

SUMMARY OF RECENT ONLINE TECHNICAL – Android Applications Using Java, XML and Android – see my Linked In Project Section for details and github links to files:

- **Android Applications (Java/XML) – Creative, Serious and Playful Science of Android Applications:** We used XML, Java and Android to create applications for Android based devices emulated as Virtual Machines on Eclipse, with either an ARM or Intel microprocessor emulated device. We used the Android Development Kit and Eclipse programming tools that Android software developers use and build complete and useful apps during this course. Fundamental computer science principles and programming ideas that power today's smartphone and tablet apps were covered too. After the course ended, I did some labs on my own using Android Studio rather than Elcipse as the IDE. The apps I made were:
 - **Happy Birthday Valentine:** This app uses: ScrollView, LinearLayout, OnClickListener, TextView, ImageView, Simple Animation, Intents, EditText and a Button for email. If you click on the first picture, of Peter and Sophie with party hats and noise makers in their mouths, it animates, moves to the right and then comes back. If you click on the Send Email button, you can send a happy birthday email to my incognitodiscforums@gmail.com email account. If you hit the ESC key, you come back to the app. You hear the Beatles "Happy Birthday Song - Live Version" playing in the background once the app opens, and only stops to send an email, or if you click the bottom image, of Peter with his saxophone. If you click that image, it takes you to a You Tube video of a monkey singing happy birthday. If you hit the ESC key, you come back to the app, and the Beatles happy birthday song starts to play again. I chose to make this because it happened to be my eldest child's 11th birthday on Valentine's day during this class.
 - **Playing With Music App:** This application simply "plays with music" using web views and separate activities. There are 2 activities outside main, one that has buttons that take you to the You Tube video page for those musical songs. The other activity uses a raw mp3, but also has buttons that start and stop the raw mp3 song. The interactivity is the button presses that the user must press, that are responded to in the Java code. Unlike the first app in this assignment, I used the "onClick" properties in the XML code to specify the Java routine to respond to the button press, since I used "listeners" in the onCreate code to respond to those in the first app. The music I chose was really randomly chosen trying to find music that may appeal to all sorts of people's tastes in the class who evaluate the apps. For the raw musical section, I chose "Happy New Year", since we just started a new year, and also, because this version is a mix of opera and rock. The app demonstrated interactivity.
 - **Android Application: War of Worlds, Jabberwocky, Univ. of Illinois NASA group, Round Ball Game:** I decided to use 5 activities for this assignment, using the first one just to direct the person running it to go back to the main menu, to see the icons to run the activities for JabberWocky, RoundBall, War of the Worlds and Univ. of Illinois at NASA. I also embedded the jabberwocky image as an IMG element within the poem html page given by the professor. It was challenging at first for me to get the buttons for Jabberwocky to work correctly within the separate XML layout using the web view defined in the main XML file. Rather than make the buttons respond to the onClick property in the XML file, in my web search, I found another way of doing that, by making a listener for the button

within the onCreate activity code. I also searched and searched but could not find a short enough mp3 clip for the jabberwocky poem, and finally found one as a phone ring, but it was not that great, so instead, used a 30 second music clip I had laying around that has nothing to do with that poem, called "Nutrocker", from Emerson, Lake and Palmer in the 1970's, since I had no other 30 second clip, and no time left to find one that would match better with the Jabberwocky poem! I had no issues with the other activities, incorporating the provided RoundBall game in one activity, Univ. of Illinois at NASA's web page in another activity, and War of the Worlds web page in another activity.

- **Part 1 of our first simple app: Displaying in both portrait and landscape modes their photos with titles and a blurb (as follows) that scrolled to read about them, and the app would allow you to switch between the 2 of them.** I chose Ada Lovelace and Grace Murray Hopper as my 2 historically famous computer scientists since from the suggested list, these 2 were the only women, and women continue to be a minority in this field.
 - **Ada Lovelace (1815-1852, England):** Ada's mathematical talents led her to an ongoing working relationship and friendship with British mathematician Charles Babbage, and in particular Babbage's work on the Analytical Engine. She translated an article by Italian military engineer Luigi Menabrea on the engine, which she supplemented with a set of her notes, simply called Notes-- containing what many consider to be the first computer program—that is, an algorithm designed to be carried out by a machine. She also developed a vision on the capability of computers to go beyond mere calculating or number-crunching while others focused only on those capabilities.
 - **Grace Murray Hopper (1906-1992):** Grace was an American computer scientist and United States Navy rear admiral. A pioneer in the field, she was one of the first programmers of the Harvard Mark I computer, and developed the first compiler for a computer programming language. She conceptualized the idea of machine-independent programming languages, which led to the development of COBOL, one of the first modern programming languages. She is credited with the term "debugging" for fixing computer glitches (inspired by an actual moth removed from the computer). The U.S. Navy named a ship after her and Cray named a supercomputer after her at NERSC.
- **Part 2 of our first very basic and simple app. It is similar to the first application, in that there is a portrait photo with caption, and you use CTRL-F11 to switch to the landscape version of another photo with caption, but the theme was from our prior summer vacation and the history we toured along with a bike ride near home.** Why did I decide to build this application? I chose the West Family Adventures as the theme for application #2 for assignment #1, because these were 2 of the 3 pictures on our holiday cards sent to many people during the holiday week 2013, when this assignment was started, and the videos watched, and also because application #2 was stated to be “anything that is interesting to you but is not the same application as application #1.” The reason this was interesting to me, was because it was about 2 adventures my family had in 2013 that we shared on our holiday card in 2013. The portrait adventure was our family bike riding in Borderland State Park in the town in which we live, in Easton, MA, USA, in October 2013. The landscape adventure was our family having just climbed to the top of Warwick Castle in England, all hot and sweaty, in July 2013. Borderland State Park in Easton is a very beautiful state park donated to Easton by an old rich family from Easton, the Ames Family, who used it as their summer home at the start of 1900 or so. It has a great park, an old mansion to tour, trails to walk, ride, walk dogs or ride horses, and ponds. Warwick Castle was an interesting place to tour this summer, not far from where Rich grew up in Derby,

England, and was originally built in 1068, in wood. It was transformed into stone in 1215. There were no elevators or air conditioners of course in that era, so we were very hot when we reached the top of the Warwick Castle tower!