

Android Device Risk Assessment Tool: Using Common Permissions to Identify Applications Used in Intimate Partner Violence

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Abstract

Intimate partner violence affects millions of people in the United States every day. With the rising popularity of social media and smart phones, abusers have leveraged technology to control and harm their victims. One such method is through surveillance spyware applications downloaded on the victim's phone. This project uses application permission analysis, application data gathering, and a risk assessment algorithm to detect spyware applications installed on a victim's device. The risk assessment is based on the principle of guilt by association whereby any application that uses the same permissions used in a known spyware application is likely to be spyware itself. While analyzing the permissions of spyware and non-spyware applications, I found patterns in the permissions that did indicate spyware usage, particularly in the case of permissions designated by Android as "dangerous" or "signature." These patterns were used for heuristic weights in the risk assessment algorithm, which correctly identifies spyware between 80 and 100% of the time while identifying non-spyware applications as only slightly likely to be spyware between 10 and 50%. These results imply that with further work, the AssessAppRisk tool could be used in conjunction with existing tools and security practices to better detect spyware applications used in intimate partner violence and help victims understand and respond to the threat.

1 Introduction

Intimate partner violence (IPV) is considered a public health concern in the United States by the CDC. This fact can be shocking for the uninformed whose idea of a public health concern is heart disease or a viral pandemic, but the four abusive behaviors of physical violence, sexual violence, stalking, and psychological aggression can lead to injury and death as assuredly as any disease [1]. The statistics differ slightly depending on the source, but approximately 1 in 4 women and 1 in 10 men have reported experiencing some form of IPV. One method that abusers use to control, manipulate, and harm their victims is surveillance spyware installed on their victim's devices. This topic has only recently been researched, but it is a security issue of great importance because the abusers do not have to be technologically savvy to employ their attacks. Additionally, many victims are uninformed about the abuser's tech capabilities and do not know how to deal with it even once the surveillance is suspected or discovered.

This project aims to continue the burgeoning research and security solutions begun by students and faculty primarily at Cornell Tech and New York University [2, 3, 4, 5, 6, 7]. The

work done by Sam Havron et al. in creating a clinical computer security procedure and IPV Spyware Discovery tool (ISDi) is the major inspiration for the project [5]. Further work by Kevin Roundy et al. also provided ideas during the research phase [7]. I had several goals for the project, the first of which was to improve ISDi's efficacy with a sort of "signature"-based spyware detection, as ISDi relies on blacklisting. The second goal was to obtain the permissions of known Android spyware applications and analyze them for commonalities in a guilt by association approach where any permission that was frequently used in spyware was more likely to indicate that an unknown application was also spyware. The third goal was to inspect victim devices without arousing suspicion of the attacker. The fourth goal was to programmatically assess the likelihood of an application being spyware with accuracy, as false negatives can be dangerous for the client (victim) while false positives obfuscate the danger. The final goal was to do everything in a way that is easy for a client to understand, leading to informed decision making regarding their device.

To accomplish these goals, I have designed three separate pieces, two support tools and a graphic user interface to display the findings. The first tool, AnalyzeAndroidPermissions, is Java code used to read the permissions from the AndroidManifest.xml files of a group of sample applications. It categorizes and sorts them according to Android protection level, number of times used, and whether they are present in spyware or popular, non-spyware applications. The second tool, Horoscope, is an Android application that on its face appears to be a simple daily horoscope. However, when the application is launched, it also gathers installation data of the applications on the device and saves them to a file to be used with the third tool. This final tool, AssessAppRisk, is a Java Swing application which lists every installed application with the data taken from the Horoscope application, and also displays a risk value decided by heuristic weights, a risk assessment, and descriptions of the permissions' capabilities. AssessAppRisk includes a whitelist of 17 of the most popular applications on the Google Play Store, so the risk assessment ranges from whitelisted, very unlikely, unlikely, slightly likely, likely, and very likely to be spyware. If these tools were to be used in a real situation, it would follow the example of the field study introducing ISDi: a technician works with the client to run the tools on their device and go over the results with them.

Since IPV has evolved into a computer security problem, it is important to create a threat model that contextualizes the roles of attacker and victim and answers the questions of what the attacker knows, has access to, and can do. We must have a model both for the initial attack on the victim device and in the use of project's tool. In the first case, these questions have been answered by the previous researchers [3]. As an aside, we use the terms attacker and victim here in the sense of an adversary model, though they align with the role of abuser and the target of abuse. "Victim" is not meant to be a slight or implication toward any person who is a target of or survivor of abuse. As for who the attacker and victim are, they tend to be intimate partners—spouses, boyfriends or girlfriends, exes, etc. There are other types of relationships, such as that of parent and child (where either party may play either role depending on age and circumstances) or even platonic friendships [8], but the relationships described in anecdotes by clients of IPV studies were only those of a romantic partner, ex-partner, and/or parent of their child(ren). The attacker and victim may live together, have lived together in the past, or never together at all. This is an important distinction for this threat model; while there are insider attacks wherein the attacker uses their organizational status to carry out an attack on that organization, it is easier to imagine a hacker thousands of miles away carrying out a remote attack. This is also not an attack

on some faceless corporation, but one on a specific individual, and one whom the attacker knows very well.

What the attacker knows in this situation is both much and very little. On the social engineering side, the attacker may know many secrets that allow them to compromise the victim's devices or accounts. Over the course of their relationship with the victim, they may come to know or compel the victim to tell them answers to security questions, like favorite color or birthday; they can watch or compel the victim to type passwords and PINs. On the other hand, it has been found that these attackers are not technically sophisticated, and Freed et al. go so far as to term them "UI-bound adversaries," as they employ their attacks through a standard user interface with which they can be authenticated, or download the applications examined in this project to do their surveillance [3].

Another drastic difference from the typical adversary model is the attacker's access to the victim device since most, if not all, assume the attacker's target is someone else's device [11]. One commonly reported scenario in cases of IPV is the device or its service is bought or paid for by the attacker. This gives the attacker control in innumerable ways, with such examples as the attacker confiscating or destroying the device, controlling associated digital accounts such as the mobile family plan or iCloud, and even manipulating relationships by giving a child a device with the intention to harass the adult target through it. Physical access to the device is key, especially since many of the spyware applications marketed towards these attackers require it.

Finally, what the attacker can do varies and has changed over time. In the past, an attacker could search for simple terms on the Google Play store like "track my girlfriend's phone without them knowing" or "read SMS from another phone" and find many applications to choose from [4]. Following the warnings of security researchers, Google has removed many spyware applications from its store and filtered out IPV-related search terms, and it seems Android also has made changes to its APIs to make certain features of spyware applications unusable. Still, there were and are applications that can be found from a Google search, and it is simple to disable a device's protections, e.g., Google's Play Protect, to install such off-store applications. One particularly nasty application called Cerberus boasts of uninstall protection, remote wipe, lock with password, blocking the power menu, and those are only the capabilities that prevent the victim from reclaiming their privacy. Applications claim they can track the device's location, take pictures, record video and audio, forward text messages, read deleted messages, and practically any other type of privacy breach one can imagine. This makes them powerful and scary tools indeed. On the other hand, some applications are not as they appear. Some applications tested for this project did not work past an introductory screen, and others triggered anti-virus software which flagged the application as a phishing attack. The Zscaler research term confirmed another case when analyzing the code of the keylogger application SPYMIE, finding a hard-coded email address with a timer to send surveilled data every minute [12]. Additionally, while some applications are free to download, most can only be used after purchasing a subscription plan.

I had to evaluate a threat model when designing my project as well. Many aspects from the previous threat model remain. I kept many design considerations from Sam Havron et al. when they were creating ISDi. First we had to consider if the attacker would know that a spyware scanning tool was being used on the victim device, and the following consideration was what they would do upon learning of the tool's use or the victim's participation in a security clinic. I will discuss the implications of these considerations on both projects in later sections.

Given that the main goal of my project is to identify Android spyware used in IPV, I would evaluate my project's success by the accuracy with which it does so. I would like to see AssessAppRisk flag 75% of known spyware applications as some degree of likely to be spyware while flagging only 25% of non-spyware applications higher than slightly likely (false positives). I will show an evaluation in a following section.

2 Background and Related Work

The groundwork for this project was laid by an interdisciplinary group of researchers at Cornell Tech, Cornell University, and New York University in a series of studies beginning in 2017 and continuing today. The first study largely identifies IPV as a security issue through interviews with 40 IPV professionals and nine focus groups with 32 survivors of IPV. These interviews revealed how abusers use technology, what clients and professionals understand about said technology, how professionals advise clients about technology, and how the law understands technology used in IPV [2]. The next paper was another qualitative study with 89 participants to detail exactly how abusers use technology in IPV, which discovered technologically unsophisticated methods, such as social engineering and downloaded applications. Most importantly, they began to consider how to mitigate these types of attacks [3]. This led to an investigation of spyware used in intimate partner surveillance (IPS) which revealed both spyware and what they termed dual-use applications which have legitimate uses but can be exploited by abusers, such as Find My Friends or anti-theft applications. In this study, they also found that existing anti-virus and anti-spyware tools did not consistently catch dual-use applications [4].

The next study, mentioned earlier, produced a consultation service for IPV victims. In this service, a trained technologist worked with the client and an IPV professional to answer a standardized technology assessment questionnaire, create a diagram summarizing the client's digital assets, manually check the client's device for security configurations, and scan the device using ISDi [5]. ISDi is a Python application that does not require installation on the client's device. This is to avoid notifying the abuser that the device is being investigated, since some spyware applications keep track of application installations or take screenshots while the device is being used. Instead, the technologist uses a USB connection to a laptop where ISDi is run in a browser. The researchers tested a USB connection on devices with six more capable spyware applications installed and were reasonably confident that the applications would not pick up on ISDi. ISDi's major limitation is that its spyware detection is rather simple, using a blacklist of application names that were found using machine learning [4].

The next paper published in 2019 examined the findings of the clinical computer security approach and was more focused on sociology than computer science, reiterating some of the ideas from previous papers about the security needs and understandings of IPV victims [6]. The last study used the spyware applications unearthed by Chatterjee et al. as a seed set to discover "creepware," applications similar to the surveillance-based spyware previously discussed but used more generally for interpersonal attacks. This paper is as important to this project as the paper concerning ISDi as it provided a method for spyware detection beyond blacklisting. The researchers developed an algorithm called CreepRank which uses the principle of guilt by association to identify applications as creepware [7].

3 Dataset Description

The first step in researching the permissions used in IPV-related applications was to obtain a representative sample of spyware applications, as well as “safe” popular applications for comparison. Most of the spyware applications (listed in Table II of Appendix section A) were referenced in previous work, while the popular applications (listed in Table III) were chosen either because they were suggested on the Google Play store, deemed the most downloaded, or reported on in the media recently. It is necessary to examine the permissions of both spyware and popular applications because there is bound to be overlap. For example, one of the features nearly every application used for IPS has is location tracking; it goes without saying that applications like Lyft and Google Maps also require location. Then there is the matter of applications which realistically should not need your location but ask for it anyway, like Facebook and TikTok. Therefore, to reach the goal of successfully identifying spyware applications while not falsely identifying popular applications, both sets of permissions needed to be analyzed.

I chose only applications available on Android devices for several reasons: it is easier to get Android application information, I was anticipating using Android Studio for part of the project, and I could readily install applications on a physical Android device via USB and Windows 10. When initially researching the possibilities for this project, I found lots of discussion about programmatically mining the data of installed applications on an Android device and little about iOS devices. What little I found implied that it was impossible. Since I had a little experience with Android Studio, I wanted to use it for the Horoscope application; additionally, although iOS applications can be written in Java, Java is better supported for Android applications, and I have most of my programming experience in that language. Lastly, when testing USB connections on my development PC, I successfully connected an Android phone in a plug-and-play manner but no success with an iPhone. I also felt that developing for iOS devices was better suited as a future work endeavor given the confines of the project timeline.

The program AnalyzeAndroidPermissions produced the data needed to develop the AssessAppRisk program. By design, every Android application must include an *AndroidManifest.xml* file. This file describes essential information about the application, including its package name and permissions that the application will request [15]. The package name is important because some spyware applications hide their nature by pretending to be system services named, for example, “Update manager” or “Sync Service.” A user granting permissions is what allows an application to access otherwise protected parts of the system, such as the camera, contacts, or external media. When I found a small sample of applications, I downloaded their APK files to my computer, APK being how Android packages applications. These files are not readable without reverse engineering, so I used the open-source Apktool to extract the *AndroidManifest* files and save them in a resources folder for AnalyzeAndroidPermissions [16]. I later used my own Horoscope application to get data from more applications that were installed on an emulated device, so the resource files are mixture of extracted XML and handwritten text files.

