Part 1

1. Android Market Share.
   1. Percent of total smartphones .

A graph of a market share

Description automatically generated

This graph shows the percent of the market share that Android devices compared to how much is held by iOS devices. These stats go back to quarter 1 of 2018 and show the makeup of the global market. The recent statistics of the market show that Android has 70.7% of the market compared to iOS devices, which has 28.4% of the market (Android Statistics, 2023).

* 1. Percentage of App store sales vs. Android or Google Play Store.

A screenshot of a graph

Description automatically generatedA white table with numbers and a number of numbers

Description automatically generated

The above charts show the total revenue from both the iOS App Store and the Google play App store Annually from 2016-2022. In 2022 iOS was responsible for generating 75% of App Store revenue while Google play receives 23% (App Revenue Data, 2023).

1. Last four named versions of Android.
   1. The last four versions of android that were named after food were Android Pie, Android Oreo, Android Nougat, and Android Marshmallow (Android Version History, 2023).
2. List four specific devices that run Android.
   1. Google Pixel (phone), Samsung Galaxy Tab (tablet), Amazon Kindle (e-reader), Samsung Galaxy Fold (phone/Tablet).
3. Does Android implement a full version of Linux OS? If not, what main parts are missing?
   1. Android contains a Linux kernel. However, Android does not implement a full version of the Linux OS. Android is missing the features that allow interface with a mouse and keyboard, rather for a touch-screen device (Is Android Linux Based, 2023).
4. What are the differences between Java and Android API?
   1. Android API runs Java bytecode. However, Android does not run it on the traditional Java virtual machine (JVM). The android API takes the Java Bytecode and runs it on Dalvik Virtual Machine for older platforms, and the Android runtime for newer platforms

Part 2

1. The Destinations List Picker starts by gathering the pre-defined list of locations and displaying them. Once the User selects a location the block will Center the map that is displaying on the App to the latitude and longitude location that is recorded for the selected location. By joining those two strings of data together, the map has a coordinate that a pin can be dropped on and the user can view the map of the location they selected.
2. The required data is split up to simplify the data down from an extended string. This data is stored in the tinyDB that is local to the app. Using Java, if the data was stored as a string, but separated out with a comma, then Java code could be written to split that data according to the comma token. Since the latitude/longitude data types are stored into a database. For Java, a separate class could be created with attributes such as Name, city, Latitude, Longitude, etc.. Additionally, Java could contain methods that organize or display the attributes like MIT App inventor.
3. This block of code checks the global destinations list and the respective latitude and longitude lists. The block then sets the destinations, latitude, and longitude to the values that are stored in that list. The result is having all locations in those lists be selected and displayed on the map.
4. These blocks of code call the database to get values from the pre-defined lists. When the database has values, the blocks call the SetValueFromTag method. Following this, the data is parsed through if/else statements to determine what type of data is stored, including name, latitude, and longitude. This is more complex as the app will check what is stored in the database and will not do anything if the database is empty. In the first line of code, if the database is empty, it will set the respective lists to the values they already contain.

Works Cited

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