**Overview:**

Students work in partners to create a presentation on the subject of the accessibility and regional settings and options available in their assigned software application. The target audience for the presentation will be the ICS2O0 class and target length for the presentation will be 12 minutes (12 slides).

**Objectives:**

* To explore the Accessibility and Regional Equity options that must be considered when designing software applications
* To identify some common configuration options and settings that may be used when installing and running common software applications.

**Instructions:**

Work with a partner to research and prepare a presentation (12 min, 12 slides) on your assigned software application.

Share your completed presentation with Mr. Nestor ([p0079141@pdsb.net](mailto:p0079141@pdsb.net)) using Google Docs or using Email.

Presentations will be given in class starting Monday, March 18th.

**Presentation Outline:**

1. General Application Overview
   1. Summarize the purpose of the application and what it does
   2. Provide a screen shot of the application related to accessibility (see below)
   3. Provide a screen shot of the application related to regionalization (see below)
2. Accessibility  
   Accessibility options relate to supporting users with special needs so that they can make effective use of the application in spite of their physical impairment.
   1. Visually Impaired
      * Explain the issues or difficulties a visually impaired user might have using this application.
      * Explain the options, settings, and other supports the application provides for visually impaired users.

Visually impaired people obviously have a problem with smartphones these

days. They either can’t see, their eyes are badly damaged for them to see

anything properly, or they are colorblind. Nowadays, there are more smartphones

with mostly touchscreen or just touchscreen with only side buttons. But there are

settings and apps to help those who are visually impaired. Some examples are Be

My Eyes, Color ID Free, iDentifi, Smart Magnifier, BlindSquare, and Google Text-

to-Speech. Be My Eyes is a free app that connects blind and low vision people

with sighted volunteers. Color ID is also a free app which recognizes colors for

colorblind people. iDentifi is an app which identifies different objects. BlindSquare

is an accessible GPS app. It describes the environment, gives point of interests,

and street intersections. Google Text-to-Speech speaks text on the screen. Some

built-in accessibility settings are Speak Passwords, Physical Buttons to manage

calls, TalkBack, Explore By Touch, Negative Colors(reverse the colors), and change

font size.

* 1. Hearing Impaired
     + Explain the issues or difficulties a hearing impaired user might have using this application.
     + Explain the options, settings, and other supports the application provides for hearing impaired users.

Hearing Impaired people obviously cannot hear anything or have hearing

problems. There are many simple solutions to help. Some apps which help are

EarMachine and AUD1. EarMachines help to enhance the sounds around you so

you can listen more clearly or louder. AUD1 uses advanced signal processing

strategies to help increase comfort and clarity of sounds around you. Some

settings in Android phones are vibration and captions.

* 1. Motor Coordination (Use of hands)
     + Explain the issues or difficulties a motor impaired user might have using this application.
     + Explain the options, settings, and other supports the application provides for motor impaired users.

Motor Coordination disorder causes a person to have trouble doing multiple

things, such as using a cup, fork or spoon, dancing, doing gymnastics, catching or

throwing a ball with accuracy, producing fluent legible handwriting, and lots more

things. In this case, they may have trouble selecting the right thing on their

android phone. Some settings in Android phones are Touch and Hold Delay, Speak

Passwords, Magnification Gestures, and Predictive Text.

* 1. Imagine that the application was designed for an impaired person from the ground up. Assuming that it would still be designed for non-impaired users, how might it be different from the current application?

Android would be different for non-impaired and impaired as there are a lot

of settings that would be changed for the impaired user to use a phone. A non-

impaired user would just use the phone simply as there are no problems he has

with the use of a phone. But impaired people cannot see, hear, or have problems

with motor coordination. So they need settings that would help them use a

simple phone. Their phone would have their phone tell them what they are

reading, their passwords, captions, and tapping something twice to make sure.

1. Regionalization

Regionalization options relate to supporting users living in different countries or speaking different languages. Regionalization also considers differences in date & time formats and different measurement units for temperature and distance.

* 1. Language
     + Explain the issues or difficulties this application would present to a non-English speaking user.

There are not that many issues as Android offers its service in over 100 languages. With Android you can use 2 or more languages at the same time with the swipe of the spacebar. Along with the most common 25 commonly used languages like english, android offer the choice of over 100 more new languages. There are still some languages around the world that are not commonly used and are not included in android. If a non-english user uses android they will have little to no difficulties or issues.

* + - Explain the options, settings, and other supports the application provides for different languages.

Android offers Multi Locale language settings, which allows you to change your language to another language with the swipe of the spacebar. When typing in android, english is always available, languages spoken in your area are also available. Let's say you are in Japan, if you want to type something in japanese, you can do so by swiping the spacebar on the digital keyboard to toggle between different languages. You always get an option to choose your base language for the device, when you start your device for the first time. You can also change your base language in setting when using android. There are over 100 languages to choose from when picking a base language.

* 1. Location
     + Explain the issues or difficulties this application would present to a user living outside of North America.

There won't be a lot of difficulties as Android is used world wide and is very common among countries around the world. One difficulty world be that Android uses google as a way to install new software on the android operating systems. Google play store has limits on which apps users can download from certain countries. The downside is that those people in limiting countries will not get the complete android service and experience, they will be left out in a sense. Another issue with android and the Google play store on it, is that in order to download new application you will need internet. This is an issue because Android provides its service around the world even in third world countries and some of those third world countries may not have access to the internet. This will be limiting to those users that live in country without internet. Other than these difficulties with google, android can operate in almost every country around the world. Android alone will not be an issue to the user outside of north america because android has an option where you can allow it to sense which country you are in and the operating system will change and adapt to your location.

* + - Explain the options, settings, and other supports the application provides for different locations.

Android offers the user an option to allow the android to know their location. This can be especially helpful when you are traveling country to country and android will be able to adapt to the specific country you are in, even if you are outside north america. Location tracking can offer support to you when you are in an emergency, for example if you have been kidnapped and you have your location tracking on then the police can find you and you will be safe. This adaptability of android makes using android around the world very easy. One example of location adaptability would be if you were traveling from San Francisco to New York City, the time zones would be different and this would mean you phone would change time zones. Android is also lowering the cost of the operating system to be more consumer friendly to consumer in third world countries. Also, Android is the most used operating system used around the world in phones.

* 1. Imagine that the application was designed by a company from a small country like Sweden. Assuming that it would still be designed for North American users, how might it be different from the current application?

The application will be slightly different. For example, all the excess language settings needed for other languages will not be present. So only languages like English, French and Spanish will be in the Android operating system. Another difference could be the automatic time zone change will only be applicable for time zones in north america rather than all around earth. The rest of the application will be the same as Android is made for everyone around the world. In conclusion the main difference will be that the exes settings for languages and countries outside of north america will not be present.

**Topic Signup Sheet**

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| --- | --- | --- |
| **Software Application** | **Partner #1** | **Partner #2** |
| Android Operating System | Harman Goraya (Questions 1&2) | Harjap Saini  (Question 3) |