To begin, the program reads all of the files in the spyware or popular folder. It searches for the prefix *<uses-permission android:name=*, which is found before every permission, and adds it to a new line in a text file (*spywarePermissions.txt* or *popularPermissions.txt*). Repeated permissions between files are included because I want to see which permissions are requested most frequently. With all of the permissions consolidated, I first referenced the Android

permissions documentation to determine if a permission was install-time (normal and signature) or runtime (dangerous) [17]. These protection levels indicate the scope of data accessed and actions performed by the application, so I hoped different levels would correlate with the permissions used in spyware or popular applications. Install-time permissions are automatically granted when the user installs the application, which means they are considered minimally risky for other applications, the system, or the user, so many permissions are considered normal. The system grants signature permissions only if the requesting application is signed with the same certificate as the application that declared the permission, and some signature permissions are not meant for third party use. Dangerous runtime permissions, however, must be explicitly granted by the user when first opening the application. They allow an application to access a higher level of private user data or control over the device. Unfortunately, Android's documentation is not comprehensive. It was difficult to find information about permissions that were deprecated or removed in previous versions of the API, and these difficult-to-find permissions were categorized using other sources [18]. I labeled permissions that are not in the current API as "removed." Permissions that seem to have similar purposes but which I could not find clear documentation for were classified as "other," while some permissions are developer-specified, which I classified as "unknown" by default since I cannot predict the naming scheme or usage.

The next step was to place each permission in a hash map with its name as the key and the number of times it appeared in applications and its protection level as the value, then sort the map by protection level and count. This was done separately for the spyware and popular permissions. The final function of AnalyzeAndroidPermissions was to create lists of permissions unique to spyware, unique to popular, and shared between the two. These lists also included the permission's protection level and the percent of applications which used it. I then copied this data to Microsoft Excel to do some additional sorting and see the data side by side, which helped me to better notice patterns or interesting outliers. This data is in section B of the Appendix.

4 Using Guilt by Association

As mentioned earlier, the CreepRank algorithm developed by Roundy et al. informed the design of AssessAppRisk's risk assessment algorithm. CreepRank uses graph mining to compute scores using maximum a posteriori (MAP) estimation so that the higher the score, the more the application is associated with known creepware [7]. The algorithm takes a seed set of applications discovered by Chatterjee et al. as input and a dataset of installed applications and outputs the CreepRank for each application. AssessAppRisk's algorithm is similar, taking the set of permissions discovered by AnalyzeAndroidPermissions and a set installed applications and outputs a rank for each application. The CreepRank algorithm is much more sophisticated, however, as the researchers used bipartite graphs to represent applications and devices as nodes and edges to represent installation. They then estimated the probability p that a particular application appears on a spyware-infected device using a binomial distribution and maximum likelihood estimation (MLE); they later incorporated MAP probability estimates when the MLE method proved to suffer from high false positive rates.

Although I would have preferred AssessAppRisk to have a mathematically-driven algorithm, I instead decided on a heuristic approach based on what I saw in the permission analysis. The first decision was that permissions of different protection levels would be more or less indicative of spyware use. This is obvious in the case of dangerous permissions; indeed, you can see in Table V and Table VI that the spyware applications use more unique dangerous permissions than

the popular applications, and in Table IV that the spyware applications use more dangerous applications at a slightly higher frequency than the popular applications. I ignored the normal permissions in the assessment because of the high overlap between spyware and popular applications and the fact that they have little use for attackers.

I made two other decisions based on intuition. The first was noticing that some spyware applications used five unique removed permissions while some popular applications used only two. The difference is small, but I considered how the spyware applications are used in practice: an attacker installs the application on the victim's device while they have physical access to it, and they may not have access to that device again. This could mean the spyware application, while running on the victim's device, is never or rarely updated. It is also possible that the developers do not update the application frequently, unlike big-name development companies like Facebook and Twitter. Both of these theories could mean that spyware contains removed permissions at a higher rate. The second decision I made was about signature permissions. I noticed that a substantial number of signature permissions were used by spyware applications, with only three permissions shared between spyware and popular applications and popular applications using only two unique permissions. This imbalance combined with the fact that many signature applications are not to be used by third parties made signature permissions a red flag for spyware.

Based on these observations, I separated the permissions into nine groups and assigned a different weight.

Category	Weight
Very Dangerous	3 + frequency
Moderately Dangerous	2 + frequency
Less Dangerous	1 + frequency
Only Spyware Dangerous	1.5 + frequency
Only Popular Dangerous	1
Shared Signature	1 + frequency
Only Spyware Signature	3 + frequency
Only Popular Signature	1
Removed	0.3

Table I: Heuristic values for risk assessment.

The frequency value is the fraction of spyware applications that use a particular permission. Very Dangerous includes dangerous permissions that were included in a large majority (over 70%) of spyware applications, with the reasoning that if most spyware applications used them, they must be important to the basic surveillance functionality of the applications. Moderately Dangerous includes dangerous permissions used by fewer than 70% and more than 30% of the spyware applications, while Less Dangerous includes the remaining dangerous permissions. The rest of the categories are as they are named. When the risk value is calculated for an individual application, the total number of permissions is also accounted for. As you can imagine from such a simple weight scheme, an application with many weighted permissions will have a higher score than an application with only a few, and some applications in the sample only used around 10 total permissions. This does not exclude them from being spyware, so I added a modifier to the risk score. This modifier is the ratio of weighted permissions used in the application to the total number of permissions. If this ratio is greater than 0.4, then the risk score is increased by 1 + ratio, which helps to normalize the risk score.

5 The Risk Assessment Tool

As mentioned earlier, the Horoscope application and AssessAppRisk program are meant to be used to investigate the victim device with the help of a technician to run and interpret the programs. The technician would have Android Studio installed on a laptop which also has the project files for Horoscope and AssessAppRisk. The technician would put the victim device into debugging mode and connect it to the laptop via USB. The Horoscope application can then be installed on the device through Android Studio. After obtaining the application data from the device, the technician saves the output file to the resources folder in AssessAppRisk's source folder. After running AssessAppRisk, the technician and client can view the results together with the technician providing explanation and advice. The tools are not meant to be used alone by victims of IPV for several reasons. The first is releasing either the Horoscope application or AssessAppRisk program to the public would make abusers equally aware of its use as survivors, and knowing that their attacks have been thwarted could cause them to change their methods or escalate their violent behavior. Another reason is that the clients surveyed in earlier studies were not typically knowledgeable about technology and may have trouble understanding the results. Finally, the way this project is designed prohibits the average non-programmer from using it; this is because the project is experimental, not because this is the best design.

The Horoscope application is an Android application with two parts: the front-facing daily horoscope and the backend application listing function. Horoscope uses Android's *PackageManager* class to retrieve information about the application packages installed on the device including the application name, package name, installation date, last modified date, and permissions [9]. It also filters system applications and Horoscope itself since we are only interested in applications that were user-installed. Horoscope writes to file the application information, and the file is accessible in Android Studio by clicking *View > Tool Windows > Device File Explorer > data/data/net.sleepinginthevoid.horoscope > appdata.txt*. This file can then be saved to AssessAppRisk's resources folder.

Horoscope is designed to meet the goal of inspecting the victim device without alerting the abuser. Unlike ISDi, this approach does involve installing an application, so I have taken some efforts to make up for this. I feel that if the application looks innocuous, it is less likely to arouse suspicion. If one were to search the Google Play or iTunes store, they would find many similarly titled and themed applications, and it is easy to imagine anyone downloading such an application for fun or out of boredom. The application also does what it says—it displays a daily horoscope for each astrological sign, which makes it more believably innocent. The text is hardcoded as Horoscope can be uninstalled as soon as it runs; it is not meant to stay on the device longer than necessary. On the backend, the package name keeps with the horoscope theme; unlike the spyware applications which fake their name and reveal their true nature with their package name, Horoscope maintains its disguise rather than being named something like “applist.” Finally, the actual application listing and risk assessment happens off of the victim device. This is so any spyware installed on the device does not report the assessment, and even if an attacker were to reverse engineer Horoscope's code, they would not know the purpose of the application data being gathered.

The final piece of the project is the main feature, AssessAppRisk. The file *appdata.txt* is saved to the project files and run from the IDE, which creates a Java Swing application window with four panels (shown in section D, Figure III of the Appendix). The top left panel displays a list of installed applications and their package name. Clicking on an item changes the appearance

of the other three panels [10]. The bottom left panel displays the risk score, first installation date, last modified date, and permissions. The bottom right panel again lists the permissions, but with details about their protection level and a brief description of their use (mostly taken from the Android documentation). The top right panel displays a qualitative risk assessment with a description of what that assessment could mean.

The program works by first creating a hash map to store the permission weights described in section 4. It also reads from the *whitelist.txt* file in the resources folder, which contains 19 very popular applications. This whitelist is intended to lower the number of false positives AssessAppRisk returns. When the user clicks on an application in the list, the program calculates the risk score and returns it along with the other information displayed in the bottom left panel. The risk score is calculated by comparing the application's permissions to the weighted permissions in the permission weight map, adding the values for all weighted permissions, and adjusting the total score by the ratio discussed earlier.

The risk assessment follows another simple heuristic evaluation. Any whitelisted application is noted as such, while any other application may be rated as very unlikely, unlikely, slightly likely, likely, or very likely to be spyware, which is decided on the range in which the application's risk score falls. The ranges are 0, greater than 0 and less than 20, greater than or equal to 20 and less than 50, greater than or equal to 50 and less than 70, and greater than 70. These ranges were determined by observing the risk scores from the sample applications and how they roughly broke down among the spyware and popular applications. Obviously the higher the risk score, the more likely the application is to be spyware. If an application were to use every single weight permission, its score would be 129.05; this is extremely unlikely since many of the permissions are used in only one or two applications, but it does show the relative severity of some applications over others.

6 Evaluating Efficacy

To evaluate AssessAppRisk's efficacy, I downloaded 10 spyware and 10 non-spyware applications to an emulated device and ran Horoscope to get the application data. These 20 applications were not members of the sample applications used to create the guilt by association algorithm. The results are shown in Table VIII in the Appendix, and Table VII shows the assessment for the seed applications for reference. The identification rate for the spyware applications exceeded expectations with 100% being identified as slightly likely to be spyware or more. No applications were deemed unlikely to be spyware in this test, although four known spyware applications were flagged as unlikely out of the seed set. This is due to those applications using a relatively small number of weighted permissions, especially those that overlap with popular applications like *android.permission.ACCESS_FINE_LOCATION* and *android.permission.WRITE_EXTERNAL_STORAGE*. As for the non-spyware applications, the assessment met expectations for them as well. Again, those applications deemed slightly likely to be spyware use the most popular dangerous permissions to access location and camera, amongst others.

An assessment of an actual user's device produced similar results on a larger scale. My husband has a habit of downloading lots of applications and never uninstalling them, so I gathered the application data from his Samsung phone (the results of which are shown in Table IX and Table X). Assuming none of the applications are known spyware, AssessAppRisk labeled 38.2% as unlikely or very unlikely to be spyware. The largest group of applications (47.2%)

were labeled slightly likely. This number is higher than desired, but not unexpected given the limitations of the heuristic assessment.

7 Discussion

I believe that I accomplished all of the goals I established when beginning this project. The overarching goal was to improve on ISDi's blacklisting assessment by judging applications based on their permissions. To reach this goal, I first needed to learn how to get the permissions of applications, which I accomplished in developing Horoscope. I then needed to analyze the data, which I accomplished in developing AnalyzeAndroidPermissions and finding patterns in popularity of usage and unique usage. I partially fulfilled my goal of using guilt by association to judge the applications using certain permissions as spyware. My third goal (to not alert an abuser to any anti-spyware inspection) would need to be tested on a real person, but I believe the precautions I took in concealing Horoscope's purpose and doing the actual risk assessment on a separate device are enough to fool the average person while not leaving evidence for a spyware application to forward to the abuser later. I accomplished the fourth goal of programmatically assessing risk with AssessAppRisk, and by my efficacy evaluation, did so successfully with few false negatives or false positives. The final goal was for the entire process of inspecting the device to be easy for a client to understand; since I am not using the tool with an actual client, I cannot say for sure if they would understand it. I designed the risk assessment application window for understanding and included verbal descriptions of what the assessment and permissions mean, aimed to help a trained technician explain the results to a client. Overall, I am fairly satisfied with what I have developed.

