BRAIN HACKERS APP DEVELOPMENT CURRICULUM

Preparations to Use MIT App Inventor

SUMMARY

MIT App Inventor is a free online resource. It consists of a visual programming environment and accompanying services that allow apps to be developed for Android phones and other devices. App Inventor is well-suited for beginning programmers, while providing a range of capabilities to support the creation of professional-quality apps.

REQUIREMENTS

1. Computer – almost any Windows or Mac computer with Internet access that will run either the Firefox or Chrome browsers should be sufficient

2. Internet Browser – App Inventor will work with either the Firefox or Chrome browsers. Internet Explorer, Edge and other browsers are not supported.

3. Android Phone or Device – it is recommended that students be provided either Android phones or devices. App Inventor does not support development for Apple products. Unused, low-end Android phones in the $30 price range can be easily found at major department and electronics stores (e.g., Walmart, Target, Best Buy) that are adequate for working with App Inventor. It is not necessary that the phone or device have cell phone service.

4. MIT AI2 Companion App – the Android phone or device must have the MIT AI2 Companion app installed. This is a free app that may be downloaded from the Google Play Store and other sources.

5. Google Account – to use App Inventor, students must first login using a Google account. This not only provides access to the App Inventor programming environment, but also allows projects to be stored in the MIT App Inventor repository so they are available from any computer with Internet access.

NETWORK REQUIREMENTS

Many networks are configured to prohibit two devices from communicating with one another across the network. On some networks, this is referred to as a Privacy Separator. Ideally, students should be able to wirelessly connect with MIT App Inventor. If the network does not allow devices to communicate with one another, there are four options:

1. Acquire an Internet hotspot(s) - with Brain Hackers Association activities, we have resorted to using our own Internet hotspots where the networks at schools and other facilities do not support working with App Inventor wirelessly.

2. Establish hotspot with computer – if the computers used for App Inventor will allow a hotspot to be created, the Android phone or device can be connected to this hotspot.

3. Connect using USB to micro USB cable – the computer, and the Android phone or device may be connected using a USB cable to micro USB cable.

4. App Inventor Emulator – the emulator presents a screen on the computer that behaves similarly to an Android phone. This should be the solution of last resort given that the emulator can be unreliable.

The third and fourth options both require that the aiStarter software, which may be downloaded from the MIT App Inventor website, be running on the computer. Both of these options are discouraged. From the students' perspective, the experience loses much of its magic when they must either use a wired connection or they cannot see their app running on an Android phone or device.