sub folders. For example, "Biology Textbooks".
- 2<sup>nd</sup> Sub Menu
  - This page is the third level of the list view.



- Tap a folder to display its files. For example, "Biology".
- File Selection Menu
  - This page is the fourth and final level of the list view.

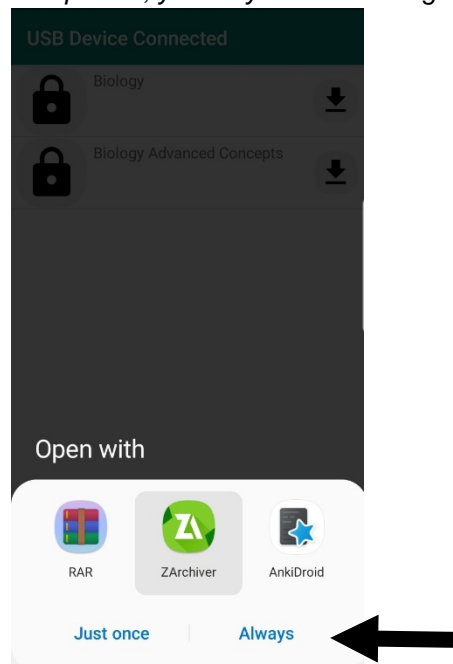


- 
- Tap a file to open it or tap the download  button to save it to internal storage. Files that are downloaded are able to be opened without the drive present. Tap the delete button to delete the file from internal storage.



- Default Apps

- When you tap a file, you may see this dialog:



- Select your favorite app to use and select always.
  - This will set this app to open as default the next time you select a file.

## Section 5 Android eLibrary Application Programmer

- This Android Application was developed by Mason Adam Channer, a Computer Scientist educated at La Sierra University.
  - o [Resume.](#)