I faced several limitations while creating this project. The first was difficulty finding spyware applications to study. Although there are supposedly thousands of them, the ones I found were inaccessible. Some were non-functional, not accepting user credentials or crashing on boot (the best and brightest do not make their careers off harming others, it seems). Many of the more sturdy-looking applications required payment before they could even be downloaded. I refused to pay for them because the prices were exorbitant, I did not want to reward developers who are actively and knowingly facilitating harm [4], and if I were foolish enough to use my own credit card, I would be at risk of having it stolen. I assume the researchers in New York have more resources to work around these problems.

Another limitation involved the ISDi tool. Originally, I wanted to work with the program and add functionality since ISDi's code is available on GitHub [13]. However, it was designed for Linux and Mac computers, so I had a lot of trouble using workarounds for my Windows 10 computer. Even when I solved that problem, I could not use the tool because I lacked the blacklist (kept secret by the researchers so neither abusers nor developers learn of it and evolve their methods in response). I created my own placeholder blacklist just to get the program to run, but I found there must be some other files I was missing. Additionally, I could not get ISDi to recognize that a device was connected, a function that apparently works natively on Mac, but not Windows. These obstacles meant my project would have to be a spiritual successor rather than an increase in functionality.

A final limitation was in my implementation of the guilt by association algorithm. When I first read the paper discussing it, I thought it was a very smart and intuitive approach to take, and I wanted to mimic it. I spent time on other parts of the project, intending to come back to the algorithm later on. When I reread the paper, I realized the algorithm was much more complicated

than I remembered, involving math concepts that I have little to no experience with. I knew it would take a lot of research for me to even understand their approach, let alone implement it with my project, and unfortunately time was now an issue. This led to my decision to take a heuristic approach, similar to ISDi. If I had more time, I would like to go back and learn about the probability estimation referenced by Roundy et al. and implement a data-driven algorithm, which I think would improve both my results and credibility of the tool.

My research and development has uncovered many implications. I believe it is possible for spyware, dual-use, and creepware applications to be detected with a more dynamic tool than a blacklist, and that is through permission analysis. My research also emphasizes something that I think should be common knowledge: popular applications can be predatory, and users should not blindly trust developers because they are well-known. When I was analyzing the permissions I had gathered, I worried that my project would be meaningless—that it would think everything was spyware because so many highly-downloaded applications used just as many dangerous permissions as known spyware did. I joked to friends and family that my program would not be entirely wrong to judge Facebook or Amazon as dangerous. That was why these applications had to be whitelisted. Uber has a risk score of 60.28, which would otherwise deem it likely to be spyware, and far too many non-spyware applications fall into the slightly likely range. This is of course a limitation of my analysis, but it is also the result of far too many applications requesting the user's private data, like location, camera, audio, and storage. This is a takeaway not just for users, but for developers as well. It behooves application developers to ask themselves if they really need to ask for a particular permission for their application to function, or if they are overreaching and creating an avenue for abuse.

If this project were to be continued into the future, the first thing to do would be gather more sample applications for their permissions. This may reinforce the trends I noticed in my original sample, uncover new ones, or actually debunk them, but large sample sizes are important for accurate statistical analysis. The next task would be to refine the permission analysis with more research on the permissions that were not easily classified, which again could provide more insight into what differentiates the spyware applications from others. As I mentioned earlier, the algorithm used for the risk assessment could be improved to be more rigorous, providing better, more meaningful results. Once the tool was improved and tested, it could be integrated into already existing spyware detection like ISDi and used during security clinics to assist and advise clients.

8 Conclusion

In developing this project, I learned about a real security threat that affects many people in the United States and the current methods developed to prevent it. I also learned about Android applications and permissions, including how an application requests them, how they are categorized, and what kinds of actions they allow an application to take. I created my first Android application with interactive buttons, which also involved learning about *PackageManager* and saving files to the Android device. The research and work that I have done was in the name of an important societal cause, which is my major motivation in life. I am happy that the end result of my work pretty closely resembles how I had imagined it when first setting out and that it could be of actual use to someone who needs it.

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APPENDIX

A. Sampled Applications

Application Name	Package Name
AllTracker Anti-Theft [14]	city.russ.alltrackercorp
Android Monitors [14]	com.ibm.fb
Cell Tracker Kids	us.cell.tracker.kids.locator
Cerberus [4]	com.lsdroid.cerberuss
Clone WhatsWeb Pro [7]	clone.whatsapp.pro
Control by SMS [7]	smartmob.com.controller
FamiSafe	com.wondershare.famisafe
Girlfriend Cell Tracker [7]	com.omrup.cell.tracker
Highster Mobile	com.highstermobile.main
Hoverwatch	com.android.core.mntg
iKeyMonitor [4]	com.sec.android.internet.im.service.im20190419
IP Webcam [7]	com.pas.webcam
iSpyoo [14]	com.systemservice
Mrecorder [7]	com.mobileservice.sync
Screen Recorder [7]	net.example.hatiboy.gpcapture
SMS Forwarder [7]	cz.psencik.smsforwarder
Spy GPS SMS Call Controller [7]	com.dspark.phone.modefind
Spy To Mobile [7]	com.spy2mobile.light
TrackView [4]	com.trackview
Unseen – No Last Seen [7]	com.tda.unseen

Table II: Set of IPS-related apps (more simply called spyware) used for permission analysis. Applications without a reference were found by searching online for IPS-related terms.

Application Name	Package Name
Amazon	com.amazon.mShop.android.shopping
Among Us	com.innersloth.spacemafia
Cash App	com.squareup.cash
Facebook	com.facebook.katana
Gmail	com.google.android.gm
Google Maps	com.google.android.apps.maps
Instagram	com.instagram.android
Lyft	me.lyft.android
Facebook Messenger	com.facebook.orca
Netflix	com.netflix.mediaclient
Pokemon GO	com.nianticlabs.pokemongo
Seamless	com.seamlessweb.android.view
Snapchat	com.snapchat.android
Spotify	com.spotify.music
TikTok	com.zhiliaoweb.musically
Twitter	com.twitter.android
Uber	com.uber.uber
Weather Channel	com.weather.Weather
WhatsApp	com.whatsapp
YouTube	com.google.android.youtube

Table III: Set of non-IPS-related apps (more simply called popular) used for permission analysis.

B. Sampled Permissions

	Shared	Spyware	Popular	Combined
dangerous	android.permission.WRITE_EXTERNAL_STORAGE	0.85	0.8	0.83
dangerous	android.permission.ACCESS_FINE_LOCATION	0.75	0.7	0.73
dangerous	android.permission.READ_EXTERNAL_STORAGE	0.75	0.7	0.73
dangerous	android.permission.ACCESS_COARSE_LOCATION	0.7	0.6	0.65
dangerous	android.permission.READ_CONTACTS	0.7	0.65	0.68
dangerous	android.permission.READ_PHONE_STATE	0.7	0.65	0.68
dangerous	android.permission.RECORD_AUDIO	0.55	0.5	0.53
dangerous	android.permission.CAMERA	0.5	0.7	0.6
dangerous	android.permission.READ_SMS	0.5	0.1	0.3
dangerous	android.permission.RECEIVE_SMS	0.5	0.15	0.33
dangerous	android.permission.GET_ACCOUNTS	0.45	0.7	0.57
dangerous	android.permission.CALL_PHONE	0.35	0.25	0.3
dangerous	android.permission.ACCESS_BACKGROUND_LOCATION	0.3	0.15	0.23
dangerous	android.permission.ACCESS_MEDIA_LOCATION	0.25	0.15	0.2
dangerous	android.permission.READ_CALENDAR	0.25	0.2	0.23
dangerous	android.permission.SEND_SMS	0.25	0.15	0.2
dangerous	android.permission.RECEIVE_MMS	0.1	0.05	0.08
dangerous	android.permission.WRITE_CONTACTS	0.05	0.2	0.13
normal	android.permission.ACCESS_NETWORK_STATE	0.95	1	0.98
normal	android.permission.INTERNET	0.95	1	0.98
normal	android.permission.WAKE_LOCK	0.95	1	0.98
normal	android.permission.ACCESS_WIFI_STATE	0.75	0.8	0.78
normal	android.permission.RECEIVE_BOOT_COMPLETED	0.7	0.85	0.78
normal	android.permission.CHANGE_WIFI_STATE	0.45	0.4	0.43
normal	android.permission.MODIFY_AUDIO_SETTINGS	0.4	0.5	0.45
normal	android.permission.VIBRATE	0.35	0.85	0.6
normal	android.permission.BLUETOOTH	0.3	0.55	0.43
normal	android.permission.FOREGROUND_SERVICE	0.25	0.7	0.48
normal	android.permission.CHANGE_NETWORK_STATE	0.2	0.25	0.23
normal	android.permission.GET_TASKS	0.2	0.15	0.18
normal	android.permission.BLUETOOTH_ADMIN	0.1	0.45	0.28
normal	com.android.launcher.permission.INSTALL_SHORTCUT	0.1	0.35	0.23
normal	com.android.launcher.permission.UNINSTALL_SHORTCUT	0.1	0.15	0.13
normal	android.permission.BROADCAST_STICKY	0.05	0.15	0.1
normal	android.permission.CHANGE_WIFI_MULTICAST_STATE	0.05	0.2	0.13
normal	android.permission.DISABLE_KEYGUARD	0.05	0.05	0.05
normal	android.permission.GET_PACKAGE_SIZE	0.05	0.05	0.05
normal	android.permission.NFC	0.05	0.4	0.23
normal	android.permission.READ_SYNC_SETTINGS	0.05	0.25	0.15
normal	android.permission.READ_SYNC_STATS	0.05	0.1	0.08

	Shared	Spyware	Popular	Combined
normal	android.permission.USE_BIOMETRIC	0.05	0.35	0.2
normal	android.permission.USE_FINGERPRINT	0.05	0.45	0.25
normal	android.permission.USE_FULL_SCREEN_INTENT	0.05	0.2	0.13
other	com.google.android.c2dm.permission.RECEIVE	0.65	0.9	0.78
other	com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE	0.4	0.6	0.5
other	com.android.vending.BILLING	0.3	0.35	0.33
other	com.google.android.gms.permission.ACTIVITY_RECOGNITION	0.1	0.2	0.15
other	com.android.launcher.permission.READ_SETTINGS	0.05	0.1	0.08
other	com.google.android.providers.gsf.permission.READ_GSERVICES	0.05	0.55	0.3
removed	android.permission.READ_PROFILE	0.15	0.4	0.28
removed	android.permission.USE_CREDENTIALS	0.15	0.5	0.33
removed	android.permission.FLASHLIGHT	0.1	0.15	0.13
removed	android.permission.WRITE_SMS	0.1	0.05	0.08
removed	android.permission.AUTHENTICATE_ACCOUNTS	0.05	0.35	0.2
removed	android.permission.MANAGE_ACCOUNTS	0.05	0.45	0.25
signature	android.permission.SYSTEM_ALERT_WINDOW	0.45	0.25	0.35
signature	android.permission.WRITE_SETTINGS	0.3	0.05	0.18
signature	android.permission.REQUEST_INSTALL_PACKAGES	0.1	0.1	0.1

Table IV: Shared permissions (unknown omitted) with fraction of apps that included them.

