http://localhost:3000

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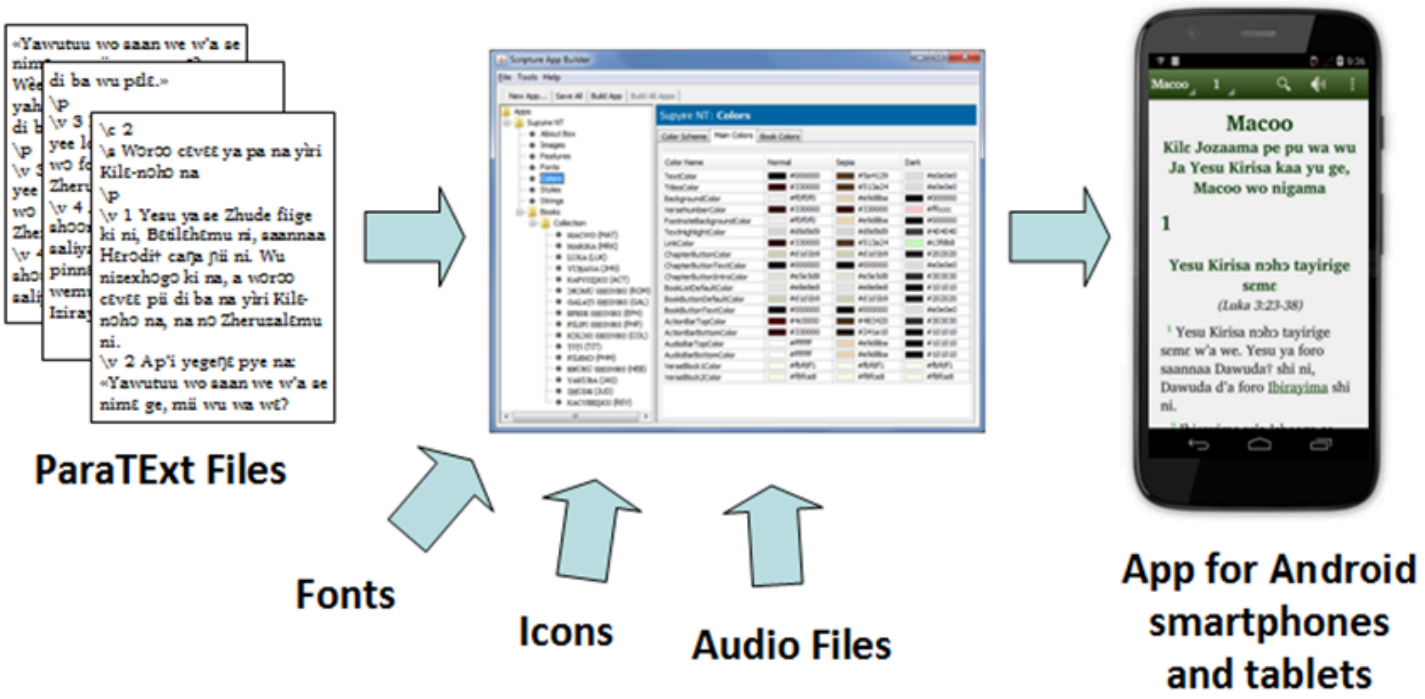
Introduction

Scripture App Builder does what its name suggests: it helps you to build customized Scripture apps for smartphones and tablets.

You specify the Scripture files to use, the app name, the fonts, the colours, the about box information, the audio and the icons. Scripture App Builder will package everything together and build the customized app for you. You then install it on your mobile device, send it to others by Bluetooth or Wi-Fi transfer app, share it on microSD memory cards and publish it to app stores on the Internet.



To install Scripture App Builder on **Windows**, please follow the instructions in section 2. For **Linux**, please find the instructions in section 3.

For **Mac**, you can find the installation instructions in the document **Installing and Building Apps on a Mac**.