Spyware Only

dangerous	android.permission.READ_CALL_LOG	0.5
dangerous	android.permission.PROCESS_OUTGOING_CALLS	0.45
dangerous	android.permission.ACCESS_SUPERUSER	0.15
dangerous	android.permission.READ_PHONE_NUMBERS	0.1
dangerous	android.permission.WRITE_CALL_LOG	0.1
dangerous	android.app.action.DEVICE_ADMIN_ENABLED	0.05
normal	android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS	0.35
normal	android.permission.REQUEST_DELETE_PACKAGES	0.2
normal	android.permission.ACCESS_LOCATION_EXTRA_COMMANDS	0.1
normal	android.permission.RESTART_PACKAGES	0.1
normal	android.permission.ACCESS_NOTIFICATION_POLICY	0.05
normal	android.permission.KILL_BACKGROUND_PROCESSES	0.05
normal	android.permission.PERSISTENT_ACTIVITY	0.05
normal	android.permission.SET_ALARM	0.05
removed	com.android.browser.permission.READ_HISTORY_BOOKMARKS	0.25
removed	com.android.browser.permission.WRITE_HISTORY_BOOKMARKS	0.1
removed	android.permission.READ_HISTORY_BOOKMARKS	0.05
removed	android.permission.READ_USER_DICTIONARY	0.05
removed	android.permission.WRITE_USER_DICTIONARY	0.05
signature	android.permission.PACKAGE_USAGE_STATS	0.2
signature	android.permission.READ_PRIVILEGED_PHONE_STATE	0.15
signature	android.permission.INTERACT_ACROSS_USERS	0.1
signature	android.permission.INTERACT_ACROSS_USERS_FULL	0.1
signature	android.permission.READ_LOGS	0.1
signature	android.permission.WRITE_SECURE_SETTINGS	0.1
signature	android.app.action.BIND_DEVICE_ADMIN	0.05
signature	android.permission.BIND_ACCESSIBILITY_SERVICE	0.05
signature	android.permission.BIND_NOTIFICATION_LISTENER_SERVICE	0.05
signature	android.permission.CAPTURE_AUDIO_OUTPUT	0.05
signature	android.permission.CHANGE_CONFIGURATION	0.05
signature	android.permission.MANAGE_DEVICE_ADMINS	0.05
signature	android.permission.MANAGE_USERS	0.05
signature	android.permission.MODIFY_PHONE_STATE	0.05
signature	android.permission.OVERRIDE_WIFI_CONFIG	0.05
signature	android.permission.REBOOT	0.05
signature	android.permission.STATUS_BAR	0.05
signature	android.permission.TETHER_PRIVILEGED	0.05
signature	android.permission.UPDATE_APP_OPS_STATS	0.05
signature	com.android.launcher.permission.WRITE_SETTINGS	0.05

Table V: Permissions unique to spyware (unknown omitted).

Popular Only

dangerous	android.permission.ACTIVITY_RECOGNITION	0.15
dangerous	android.permission.WRITE_CALENDAR	0.1
normal	android.permission.WRITE_SYNC_SETTINGS	0.3
normal	android.permission.DOWNLOAD_WITHOUT_NOTIFICATION	0.15
normal	android.permission.MANAGE_OWN_CALLS	0.1
normal	android.permission.INSTALL_SHORTCUT	0.05
normal	android.permission.REORDER_TASKS	0.05
other	com.htc.launcher.permission.READ_SETTINGS	0.4
other	com.htc.launcher.permission.UPDATE_SHORTCUT	0.4
other	com.sec.android.provider.badge.permission.READ	0.35
other	com.sec.android.provider.badge.permission.WRITE	0.35
other	com.sonyericsson.home.permission.BROADCAST_BADGE	0.35
other	com.huawei.android.launcher.permission.CHANGE_BADGE	0.3
other	com.amazon.device.messaging.permission.RECEIVE	0.25
other	com.huawei.android.launcher.permission.READ_SETTINGS	0.2
other	com.huawei.android.launcher.permission.WRITE_SETTINGS	0.2
other	com.sonymobile.home.permission.PROVIDER_INSERT_BADGE	0.2
other	com.oppo.launcher.permission.READ_SETTINGS	0.15
other	com.oppo.launcher.permission.WRITE_SETTINGS	0.15
other	com.anddoes.launcher.permission.UPDATE_COUNT	0.1
other	com.facebook.katana.provider.ACCESS	0.1
other	com.facebook.mlite.provider.ACCESS	0.1
other	com.facebook.orca.provider.ACCESS	0.1
other	com.facebook.permission.prod.FB_APP_COMMUNICATION	0.1
other	com.facebook.receiver.permission.ACCESS	0.1
other	com.majeur.launcher.permission.UPDATE_BADGE	0.1
other	com.nokia.pushnotifications.permission.RECEIVE	0.1
other	me.everything.badger.permission.BADGE_COUNT_READ	0.1
other	me.everything.badger.permission.BADGE_COUNT_WRITE	0.1
removed	android.permission.SUBSCRIBED_FEEDS_READ	0.05
removed	android.permission.SUBSCRIBED_FEEDS_WRITE	0.05
signature	android.permission.BATTERY_STATS	0.05
signature	android.permission.MANAGE_DOCUMENTS	0.05

Table VI: Permissions unique to popular apps (unknown omitted).

C. Evaluation

Known Spyware		Not Spyware	
AllTracker Anti-Theft	Very Likely	Amazon	Whitelisted
Update manager	Likely	Among Us	Very Unlikely
Cell Tracker Kids	Slightly Likely	Cash App	Slightly Likely
Cerberus	Very Likely	Facebook	Whitelisted
Clone WhatsWeb Pro	Slightly Likely	Gmail	Whitelisted
Control by SMS	Unlikely (5)	Google Maps	Whitelisted
FamiSafe	Slightly Likely	Instagram	Whitelisted
Girlfriend Cell Tracker	Likely	Lyft	Whitelisted
Highster Mobile	Unlikely (4)	Facebook Messenger	Whitelisted
Hoverwatch	Very Likely	Netflix	Whitelisted
iKeyMonitor	Very Likely	Pokemon Go	Slightly Likely
IP Webcam	Slightly Likely	Seamless	Unlikely
iSpyoo	Very Likely	Snapchat	Whitelisted
Mrecorder	Likely	Spotify	Whitelisted
Screen Recorder	Slightly Likely	TikTok	Whitelisted
SMS Forwarder	Slightly Likely	Twitter	Whitelisted
Spy GPS SMS Call Controller	Likely	Uber	Whitelisted
Spy To Mobile	Likely	Weather Channel	Whitelisted
TrackView	Unlikely (6)	WhatsApp	Whitelisted
Unseen – No Last Seen	Unlikely (3)	YouTube	Whitelisted
80% correct		0% incorrect; 10% slightly likely	

Table VII: AssessAppRisk’s assessment of the seed applications. The number in parentheses denotes the small number of weighted permissions used in incorrectly labeled spyware applications.

Known Spyware		Not Spyware	
Cloud backup	Likely	Discord	Unlikely
Android System4	Very Likely	Duolingo	Unlikely
Google Settings	Very Likely	Reddit	Slightly Likely
Settings	Likely	Zoom	Likely
System Service (xno)	Very Likely	Wish	Slightly Likely
Update Manager	Likely	Twitch	Unlikely
Backup	Very Likely	DoorDash	Slightly Likely
Easy Logger	Very Likely	Venmo	Slightly Likely
System Service	Very Likely	GPay	Slightly Likely
Find My Friends	Slightly Likely	SoundCloud	Unlikely
100% correct		10% incorrect; 50% slightly likely	

Table VIII: AssessAppRisk’s assessment of the test applications.

Application	Assessment	Application	Assessment
Amazon Shopping	Slightly Likely	Drive	Unlikely
Skype for Business	Slightly Likely	Currents	Slightly Likely
McDonald's	Slightly Likely	Uber Eats	Whitelisted
Ring	Slightly Likely	Word	Slightly Likely
Tuesdays	Unlikely	Taco Bell	Unlikely
Duke Energy	Unlikely	Burger King	Slightly Likely
1Password	Unlikely	Twitch	Very Unlikely
T-Mobile Pay	Unlikely	Google Pay	Likely
Navy Federal	Slightly Likely	AppSelector	Unlikely
MyFitnessPal	Slightly Likely	hum	Unlikely
Authenticator (Google)	Slightly Likely	Google Play Movies & TV	Slightly Likely
Target	Unlikely	Pokemon HOME	Slightly Likely
My Spectrum	Unlikely	DoorDash	Whitelisted
Facebook Ads	Unlikely	Photos	Slightly Likely
PayPal	Slightly Likely	Uber	Slightly Likely
Discord	Unlikely	Trails End	Whitelisted
eBay Partner Attribution	Unlikely	MapMyWalk	Slightly Likely
Content Transfer	Likely	Facebook	Slightly Likely
Excel	Slightly Likely	Business Suite	Unlikely
Samsung Time Zone Data	Slightly Likely	Messenger	Likely
myScouting	Slightly Likely	JetBlue	Unlikely
Android Accessibility Suite	Unlikely	SmartThings	Very Unlikely
Reddit	Slightly Likely	TCGplayer	Unlikely
Zoom	Likely	Calculator	Slightly Likely
GoToWebinar	Slightly Likely	SmartNews	Slightly Likely
D&D Beyond	Unlikely	Samsung Health	Likely
Lyft	Whitelisted	Venmo	Slightly Likely
HomeAdvisor	Slightly Likely	Samsung Pay	Unlikely
Amazon Alexa	Slightly Likely	Samsung Notes	Likely
Instagram	Whitelisted	Google Play Books	Unlikely
GIPHY	Slightly Likely	Smart Switch	Unlikely
Flipboard	Unlikely	Inkpad NotePad	Slightly Likely
Alarmy	Slightly Likely	ParkMobile	Unlikely
Patreon	Slightly Likely	Sport Clips	Slightly Likely
Pokemon GO	Slightly Likely	Audio Recorder	Unlikely
Outlook	Slightly Likely	Authenticator (Azure)	Slightly Likely
Google Play Music	Slightly Likely	Postmates	Very Unlikely
myAT&T	Slightly Likely	Name ID	Very Unlikely
Yelp	Slightly Likely	SlowCOVIDNC	Unlikely
American Airlines	Unlikely	One Night	Unlikely
RAR	Unlikely	WEBTOON	Unlikely
PNC	Slightly Likely	Google Play Games	Unlikely
Twitter	Whitelisted	Google News	Slightly Likely
Square Point of Sale	Slightly Likely	Chick-fil-A	Unlikely
Softcard	Likely		

Table IX: AssessAppRisk's assessment of a real user's device.

Assessment	Percent
Whitelisted	6.7% (6/89)
Very Unlikely	4.5% (4/89)
Unlikely	33.7% (30/89)
Slightly Likely	47.2% (42/89)
Likely	7.9% (7/89)
Very Likely	0% (0/89)

Table X: Assessment percentages for Table IX.

D. Program Screenshots

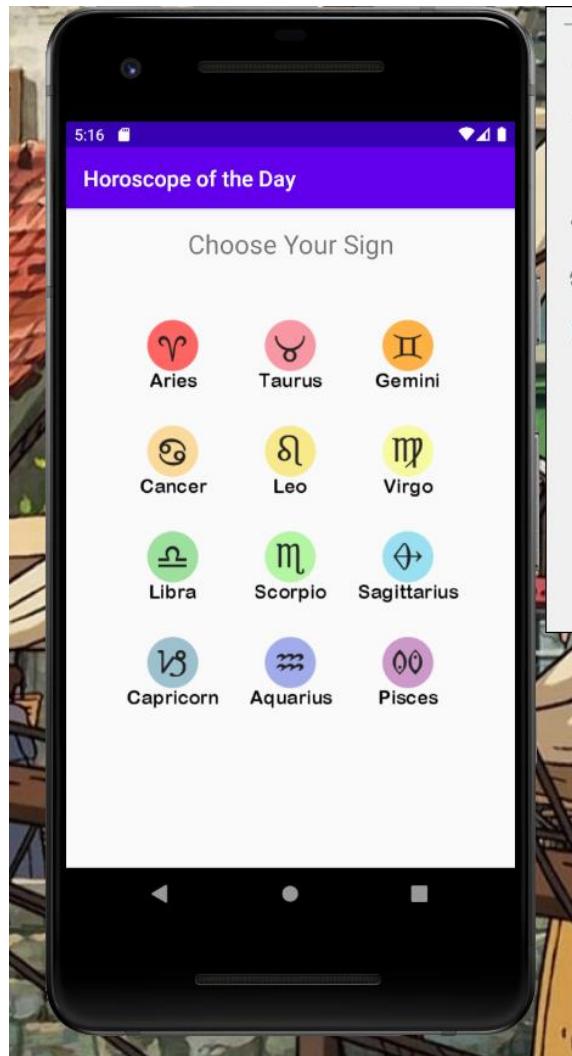


Figure I: The Horoscope application's main screen.

Device File Explorer

Emulator Pixel_2_API_29 - Attacker Android 10, API 29

Name	Permissions	Date	Size
com.google.android.partnersetup	drwxrwx--x	2020-11-23 23:09	4 KB
com.google.android.permissioncontro	drwxrwx--x	2020-11-23 23:09	4 KB
com.google.android.printservice.recon	drwxrwx--x	2020-11-23 23:09	4 KB
com.google.android.projection.gearhe	drwxrwx--x	2020-11-23 23:09	4 KB
com.google.android.providers.media.n	drwxrwx--x	2020-11-23 23:09	4 KB
com.google.android.sdksetup	drwxrwx--x	2020-11-23 23:09	4 KB
com.google.android.setupwizard	drwxrwx--x	2020-11-23 23:09	4 KB
com.google.android.soundpicker	drwxrwx--x	2020-11-23 23:09	4 KB
com.google.android.syncadapters.con	drwxrwx--x	2020-11-23 23:09	4 KB
com.google.android.tag	drwxrwx--x	2020-11-23 23:09	4 KB
com.google.android.tts	drwxrwx--x	2020-11-23 23:09	4 KB
com.google.android.videos	drwxrwx--x	2020-11-23 23:09	4 KB
com.google.android.webview	drwxrwx--x	2020-11-23 23:09	4 KB
com.google.android.wifi.resources	drwxrwx--x	2020-11-23 23:09	4 KB
com.google.android.youtube	drwxrwx--x	2020-11-23 23:09	4 KB
com.instagram.android	drwxrwx--x	2020-11-23 23:09	4 KB
net.sleepinginthevoid.horoscope	drwxrwx--x	2020-11-23 23:09	4 KB
cache	drwxrws--x	2020-10-16 18:55	4 KB
code_cache	drwxrws--x	2020-10-16 18:55	4 KB
files	drwxrwx--x	2020-10-24 19:05	4 KB
appdata.txt	-rw-rw----	2020-11-30 17:20	20.7 KB

Figure II: The Device File Explorer in Android Studio.

Your Risk Assessment

Installed Applications

- Zoom (us.zoom.videomeetings)
- Google Settings (com.wifiset.service)
- Wish (com.contextlogic.wish)
- Settings (wosc.cwf)
- System Service (com.xno.systemservice)
- Twitch (tv.twitch.android.app)
- DoorDash (com.dd.doordash)
- Update Manager (com.hp.vd)
- Venmo (com.venmo)
- Backup (com.spap.calabsss.alarm)
- GPay (com.google.android.apps.nbu.paisa.user)
- Easy Logger (app.EasyLogger)
- SoundCloud (com.soundcloud.android)
- System Service (com.systemservice)
- Find My Friends (info.com.dev.hkmobile.chatonline)

Assessment

This app is slightly likely to be spyware.

Many popular apps fall within this range, in part because they use location services. Check the name and installation date to see if you recognize installing this app yourself, and familiarize yourself with its capabilities through its permissions.

Risk = 46.25

First installed: Nov 24, 2020, 12:13 AM
Last modified: Nov 24, 2020, 12:13 AM

Permissions:

- android.permission.ACCESS_BACKGROUND_LOCATION
- android.permission.ACCESS_COARSE_LOCATION
- android.permission.ACCESS_FINE_LOCATION
- android.permission.CALL_PHONE
- android.permission.CAMERA
- android.permission.READ_CONTACTS
- android.permission.READ_EXTERNAL_STORAGE
- android.permission.READ_PHONE_STATE
- android.permission.WRITE_EXTERNAL_STORAGE

Permission Details

android.permission.ACCESS_BACKGROUND_LOCATION	DANGEROUS
Allows an app to access location in the background.	
android.permission.ACCESS_COARSE_LOCATION	DANGEROUS
Allows an app to access approximate location.	
android.permission.ACCESS_FINE_LOCATION	DANGEROUS
Allows an app to access precise location.	
android.permission.CALL_PHONE	DANGEROUS
Allows an application to initiate a phone call without going through the Dialer user interface for the user to confirm the call.	
android.permission.CAMERA	DANGEROUS
Required to be able to access the camera device.	
android.permission.READ_CONTACTS	DANGEROUS
Allows an application to read the user's contacts data.	
android.permission.READ_EXTERNAL_STORAGE	DANGEROUS
Allows an application to read from external storage.	

Figure III: The AssessAppRisk application window.

```
1 package androidPermissions;
2
3 public class Permissions {
4     int count;
5     String type;
6
7     public Permissions(int c, String t) {
8         this.count = c;
9         this.type = t;
10    }
11
12    public void increaseCount() {
13        count++;
14    }
15
16    public int getCount() {
17        return count;
18    }
19
20    public String getType() {
21        return type;
22    }
23 }
24
```

```

1 package androidPermissions;
2
3 import java.io.*;
4 import java.util.*;
5 import java.util.Map.Entry;
6 import org.apache.commons.collections4.ListUtils;
7
8 public class AnalyzeAndroidPermissions {
9     static HashSet<String> normal = new HashSet<>();
10    static HashSet<String> dangerous = new HashSet<>();
11    static HashSet<String> signature = new HashSet<>();
12    static HashSet<String> removed = new HashSet<>();
13    static HashSet<String> other = new HashSet<>();
14    static File[] spyFiles = new File("src/res/spyware").listFiles();
15    static File[] popFiles = new File("src/res/popular").listFiles();
16    static File permFile = new File("src/res/permissions/allPermissions.txt");
17    static File spyData = new File("src/res/permissions/spywarePermissions.txt");
18    static File popData = new File("src/res/permissions/popularPermissions.txt");
19    static File permByAppFile = new File("src/res/permissions/permissionsByApp.txt");
20    static Map<String, Permissions> spyMap = new HashMap<>();
21    static Map<String, Permissions> popMap = new HashMap<>();
22    static File spyCount = new File("src/res/permissions/spywarePermissionsCount.txt");
23    static File popCount = new File("src/res/permissions/popPermissionsCount.txt");
24    static File sharedPerms = new File("src/res/permissions/sharedPermissions.txt");
25    static File uniquePerms = new File("src/res/permissions/uniquePermissions.txt");
26
27    public static void main(String[] args) {
28        try {
29            getPermissions(spyFiles, spyData, permByAppFile);
30            getPermissions(popFiles, popData, permByAppFile);
31            getCategories();
32            List<Entry<String, Permissions>> sortedSpy = countPermissions(spyData, spyMap, spyCount);
33            List<Entry<String, Permissions>> sortedPop = countPermissions(popData, popMap, popCount);
34            comparePermissions(sortedSpy, sortedPop);
35        } catch (IOException e) {
36            e.printStackTrace();
37        }
38    }
39    // Reads all permissions from set of apps (spyware or popular) and writes to file
40    static void getPermissions(File[] files, File dataTxt, File labeledTxt) throws IOException {
41        String line;
42        String prefix = "<uses-permission android:name=\"";
43        BufferedWriter bw1 = new BufferedWriter(new FileWriter(dataTxt));
44        BufferedWriter bw2 = new BufferedWriter(new FileWriter(labeledTxt, true));
45
46        for (File file : files) {
47            BufferedReader br = new BufferedReader(new FileReader(file));
48            // Used to filter out repeated permissions within the same XML file
49            HashSet<String> uniquePerms = new HashSet<>();
50            bw2.write(file.toString() + "\n");
51            while ((line = br.readLine()) != null) {
52                if (line.contains(prefix)) {
53                    String[] result = line.split("\\\"");
54                    if (!uniquePerms.contains(result[1])) {
55                        bw1.write(result[1] + "\n");
56                        bw2.write(result[1] + "\n");
57                        uniquePerms.add(result[1]);
58                    }
59                }
60            }
61            bw2.write("\n");
62            br.close();
63        }
64        bw1.close();
65        bw2.close();
66    }
67    // Reads categorized permissions (normal, dangerous, signature, or removed) and adds to set for use in
68    // program
68    static void getCategories() throws IOException {
69        BufferedReader br = new BufferedReader(new FileReader(permFile));
70        String line;
71
72        if ((br.readLine()).equals("Dangerous")) {
73            while (!(line = br.readLine()).equals("")) {
74                dangerous.add(line);
75            }
76        }
77        if ((br.readLine()).equals("Normal")) {

```

```

78         while (!(line = br.readLine()).equals("")) {
79             normal.add(line);
80         }
81     }
82     if ((br.readLine()).equals("Signature")) {
83         while (!(line = br.readLine()).equals("")) {
84             signature.add(line);
85         }
86     }
87     if ((br.readLine()).equals("Removed")) {
88         while (!(line = br.readLine()).equals("")) {
89             removed.add(line);
90         }
91     }
92     if ((br.readLine()).equals("Other")) {
93         while ((line = br.readLine()) != null) {
94             other.add(line);
95         }
96     }
97     br.close();
98 }
99 // Counts repeated permissions and outputs to file sorted by type and descending count
100 static List<Entry<String, Permissions>> countPermissions(File txt, Map<String, Permissions> map, File
countTxt)
101 throws IOException {
102     String line;
103     boolean isNormal = false;
104     boolean isDangerous = false;
105     boolean isSignature = false;
106     boolean isRemoved = false;
107     boolean isOther = false;
108     BufferedReader br = new BufferedReader(new FileReader(txt));
109     BufferedWriter bw = new BufferedWriter(new FileWriter(countTxt));
110
111     while ((line = br.readLine()) != null) {
112         if (map.containsKey(line)) {
113             map.get(line).increaseCount();
114         } else {
115             if (normal.contains(line)) {
116                 map.put(line, new Permissions(1, "normal"));
117                 isNormal = true;
118             }
119             if (!isNormal) {
120                 if (dangerous.contains(line)) {
121                     map.put(line, new Permissions(1, "dangerous"));
122                     isDangerous = true;
123                 }
124             }
125             if (!isNormal && !isDangerous) {
126                 if (signature.contains(line)) {
127                     map.put(line, new Permissions(1, "signature"));
128                     isSignature = true;
129                 }
130             }
131             if (!isNormal && !isDangerous && !isSignature) {
132                 if (removed.contains(line)) {
133                     map.put(line, new Permissions(1, "removed"));
134                     isRemoved = true;
135                 }
136             }
137             if (!isNormal && !isDangerous && !isSignature && !isRemoved) {
138                 if (other.contains(line)) {
139                     map.put(line, new Permissions(1, "other"));
140                     isOther = true;
141                 }
142             }
143             if (!isNormal && !isDangerous && !isSignature && !isRemoved && !isOther) {
144                 map.put(line, new Permissions(1, "unknown"));
145             }
146             isNormal = false;
147             isDangerous = false;
148             isSignature = false;
149             isRemoved = false;
150             isOther = false;
151         }
152     }
153     br.close();
154 }
```

```

155     List<Entry<String, Permissions>> sortedEntries = new ArrayList<>(map.entrySet());
156     Collections.sort(sortedEntries, Entry.comparingByValue(Comparator.comparing(Permissions::getType)
157         .thenComparing(Permissions::getCount, Comparator.reverseOrder())));
158
159     for (Entry<String, Permissions> entry : sortedEntries) {
160         int count = entry.getValue().getCount();
161         String type = entry.getValue().getType();
162         String name = entry.getKey();
163         double percentIncl = ((double)count / 20) * 100;
164
165         bw.write(count + " " + type + " " + name + " " + String.format("%,.0f", percentIncl) + "%\n");
166     }
167     bw.close();
168
169     return sortedEntries;
170 }
171 // Returns shared and unique permissions
172 static void comparePermissions(List<Entry<String, Permissions>> sp, List<Entry<String, Permissions>> pp)
173     throws IOException {
174     BufferedWriter bw1 = new BufferedWriter(new FileWriter(sharedPerms));
175     BufferedWriter bw2 = new BufferedWriter(new FileWriter(uniquePerms));
176     List<String> spyList = new ArrayList<>();
177     List<String> popList = new ArrayList<>();
178     List<String> sharedList;
179     List<String> uniqueSpyList;
180     List<String> uniquePopList;
181     String type;
182     double percentIncl;
183     double spyPer;
184     double popPer;
185
186     for (Entry<String, Permissions> e : sp) {
187         spyList.add(e.getKey());
188     }
189
190     for (Entry<String, Permissions> e : pp) {
191         popList.add(e.getKey());
192     }
193
194     sharedList = ListUtils.intersection(spyList, popList);
195     uniqueSpyList = ListUtils.subtract(spyList, popList);
196     uniquePopList = ListUtils.subtract(popList, spyList);
197     Collections.sort(sharedList);
198     Collections.sort(uniqueSpyList);
199     Collections.sort(uniquePopList);
200
201     for (String e : sharedList) {
202         type = spyMap.get(e).getType();
203         spyPer = ((double)(spyMap.get(e).getCount()) / 20) * 100;
204         popPer = ((double)(popMap.get(e).getCount()) / 20) * 100;
205         percentIncl = ((double)(spyMap.get(e).getCount() + popMap.get(e).getCount()) / 40) * 100;
206         bw1.write(type + " " + e + " " + String.format("%,.0f", spyPer) + "% "
207             + String.format("%,.0f", popPer) + "% " + String.format("%,.0f", percentIncl) + "%\n");
208     }
209
210     bw2.write("Spyware\n");
211     for (String e : uniqueSpyList) {
212         type = spyMap.get(e).getType();
213         percentIncl = ((double)spyMap.get(e).getCount() / 20) * 100;
214         bw2.write(type + " " + e + " " + String.format("%,.0f", percentIncl) + "%\n");
215     }
216     bw2.write("\nPopular\n");
217     for (String e : uniquePopList) {
218         type = popMap.get(e).getType();
219         percentIncl = ((double)popMap.get(e).getCount() / 20) * 100;
220         bw2.write(type + " " + e + " " + String.format("%,.0f", percentIncl) + "%\n");
221     }
222
223     bw1.close();
224     bw2.close();
225 }
226 }
227