Windows Installation

In order to run your App Builder on Windows, you need to have 3 components installed on your computer:

1. Your App Builder
2. Java Development Kit (JDK)
3. Android Software Development Kit (SDK)

There is an optional fourth component to install if you want to synchronize text and audio (**Only** for Scripture App Builder and Reading App Builder):

4. Aeneas audio-text synchronization tool.

Here are more details on installing each of these components.

Installing Scripture App Builder

To install the Scripture App Builder program, do the following:

1. Go to the **Download** page of the Scripture App Builder website: http://software.sil.org/scriptureappbuilder/download
2. Download the latest setup program for Windows.
3. Run the setup program, **Scripture-App-Builder-x.x-Setup.exe**, to install Scripture App Builder on your computer.

Installing the Java Development Kit (JDK)

You will need version 17 of the Java Development Kit (JDK) to build apps. There are two ways of installing it:

- Use the Install JDK wizard within your App Builder, or
- Download the JDK setup file from the Azul website and run the installer.

Installing the JDK from the Azul website

We recommend you use Zulu, which is a free distribution of OpenJDK from Azul.

```
1. Go to the **Download Zulu Builds of OpenJDK** website:
[https://www.azul.com/downloads/?version=java-17-lts&os=windows&architecture=x86-
64-bit&package=jdk#zulu](https://www.azul.com/downloads/?version=java-17-
lts&os=windows&architecture=x86-64-bit&package=jdk#zulu)            There are many
downloads on this page, but the above link will filter the ones you see (Java
Version: Java 17 LTS; Operating System: Windows; Architecture: x86 64-bit; Java
Package: JDK).
2. Scroll down the page until you see the downloads:

![](/notion_imgs/installing-jdk-from-azul.22d80858-a4b6-8019-b630-c26eef19eccf.png)

1. You have a choice between a zip file and an msi file. **Download the .msi file**
since it comes with its own installer program. The file you download will have a
filename something like this:  **zulu17.44.15-ca-jdk17.0.8-win_x64.msi**
2. **Double-click the msi file** and follow the instructions in the installation
wizard to install it. By default, the .msi installer will install the JDK to the
following folder: C:\Program Files\Zulu\zulu-17\
```

INFO

Important: If you change the JDK install folder to something other than the default folder, you will need to remember the location of the folder so you can tell your App Builder where to find the JDK.

Downloading the Android SDK packages from the internet

To install the Android SDK from the internet:

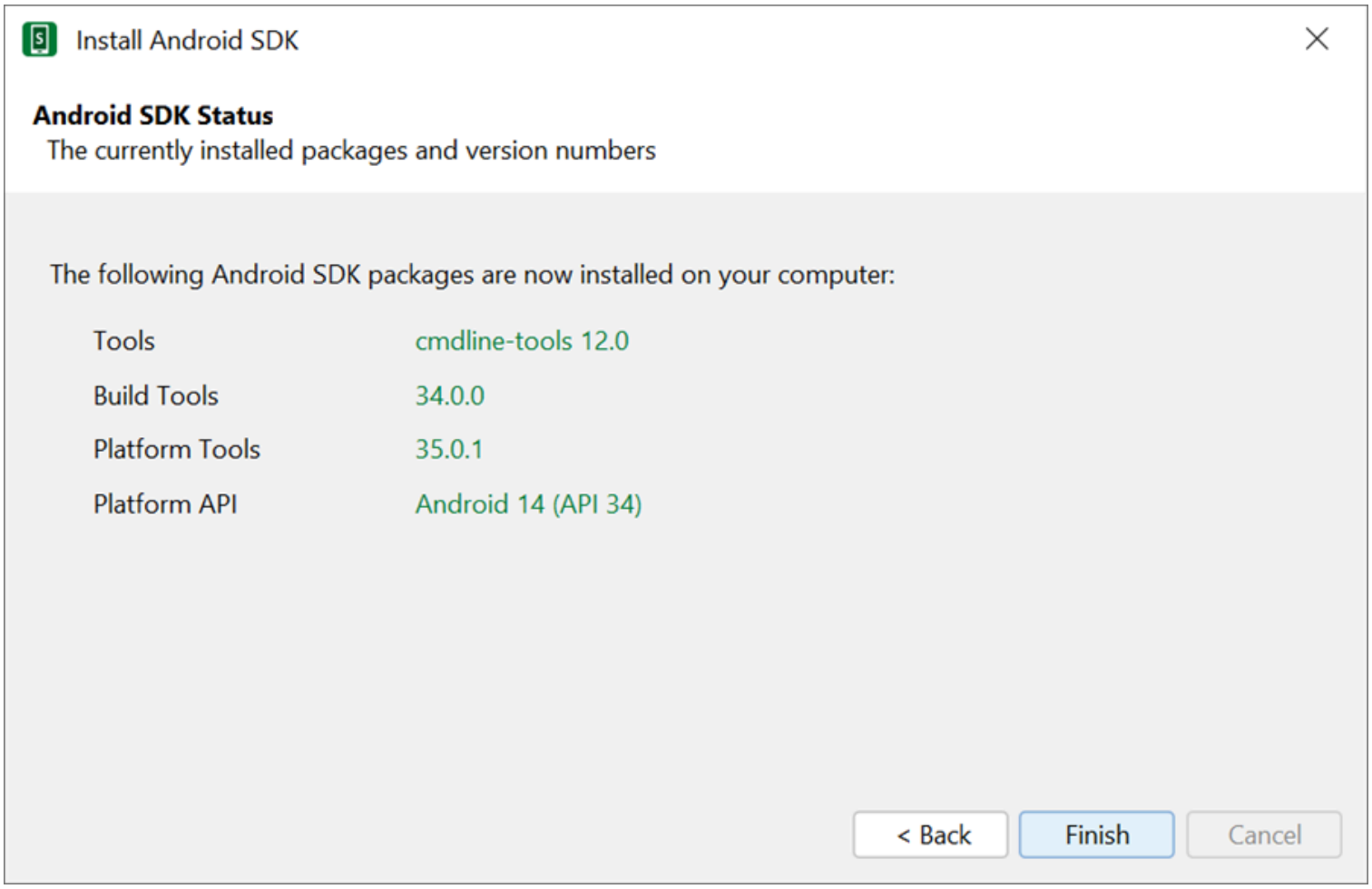
1. Launch **App Builder**.
2. Click the **Install Android SDK** button on the welcome page (or select **Tools → Install Android SDK** from the main menu).
3. Follow the instructions on each page of the **Install Android SDK** wizard to download each of the Android SDK packages and install them.

When you are asked to specify a target folder, a good place is **C:\sdk**.

Four packages will be downloaded and installed:

- Command line tools,
- Build Tools,
- Platform Tools, and
- Platform API.

If the installation was successful, you will see the version numbers displayed in green.



If any of the Build Tools, Platform Tools or Platform API is listed as “Not Found” (displayed in red), go to **Tools** → **Settings**, select the **Android SDK** tab, and click the **Install Packages** button to install them.

Click the **Check Installation** button to confirm that all the packages have been installed correctly.

You can skip section 2.3.2 and go straight to section 2.4.

Copying the Android SDK files from someone else

If you know someone who has already downloaded and installed the Android SDK and is successfully building apps with it, you can copy all of their Android SDK files to a folder on your computer.

You need to look for the top-level Android SDK folder, such as **c:\sdk**, and copy the whole folder and its contents to your computer. A location such as c:\sdk is good. If it makes it easier, you can zip the folders and then unzip them onto your computer.

Note that there is no setup program to run. Copying the files from one computer to another is sufficient.