```

```
1 Dangerous
2 android.app.action.DEVICE_ADMIN_ENABLED
3 android.permission.ACCESS_BACKGROUND_LOCATION
4 android.permission.ACCESS_COARSE_LOCATION
5 android.permission.ACCESS_FINE_LOCATION
6 android.permission.ACCESS_MEDIA_LOCATION
7 android.permission.ACCESS_SUPERUSER
8 android.permission.ACTIVITY_RECOGNITION
9 android.permission.ADD_VOICEMAIL
10 android.permission.ANSWER_PHONE_CALLS
11 android.permission.BODY_SENSORS
12 android.permission.CALL_LOG
13 android.permission.CALL_PHONE
14 android.permission.CAMERA
15 android.permission.GET_ACCOUNTS
16 android.permission.PROCESS_OUTGOING_CALLS
17 android.permission.READ_CALENDAR
18 android.permission.READ_CALL_LOG
19 android.permission.READ_CONTACTS
20 android.permission.READ_EXTERNAL_STORAGE
21 android.permission.READ_PHONE_NUMBERS
22 android.permission.READ_PHONE_STATE
23 android.permission.READ_SMS
24 android.permission.RECEIVE_MMS
25 android.permission.READ_EXTERNAL_STORAGE
26 android.permission.RECEIVE_SMS
27 android.permission.RECEIVE_WAP_PUSH
28 android.permission.RECORD_AUDIO
29 android.permission.SEND_SMS
30 android.permission.USE_SIP
31 android.permission.WRITE_CALENDAR
32 android.permission.WRITE_CALL_LOG
33 android.permission.WRITE_CONTACTS
34 android.permission.WRITE_EXTERNAL_STORAGE
35
36 Normal
37 android.permission.ACCESS_LOCATION_EXTRA_COMMANDS
38 android.permission.ACCESS_NETWORK_STATE
39 android.permission.ACCESS_NOTIFICATION_POLICY
40 android.permission.ACCESS_WIFI_STATE
41 android.permission.BLUETOOTH
42 android.permission.BLUETOOTH_ADMIN
43 android.permission.BROADCAST_STICKY
44 android.permission.CHANGE_NETWORK_STATE
45 android.permission.CHANGE_WIFI_MULTICAST_STATE
46 android.permission.CHANGE_WIFI_STATE
47 android.permission.DISABLE_KEYGUARD
48 android.permission.DOWNLOAD_WITHOUT_NOTIFICATION
49 android.permission.EXPAND_STATUS_BAR
50 android.permission.FOREGROUND_SERVICE
51 android.permission.GET_PACKAGE_SIZE
52 android.permission.GET_TASKS
53 android.permission.INSTALL_SHORTCUT
54 android.permission.INTERNET
55 android.permission.KILL_BACKGROUND_PROCESSES
56 android.permission.MANAGE_OWN_CALLS
57 android.permission.MODIFY_AUDIO_SETTINGS
58 android.permission.NFC
59 android.permission.PERSISTENT_ACTIVITY
60 android.permission.READ_SYNC_SETTINGS
61 android.permission.READ_SYNC_STATS
62 android.permission.RECEIVE_BOOT_COMPLETED
63 android.permission.REORDER_TASKS
64 android.permission.REQUEST_COMPANION_RUN_IN_BACKGROUND
65 android.permission.REQUEST_COMPANION_USE_DATA_IN_BACKGROUND
66 android.permission.REQUEST_DELETE_PACKAGES
67 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
68 android.permission.RESTART_PACKAGES
69 android.permission.SET_ALARM
70 android.permission.SET_WALLPAPER
71 android.permission.SET_WALLPAPER_HINTS
72 android.permission.TRANSMIT_IR
73 android.permission.USE_BIOMETRIC
74 android.permission.USE_FINGERPRINT
75 android.permission.USE_FULL_SCREEN_INTENT
76 android.permission.VIBRATE
77 android.permission.WAKE_LOCK
78 android.permission.WRITE_SYNC_SETTINGS
```

```
79 com.android.alarm.permission.SET_ALARM
80 com.android.launcher.permission.INSTALL_SHORTCUT
81 com.android.launcher.permission.UNINSTALL_SHORTCUT
82
83 Signature
84 android.permission.BATTERY_STATS
85 android.permission.BIND_ACCESSIBILITY_SERVICE
86 android.app.action.BIND_DEVICE_ADMIN
87 android.permission.BIND_NOTIFICATION_LISTENER_SERVICE
88 android.permission.CAPTURE_AUDIO_OUTPUT
89 android.permission.CHANGE_CONFIGURATION
90 android.permission.INTERACT_ACROSS_USERS
91 android.permission.INTERACT_ACROSS_USERS_FULL
92 android.permission.MANAGE_DEVICE ADMINS
93 android.permission.MANAGE_DOCUMENTS
94 android.permission.MANAGE_USERS
95 android.permission.MODIFY_PHONE_STATE
96 android.permission.OVERRIDE_WIFI_CONFIG
97 android.permission.PACKAGE_USAGE_STATS
98 android.permission.READ_LOGS
99 android.permission.READ_PRIVILEGED_PHONE_STATE
100 android.permission.REBOOT
101 android.permission.REQUEST_INSTALL_PACKAGES
102 android.permission.STATUS_BAR
103 android.permission.SYSTEM_ALERT_WINDOW
104 android.permission.TETHER_PRIVILEGED
105 android.permission.UPDATE_APP_OPS_STATS
106 android.permission.WRITE_SECURE_SETTINGS
107 android.permission.WRITE_SETTINGS
108 com.android.launcher.permission.WRITE_SETTINGS
109
110 Removed
111 android.permission.AUTHENTICATE_ACCOUNTS
112 android.permission.FLASHLIGHT
113 android.permission.MANAGE_ACCOUNTS
114 android.permission.READ_HISTORY_BOOKMARKS
115 android.permission.READ_PROFILE
116 android.permission.READ_USER_DICTIONARY
117 android.permission.SUBSCRIBED_FEEDS_READ
118 android.permission.SUBSCRIBED_FEEDS_WRITE
119 android.permission.USE_CREDENTIALS
120 android.permission.WRITE_SMS
121 android.permission.WRITE_USER_DICTIONARY
122 com.android.browser.permission.READ_HISTORY_BOOKMARKS
123 com.android.browser.permission.WRITE_HISTORY_BOOKMARKS
124
125 Other
126 com.amazon.device.messaging.permission.RECEIVE
127 com.android.launcher.permission.READ_SETTINGS
128 com.anddoes.launcher.permission.UPDATE_COUNT
129 com.android.vending.BILLING
130 com.facebook.katana.provider.ACCESS
131 com.facebook.mlite.provider.ACCESS
132 com.facebook.orca.provider.ACCESS
133 com.facebook.permission.prod.FB_APP_COMMUNICATION
134 com.facebook.receiver.permission.ACCESS
135 com.google.android.c2dm.permission.RECEIVE
136 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
137 com.google.android.gms.permission.ACTIVITY_RECOGNITION
138 com.google.android.providers.gsf.permission.READ_GSERVICES
139 com.htc.launcher.permission.READ_SETTINGS
140 com.htc.launcher.permission.UPDATE_SHORTCUT
141 com.huawei.android.launcher.permission.CHANGE_BADGE
142 com.huawei.android.launcher.permission.READ_SETTINGS
143 com.huawei.android.launcher.permission.WRITE_SETTINGS
144 com.majeur.launcher.permission.UPDATE_BADGE
145 com.nokia.pushnotifications.permission.RECEIVE
146 com.oppo.launcher.permission.READ_SETTINGS
147 com.oppo.launcher.permission.WRITE_SETTINGS
148 com.sec.android.provider.badge.permission.READ
149 com.sec.android.provider.badge.permission.WRITE
150 com.sonyericsson.home.permission.BROADCAST_BADGE
151 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
152 me.everything.badger.permission.BADGE_COUNT_READ
153 me.everything.badger.permission.BADGE_COUNT_WRITE
```

```
1 src\res\spyware\AllTracker.txt
2 android.permission.READ_SMS
3 android.permission.RECEIVE_SMS
4 android.permission.READ_CALL_LOG
5 android.permission.PROCESS_OUTGOING_CALLS
6 android.permission.INTERNET
7 com.google.android.c2dm.permission.RECEIVE
8 android.permission.WAKE_LOCK
9 android.permission.GET_ACCOUNTS
10 android.permission.SYSTEM_ALERT_WINDOW
11 android.permission.USE_CREDENTIALS
12 android.permission.ACCESS_NETWORK_STATE
13 android.permission.ACCESS_WIFI_STATE
14 android.permission.CHANGE_WIFI_STATE
15 android.permission.ACCESS_COARSE_LOCATION
16 android.permission.ACCESS_FINE_LOCATION
17 android.permission.CAMERA
18 android.permission.WRITE_EXTERNAL_STORAGE
19 android.permission.READ_EXTERNAL_STORAGE
20 android.permission.GET_TASKS
21 android.permission.RECORD_AUDIO
22 android.permission.READ_CONTACTS
23 android.permission.READ_PHONE_STATE
24 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
25 android.permission.RECEIVE_BOOT_COMPLETED
26 com.android.browser.permission.READ_HISTORY_BOOKMARKS
27 com.android.launcher.permission.INSTALL_SHORTCUT
28 com.android.launcher.permission.UNINSTALL_SHORTCUT
29 android.permission.CAPTURE_AUDIO_OUTPUT
30 android.permission.ACCESS_SUPERUSER
31 android.permission.READ_CALENDAR
32 android.permission.BIND_NOTIFICATION_LISTENER_SERVICE
33 android.permission.VIBRATE
34 android.permission.MODIFY_AUDIO_SETTINGS
35 android.permission.REQUEST_INSTALL_PACKAGES
36 android.permission.PACKAGE_USAGE_STATS
37 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
38 android.permission.ACCESS_BACKGROUND_LOCATION
39
40 src\res\spyware\AndroidManger.txt
41 android.permission.INTERNET