Tip: A typical Android SDK folder can be quite large (over 1 GB, depending on which additional packages have been installed). To build an app, you do not need all of the Android SDK files. If you want to cut down the number of files, here is a list of the essential and optional folders:

Android SDK Folder	Required for building apps?
cmdline-tools (or tools)	Yes
build-tools	Yes (you only need the sub-folder for the latest version)
platforms	Yes (you only need android-34)
platform-tools	Yes
add-ons	No
docs	No
emulator	No, unless you want to use an emulator

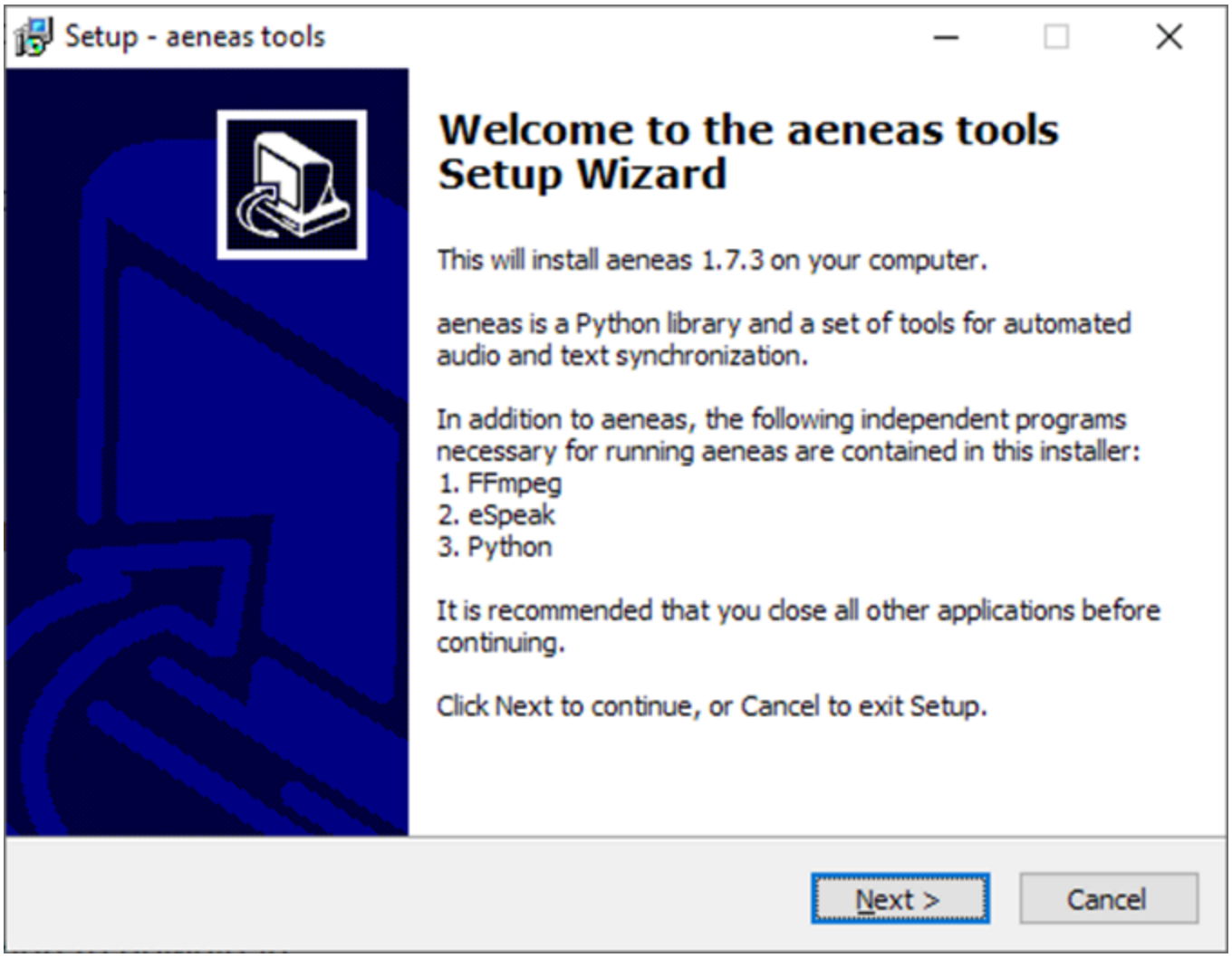
Android SDK Folder	Required for building apps?
extras	No
licenses	Yes
sources	No
system-images	No, unless you want to use an emulator
temp	No