42 android.permission.WAKE_LOCK
43 android.permission.SET_ALARM
44 android.permission.BROADCAST_STICKY
45 android.permission.WRITE_EXTERNAL_STORAGE
46 android.permission.WRITE_INTERNAL_STORAGE
47 android.permission.READ_EXTERNAL_STORAGE
48 android.permission.BLUETOOTH
49 android.permission.ACCESS_COARSE_LOCATION
50 android.permission.ACCESS_FINE_LOCATION
51 android.permission.ACCESS_LOCATION_EXTRA_COMMANDS
52 android.permission.ACCESS_NETWORK_STATE
53 android.permission.ACCESS_WIFI_STATE
54 android.permission.CHANGE_NETWORK_STATE
55 android.permission.CHANGE_WIFI_STATE
56 android.permission.CHANGE_WIFI_MULTICAST_STATE
57 android.permission.GET_ACCOUNTS
58 android.permission.USE_CREDENTIALS
59 android.permission.GET_PACKAGE_SIZE
60 android.permission.READ_CALL_LOG
61 android.permission.PROCESS_OUTGOING_CALLS
62 android.permission.READ_SMS
63 android.permission.READ_CONTACTS
64 android.permission.READ_CALENDAR
65 android.permission.READ_HISTORY_BOOKMARKS
66 android.permission.READ_PHONE_STATE
67 android.permission.READ_PROFILE
68 android.permission.READ_SYNC_SETTINGS
69 android.permission.READ_SYNC_STATS
70 android.permission.RECEIVE_BOOT_COMPLETED
71 android.permission.RECEIVE_MMS
72 android.permission.RECEIVE_SMS
73 com.google.android.gm.permission.READ_GMAIL
74 com.google.android.providers.gmail.permission.READ_GMAIL
75 com.android.browser.permission.READ_HISTORY_BOOKMARKS
76 com.android.email.permission.ACCESS_PROVIDER
77 com.android.browser.permission.WRITE_HISTORY_BOOKMARKS
78 com.google.android.c2dm.permission.RECEIVE
```

```
79 com.ibm.fb.permission.C2D_MESSAGE
80 android.permission.ACCESS_BACKGROUND_LOCATION
81
82 src\res\spyware\CellTrackerKids.xml
83 android.permission.INTERNET
84 android.permission.ACCESS_NETWORK_STATE
85 android.permission.WAKE_LOCK
86 android.permission.ACCESS_COARSE_LOCATION
87 android.permission.ACCESS_FINE_LOCATION
88 android.permission.READ_PHONE_STATE
89 android.permission.READ_CONTACTS
90 android.permission.RECEIVE_BOOT_COMPLETED
91
92 src\res\spyware\Cerberus.xml
93 android.permission.READ_SMS
94 android.permission.WRITE_SMS
95 android.permission.SEND_SMS
96 android.permission.RECEIVE_SMS
97 android.permission.READ_CALL_LOG
98 android.permission.PROCESS_OUTGOING_CALLS
99 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
100 com.google.android.c2dm.permission.RECEIVE
101 android.permission.ACCESS_COARSE_LOCATION
102 android.permission.ACCESS_FINE_LOCATION
103 android.permission.WRITE_SETTINGS
104 android.permission.WRITE_SECURE_SETTINGS
105 android.permission.RECORD_AUDIO
106 android.permission.READ_PHONE_STATE
107 android.permission.MODIFY_PHONE_STATE
108 android.permission.ACCESS_NETWORK_STATE
109 android.permission.CHANGE_NETWORK_STATE
110 android.permission.READ_CONTACTS
111 android.permission.ACCESS_WIFI_STATE
112 android.permission.CHANGE_WIFI_STATE
113 android.permission.INTERNET
114 android.permission.WAKE_LOCK
115 android.permission.RECEIVE_BOOT_COMPLETED
116 android.permission.WRITE_EXTERNAL_STORAGE
117 com.android.vending.BILLING
118 android.permission.CAMERA
119 com.latedroid.juicedefender.permission.CONTROL_JUICEDEFENDER
120 com.latedroid.juicedefender.permission.TOGGLE_MOBILE_DATA
121 net.dinglisch.android.tasker.PERMISSION_RUN_TASKS
122 android.permission.CALL_PHONE
123 android.permission.MODIFY_AUDIO_SETTINGS
124 android.permission.SYSTEM_ALERT_WINDOW
125 android.permission.VIBRATE
126 android.permission.GET_ACCOUNTS
127 android.permission.MANAGE_ACCOUNTS
128 android.permission.UPDATE_APP_OPS_STATS
129 android.permission.STATUS_BAR
130 android.permission.BLUETOOTH
131 android.permission.BLUETOOTH_ADMIN
132 android.permission.NFC
133 android.permission.INTERACT_ACROSS_USERS
134 android.permission.MANAGE_USERS
135 android.permission.MANAGE_DEVICE_HELPERS
136 com.google.android.gms.permission.ACTIVITY_RECOGNITION
137 android.permission.USE_FINGERPRINT
138 android.permission.READ_PRIVILEGED_PHONE_STATE
139 android.permission.OVERRIDE_WIFI_CONFIG
140 android.permission.ACCESS_NOTIFICATION_POLICY
141 android.permission.TETHER_PRIVILEGED
142 android.permission.ACCESS_BACKGROUND_LOCATION
143 android.permission.USE_FULL_SCREEN_INTENT
144 android.permission.USE_BIOMETRIC
145 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
146
147 src\res\spyware\CloneWhatsWebPro.txt
148 android.permission.INTERNET
149 android.permission.RECORD_AUDIO
150 android.permission.CAMERA
151 android.permission.MODIFY_AUDIO_SETTINGS
152 android.webkit.PermissionRequest
153 android.permission.ACCESS_NETWORK_STATE
154 android.permission.WRITE_EXTERNAL_STORAGE
155 android.permission.READ_EXTERNAL_STORAGE
156 android.permission.ACCESS_MEDIA_LOCATION
```

```
157  
158 src\res\spyware\ControlBySMS.xml  
159 android.permission.RECEIVE_SMS  
160 android.permission.WAKE_LOCK  
161 android.permission.DISABLE_KEYGUARD  
162 android.permission.GET_TASKS  
163 android.permission.KILL_BACKGROUND_PROCESSES  
164 android.permission.RESTART_PACKAGES  
165 android.permission.SEND_SMS  
166 android.permission.CALL_PHONE  
167 android.permission.READ_PHONE_STATE  
168 android.permission.READ_CONTACTS  
169 android.permission.MODIFY_AUDIO_SETTINGS  
170  
171 src\res\spyware\FamiSafe.xml  
172 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS  
173 android.permission.READ_CONTACTS  
174 android.permission.ACCESS_COARSE_LOCATION  
175 android.permission.ACCESS_FINE_LOCATION  
176 android.permission.ACCESS_NETWORK_STATE  
177 android.permission.ACCESS_WIFI_STATE  
178 android.permission.CHANGE_WIFI_STATE  
179 android.permission.INTERNET  
180 android.permission.RECEIVE_BOOT_COMPLETED  
181 android.permission.SYSTEM_ALERT_WINDOW  
182 android.permission.WRITE_EXTERNAL_STORAGE  
183 android.permission.FOREGROUND_SERVICE  
184 android.permission.REQUEST_DELETE_PACKAGES  
185 com.samsung.android.providers.context.permission.WRITE_USE_APP_FEATURE_SURVEY  
186 com.google.android.gms.permission.ACTIVITY_RECOGNITION  
187 android.permission.WAKE_LOCK  
188 android.permission.PACKAGE_USAGE_STATS  
189 com.google.android.c2dm.permission.RECEIVE  
190 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE  
191 android.permission.READ_EXTERNAL_STORAGE  
192 com.android.vending.BILLING  
193  
194 src\res\spyware\GirlfriendCellTracker.xml  
195 android.permission.CAMERA  
196 android.permission.INTERNET  
197 com.android.vending.BILLING  
198 android.permission.ACCESS_WIFI_STATE  
199 android.permission.READ_CALL_LOG  
200 android.permission.READ_PHONE_STATE  
201 android.permission.RECEIVE_SMS  
202 android.permission.READ_SMS  
203 android.permission.SEND_SMS  
204 android.permission.READ_CONTACTS  
205 android.permission.ACCESS_FINE_LOCATION  
206 android.permission.ACCESS_COARSE_LOCATION  
207 android.permission.WAKE_LOCK  
208 android.permission.ACCESS_NETWORK_STATE  
209 android.permission.READ_EXTERNAL_STORAGE  
210 android.permission.WRITE_EXTERNAL_STORAGE  
211 android.permission.CALL_PHONE  
212 com.google.android.c2dm.permission.RECEIVE  
213 com.omrups.cell.tracker.permission.C2D_MESSAGE  
214  
215 src\res\spyware\HighsterMobile.xml  
216 com.highstermob.main.permission.MAPS_RECEIVE  
217 android.permission.INTERNET  
218 android.permission.ACCESS_NETWORK_STATE  
219 android.permission.WRITE_EXTERNAL_STORAGE  
220 com.google.android.providers.gsf.permission.READ_GSERVICES  
221 android.permission.ACCESS_COARSE_LOCATION  
222 android.permission.ACCESS_FINE_LOCATION  
223 android.permission.CALL_PHONE  
224 android.permission.WAKE_LOCK  
225 com.highstermob.main.permission.C2D_MESSAGE  
226 com.google.android.c2dm.permission.RECEIVE  
227 android.permission.VIBRATE  
228  
229 src\res\spyware\Hoverwatch.xml  
230 android.permission.RECEIVE_SMS  
231 android.permission.ACCESS_FINE_LOCATION  
232 android.permission.ACCESS_COARSE_LOCATION  
233 android.permission.ACCESS_NETWORK_STATE  
234 android.permission.ACCESS_WIFI_STATE
```