Installing aeneas for audio-text synchronization

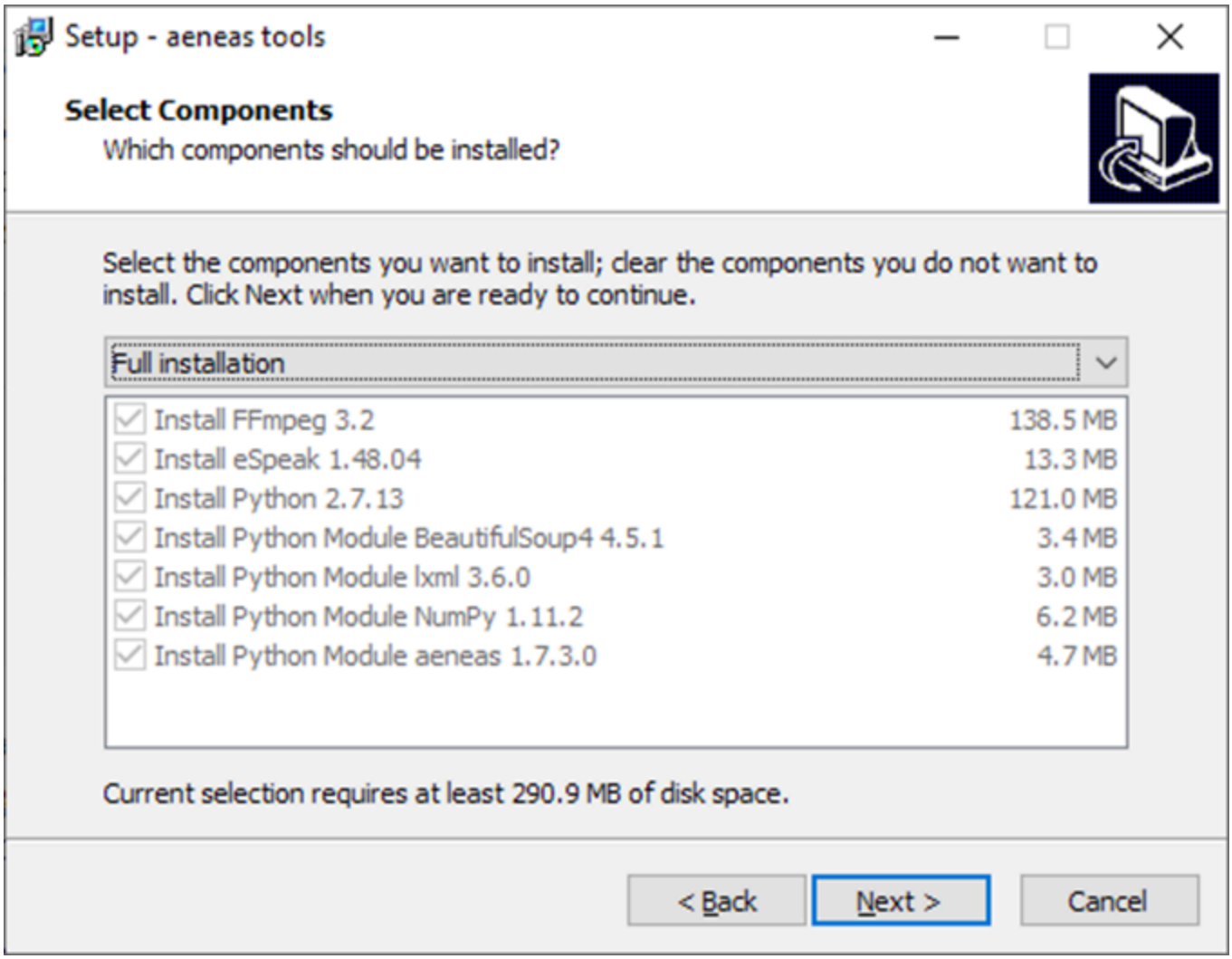
Scripture App Builder and Reading App Builder use a tool called **aeneas** to synchronise text and audio.

To set up **aeneas** on Windows, there are several programs and modules to download and install: FFmpeg, eSpeak, Python and aeneas. These are installed with a single setup program.

1. Go to the **Download** page on your App Builder website http://software.sil.org/scriptureappbuilder/download/ or http://software.sil.org/readingeappbuilder/download/ and download the latest aeneas setup program for Windows. You will find it under the heading **Audio Synchronization Tools**.
2. The filename will be something like **aeneas-windows-setup-1.7.3.exe**.
3. Double-click the file you have downloaded to start the installation wizard.



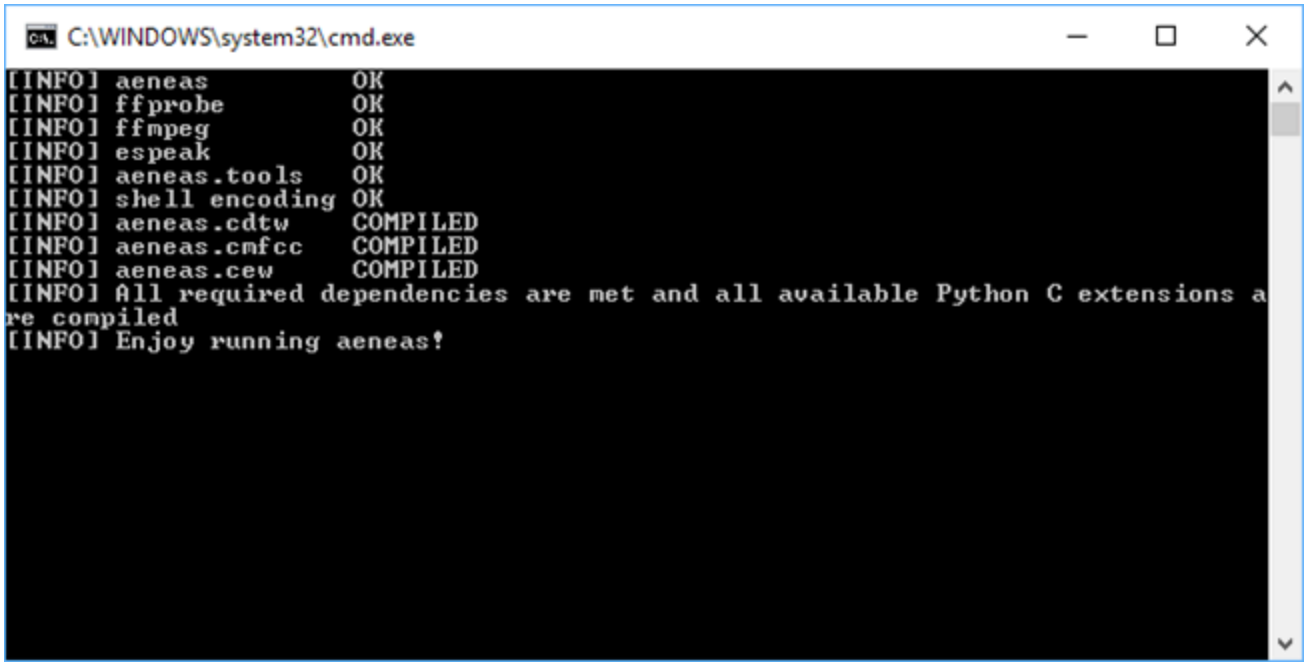
1. Follow the instructions in the wizard. You can accept all the defaults.
2. On the **Select Components** page, you need the **Full Installation** which should be selected by default.



1. On the **Ready to Install** page, click **Install**.

   You will see the wizard running several different installers: for FFmpeg, eSpeak, Python. It will also install three Python modules.

```
Before the wizard completes, you should see a command box appear for a few seconds
which verifies the aeneas installation.
```



INFO

Important: If your App Builder was open while you installed aeneas, close it and start it again to ensure that it picks up the changes to your Path settings.

Add SIL repository for Ubuntu

To install packages from the SIL repository for Ubuntu, the repository must be added to the APT sources.

Note: **Wasta-Linux** already includes configuration for the SIL repository for Ubuntu and so you can skip this section.

If you are using another **Ubuntu-based distribution**, please follow the instructions below (from the section “Enable access to SIL software and fonts in Ubuntu” on https://packages.sil.org).

1. Open a Terminal window.
2. Add the repository security key:

```
(wget -O- https://packages.sil.org/keys/pso-keyring-2016.gpg | sudo tee
/etc/apt/trusted.gpg.d/pso-keyring-2016.gpg)&>/dev/null
```

1. Add source:

```
(. /etc/os-release && sudo tee /etc/apt/sources.list.d/packages-sil-
org.list>/dev/null <<< "deb http://packages.sil.org/$ID $VERSION_CODENAME main")
```

Installing all packages from the Internet

To install all the required software from the command line, type:

```
sudo apt-get update
sudo apt-get install -y (replace with app builder name)-app-builder
```

Note: **Wasta-Linux** does not automatically install recommended packages. To get everything installed, also install android-sdk-installer.

```
sudo apt-get install -y (replace with app builder name)-app-builder android-sdk-installer
```

Downloading the Android SDK files

On a computer connected to the internet, use the following command line instructions to create a new folder and download 4 zip files (approximately 400MB).

```
mkdir -p ~/Downloads/android-sdk-zips
cd ~/Downloads/android-sdk-zips
wget -ci [http://bit.ly/android-sdk-urls](http://bit.ly/android-sdk-urls)
```

> **TIP**
>
> Note: the -c option will allow the downloads to be resumed if it fails part way through the download.

Provide zip files during the package install

Use **debconf** to pre-seed the package with the location of the files and install the package.

```
echo android-sdk-installer android-sdk-installer/dldir string ~/Downloads/android-sdk-zips | sudo debconf-set-selections
sudo apt-get install android-sdk-installer
echo android-sdk-installer android-sdk-installer/dldir string | sudo debconf-set-selections
```

Installing without Android SDK

The **android-sdk-installer** package is a recommended package for the **app-builder** package. If the Android SDK is already installed, your App Builder can use the current installation.

```
sudo apt-get update
sudo apt-get install (replace with app builder name)-app-builder --no-install-recommends
```

Set the ANDROID_HOME environment variable to the path of the Android SDK installation to allow your App Builder to find it automatically. Otherwise you can use the **Tools → Settings** dialog in your App Builder to specify the path.

Automating Android SDK installation

The **android-sdk-installer** will prompt you to accept the license for the Android SDK. To automate the installation (e.g. in an Ansible playbook), pre-seed the answer to this question.

```
echo android-sdk-installer android-sdk-installer/accepted-android-sdk-eula boolean
true | sudo debconf-set-selections
sudo apt-get install android-sdk-installer
```

How to build your first app

To build your first app with Scripture App Builder, follow the instructions in the first chapter of the document *‘Scripture App Builder – Building Apps’*.