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235 android.permission.READ_CONTACTS
236 android.permission.READ_CALENDAR
237 android.permission.READ_SMS
238 android.permission.READ_CALL_LOG
239 android.permission.WRITE_CALL_LOG
240 android.permission.READ_PHONE_NUMBERS
241 android.permission.READ_PHONE_STATE
242 android.permission.PROCESS_OUTGOING_CALLS
243 android.permission.READ_PRIVILEGED_PHONE_STATE
244 android.permission.READ_LOGS
245 android.permission.WRITE_EXTERNAL_STORAGE
246 android.permission.READ_EXTERNAL_STORAGE
247 android.permission.PACKAGE_USAGE_STATS
248 com.android.browser.permission.READ_HISTORY_BOOKMARKS
249 android.permission.INTERNET
250 android.permission.GET_TASKS
251 android.permission.RECEIVE_BOOT_COMPLETED
252 android.permission.BLUETOOTH
253 android.permission.RECORD_AUDIO
254 android.permission.MODIFY_AUDIO_SETTINGS
255 android.permission.FOREGROUND_SERVICE
256 android.permission.INTERACT_ACROSS_USERS
257 android.permission.INTERACT_ACROSS_USERS_FULL
258 android.permission.REQUEST_DELETE_PACKAGES
259 android.permission.WAKE_LOCK
260 android.permission.CAMERA
261 android.permission.WRITE_SETTINGS
262
263 src\res\spyware\iKeyMonitor.xml
264 android.permission.REBOOT
265 android.permission.RECEIVE_BOOT_COMPLETED
266 android.permission.PACKAGE_USAGE_STATS
267 android.permission.GET_TASKS
268 android.permission.READ_EXTERNAL_STORAGE
269 android.permission.WRITE_EXTERNAL_STORAGE
270 android.permission.INTERNET
271 android.permission.GET_ACCOUNTS
272 android.permission.READ_SMS
273 android.permission.RECEIVE_SMS
274 android.permission.WRITE_CALL_LOG
275 android.permission.READ_CALL_LOG
276 android.permission.CALL_PHONE
277 android.permission.READ_CONTACTS
278 android.permission.READ_LOGS
279 android.permission.WRITE_LOGS
280 android.permission.READ_PHONE_STATE
281 android.permission.READ_PRIVILEGED_PHONE_STATE
282 android.permission.PROCESS_OUTGOING_CALLS
283 android.permission.ACCESS_FINE_LOCATION
284 com.android.browser.permission.READ_HISTORY_BOOKMARKS
285 com.android.browser.permission.WRITE_HISTORY_BOOKMARKS
286 android.permission.VIBRATE
287 android.permission.READ_USER_DICTIONARY
288 android.permission.WRITE_USER_DICTIONARY
289 android.permission.ACCESS_NETWORK_STATE
290 android.permission.ACCESS_WIFI_STATE
291 android.permission.ACCESS_COARSE_LOCATION
292 android.permission.INTERACT_ACROSS_USERS_FULL
293 android.app.action.DEVICE_ADMIN_ENABLED
294 android.app.action.BIND_DEVICE_ADMIN
295 android.permission.READ_CALENDAR
296 android.permission.MODIFY_AUDIO_SETTINGS
297 android.permission.RECORD_AUDIO
298 android.permission.BIND_ACCESSIBILITY_SERVICE
299 android.permission.READ_PROFILE
300 com.android.launcher.permission.INSTALL_SHORTCUT
301 com.android.launcher.permission.UNINSTALL_SHORTCUT
302 com.android.launcher.permission.READ_SETTINGS
303 com.android.launcher.permission.WRITE_SETTINGS
304 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
305 android.permission.CAMERA
306 android.permission.SYSTEM_ALERT_WINDOW
307 android.permission.BLUETOOTH
308 android.permission.REQUEST_INSTALL_PACKAGES
309 android.permission.RESTART_PACKAGES
310 android.permission.REQUEST_DELETE_PACKAGES
311 android.permission.WRITE_SECURE_SETTINGS
312 android.permission.WRITE_SETTINGS
```

313 android.permission.WAKE_LOCK
314 com.google.android.c2dm.permission.RECEIVE
315 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
316 android.permission.WRITE_CONTACTS
317
318 src\res\spyware\IPWebcam.txt
319 android.permission.INTERNET
320 android.permission.ACCESS_NETWORK_STATE
321 android.permission.WAKE_LOCK
322 android.permission.ACCESS_WIFI_STATE
323 android.permission.RECEIVE_BOOT_COMPLETED
324 android.permission.FOREGROUND_SERVICE
325 android.permission.WRITE_EXTERNAL_STORAGE
326 android.permission.CAMERA
327 android.permission.RECORD_AUDIO
328 android.permission.SYSTEM_ALERT_WINDOW
329 android.permission.ACCESS_COARSE_LOCATION
330 android.permission.ACCESS_FINE_LOCATION
331 com.google.android.c2dm.permission.RECEIVE
332 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
333 android.permission.READ_EXTERNAL_STORAGE
334 android.permission.ACCESS_BACKGROUND_LOCATION
335 android.permission.ACCESS_MEDIA_LOCATION
336
337 src\res\spyware\iSpyoo.txt
338 android.permission.FLASHLIGHT
339 android.permission.SYSTEM_ALERT_WINDOW
340 com.android.browser.permission.READ_HISTORY_BOOKMARKS
341 android.permission.READ_CALENDAR
342 android.permission.CAMERA
343 android.permission.READ_CONTACTS
344 android.permission.GET_ACCOUNTS
345 android.permission.ACCESS_COARSE_LOCATION
346 android.permission.ACCESS_FINE_LOCATION
347 android.permission.ACCESS_BACKGROUND_LOCATION
348 android.permission.RECORD_AUDIO
349 android.permission.MODIFY_AUDIO_SETTINGS
350 android.permission.READ_PHONE_STATE
351 android.permission.READ_PHONE_NUMBERS
352 android.permission.READ_CALL_LOG
353 android.permission.PROCESS_OUTGOING_CALLS
354 android.permission.CALL_PHONE
355 android.permission.READ_SMS
356 android.permission.RECEIVE_SMS
357 android.permission.RECEIVE_MMS
358 android.permission.SEND_SMS
359 android.permission.WRITE_EXTERNAL_STORAGE
360 android.permission.READ_EXTERNAL_STORAGE
361 android.permission.INTERNET
362 android.permission.ACCESS_NETWORK_STATE
363 android.permission.ACCESS_WIFI_STATE
364 android.permission.CHANGE_WIFI_STATE
365 android.permission.CHANGE_NETWORK_STATE
366 android.permission.WAKE_LOCK
367 android.permission.RECEIVE_BOOT_COMPLETED
368 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
369 android.permission.ACCESS_SUPERUSER
370 android.permission.FOREGROUND_SERVICE
371 android.permission.REQUEST_DELETE_PACKAGES
372 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
373 com.google.android.c2dm.permission.RECEIVE
374
375 src\res\spyware\Mrecorder.txt
376 android.permission.ACCESS_FINE_LOCATION
377 android.permission.ACCESS_COARSE_LOCATION
378 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
379 android.permission.RECORD_AUDIO
380 android.permission.INTERNET
381 android.permission.READ_PHONE_STATE
382 android.permission.READ_SMS
383 android.permission.READ_CALL_LOG
384 android.permission.RECEIVE_BOOT_COMPLETED
385 android.permission.READ_CONTACTS
386 android.permission.ACCESS_WIFI_STATE
387 android.permission.ACCESS_NETWORK_STATE
388 android.permission.CHANGE_WIFI_STATE
389 android.permission.CHANGE_NETWORK_STATE
390 android.permission.PROCESS_OUTGOING_CALLS

391 android.permission.CAMERA
392 android.permission.READ_EXTERNAL_STORAGE
393 android.permission.GET_ACCOUNTS
394 android.permission.READ_PROFILE
395 android.permission.WAKE_LOCK
396 com.google.android.c2dm.permission.RECEIVE
397 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
398 android.permission.ACCESS_BACKGROUND_LOCATION
399 android.permission.ACCESS_MEDIA_LOCATION
400
401 src\res\spyware\ScreenRecorder.txt
402 android.permission.RECORD_AUDIO
403 android.permission.WRITE_EXTERNAL_STORAGE
404 android.permission.WRITE_SETTINGS
405 android.permission.SYSTEM_ALERT_WINDOW
406 android.permission.READ_EXTERNAL_STORAGE
407 android.permission.INTERNET
408 android.permission.ACCESS_WIFI_STATE
409 android.permission.ACCESS_NETWORK_STATE
410 android.permission.WAKE_LOCK
411 android.permission.ACCESS_MEDIA_LOCATION
412
413 src\res\spyware\SMSForwarder.txt
414 android.permission.READ_CALL_LOG
415 android.permission.AUTHENTICATE_ACCOUNTS
416 android.permission.GET_ACCOUNTS
417 android.permission.INTERNET
418 android.permission.RECEIVE_SMS
419 android.permission.USE_CREDENTIALS
420 android.permission.WAKE_LOCK
421 android.permission.ACCESS_NETWORK_STATE
422 android.permission.ACCESS_WIFI_STATE
423 android.permission.RECEIVE_BOOT_COMPLETED
424 android.permission.WRITE_EXTERNAL_STORAGE
425 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
426 android.permission.READ_PHONE_STATE
427 android.permission.READ_CONTACTS
428 android.permission.FOREGROUND_SERVICE
429 android.permission.READ_EXTERNAL_STORAGE
430 android.permission.ACCESS_MEDIA_LOCATION
431
432 src\res\spyware\SpyGPSSMCallController.xml
433 com.dspark.phone.modefind.permission.MAPS_RECEIVE
434 android.permission.WRITE_EXTERNAL_STORAGE
435 android.permission.READ_PHONE_STATE
436 android.permission.CHANGE_WIFI_STATE
437 android.permission.INTERNET
438 android.permission.GET_ACCOUNTS
439 android.permission.RECEIVE_BOOT_COMPLETED
440 android.permission.ACCESS_WIFI_STATE
441 android.permission.ACCESS_NETWORK_STATE
442 android.permission.PERSISTENT_ACTIVITY
443 android.permission.VIBRATE
444 android.permission.WAKE_LOCK
445 android.permission.PROCESS_OUTGOING_CALLS
446 com.google.android.c2dm.permission.RECEIVE
447 com.dspark.phone.modefind.permission.C2D_MESSAGE
448 android.permission.ACCESS_FINE_LOCATION
449 android.permission.ACCESS_COARSE_LOCATION
450 android.permission.SYSTEM_ALERT_WINDOW
451 android.permission.RECORD_AUDIO
452 com.android.vending.BILLING
453 android.permission.BLUETOOTH_ADMIN
454 android.permission.RECEIVE_SMS
455 android.permission.WRITE_SMS
456 android.permission.BLUETOOTH
457 android.permission.WRITE_SETTINGS
458 android.permission.CALL_PHONE
459 android.permission.READ_CONTACTS
460 android.permission.SEND_SMS
461 android.permission.READ_SMS
462 android.permission.READ_EXTERNAL_STORAGE
463
464 src\res\spyware\SpyToMobile.xml
465 android.permission.ACCESS_COARSE_LOCATION
466 android.permission.ACCESS_FINE_LOCATION
467 android.permission.ACCESS_LOCATION_EXTRA_COMMANDS
468 android.permission.ACCESS_NETWORK_STATE

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469 android.permission.ACCESS_WIFI_STATE
470 android.permission.CHANGE_CONFIGURATION
471 android.permission.CHANGE_WIFI_STATE
472 android.permission.INTERNET
473 android.permission.READ_EXTERNAL_STORAGE
474 android.permission.READ_PHONE_STATE
475 android.permission.WAKE_LOCK
476 android.permission.WRITE_EXTERNAL_STORAGE
477 android.permission.WRITE_SETTINGS
478 android.permission.READ_CONTACTS
479 android.permission.READ_SMS
480 android.permission.BLUETOOTH
481 android.permission.PROCESS_OUTGOING_CALLS
482 android.permission.RECEIVE_BOOT_COMPLETED
483 android.permission.READ_CALL_LOG
484 android.permission.GET_ACCOUNTS
485 android.permission.ACCESS_SUPERUSER
486
487 src\res\spyware\TrackView.xml
488 android.permission.INTERNET
489 android.permission.ACCESS_NETWORK_STATE
490 android.permission.CAMERA
491 android.permission.WRITE_EXTERNAL_STORAGE
492 android.permission.MODIFY_AUDIO_SETTINGS
493 android.permission.RECORD_AUDIO
494 android.permission.WAKE_LOCK
495 android.permission.VIBRATE
496 android.permission.READ_PHONE_STATE
497 android.permission.CHANGE_WIFI_STATE
498 android.permission.ACCESS_WIFI_STATE
499 android.permission.FLASHLIGHT
500 com.android.vending.BILLING
501 android.permission.RECEIVE_BOOT_COMPLETED
502 android.permission.ACCESS_FINE_LOCATION
503 com.google.android.c2dm.permission.RECEIVE
504 com.trackview.permission.C2D_MESSAGE
505
506 src\res\spyware\Unseen.txt
507 android.permission.VIBRATE
508 android.permission.WRITE_EXTERNAL_STORAGE
509 android.permission.SYSTEM_ALERT_WINDOW
510 android.permission.INTERNET
511 android.permission.ACCESS_NETWORK_STATE
512 com.android.vending.BILLING
513 android.permission.WAKE_LOCK
514 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
515 com.google.android.c2dm.permission.RECEIVE
516 android.permission.READ_EXTERNAL_STORAGE
517
518 src\res\popular\Amazon.xml
519 com.amazon.mShop.android.shopping.permission.C2D_MESSAGE
520 com.android.launcher.permission.INSTALL_SHORTCUT
521 com.android.launcher.permission.READ_SETTINGS
522 amazon.permission.COLLECT_METRICS
523 android.permission.READ_CONTACTS
524 android.permission.WRITE_EXTERNAL_STORAGE
525 android.permission.READ_PHONE_STATE
526 android.permission.READ_EXTERNAL_STORAGE
527 android.permission.INTERNET
528 android.permission.ACCESS_NETWORK_STATE
529 android.permission.ACCESS_WIFI_STATE
530 android.permission.VIBRATE
531 android.permission.ACCESS_FINE_LOCATION
532 android.permission.WAKE_LOCK
533 com.google.android.c2dm.permission.RECEIVE
534 android.permission.FOREGROUND_SERVICE
535 com.amazon.dcp.metrics.permission.METRICS_PERMISSION
536 com.amazon.dcp.config.permission.DYN_CONFIG_VALUES_UPDATED
537 android.permission.GET_ACCOUNTS
538 android.permission.USE_CREDENTIALS
539 android.permission.MANAGE_ACCOUNTS
540 android.permission.AUTHENTICATE_ACCOUNTS
541 com.amazon.identity.auth.device.perm.AUTH_SDK
542 com.amazon.identity.permission.GENERIC_IPC
543 com.amazon.dcp.sso.permission.USE_DEVICE_CREDENTIALS
544 com.amazon.dcp.sso.permission.account.changed
545 com.amazon.dcp.sso.permission.MANAGE_COR_PFM
546 com.amazon.dcp.sso.permission.CUSTOMER_ATTRIBUTE_SERVICE
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547 com.amazon.identity.permission.CAN_CALL_MAP_INFORMATION_PROVIDER
548 com.amazon.dcp.sso.permission.AmazonAccountPropertyService.property.changed
549 com.amazon.identity.permission.CALL_AMAZON_DEVICE_INFORMATION_PROVIDER
550 com.amazon.appmanager.preload.permission.READ_PRELOAD_DEVICE_INFO_PROVIDER
551 android.permission.CHANGE_WIFI_STATE
552 com.sec.android.provider.badge.permission.READ
553 com.sec.android.provider.badge.permission.WRITE
554 com.htc.launcher.permission.READ_SETTINGS
555 com.htc.launcher.permission.UPDATE_SHORTCUT
556 com.amazon.whas.API_COMMUNICATION
557 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
558 android.permission.RECORD_AUDIO
559 android.permission.USE_FINGERPRINT
560 android.permission.CAMERA
561 android.permission.BLUETOOTH
562 android.permission.BLUETOOTH_ADMIN
563 android.permission.ACCESS_COARSE_LOCATION
564 android.permission.MODIFY_AUDIO_SETTINGS
565 com.google.android.gms.permission.ACTIVITY_RECOGNITION
566 android.permission.ACTIVITY_RECOGNITION
567 android.permission.FLASHLIGHT
568 android.permission.ACCESS_BACKGROUND_LOCATION
569 com.amazon.whisperjoin.deviceprovisioningservice.WhiteListPolicyUpdate.Permission
570 com.amazon.whisperjoin.deviceprovisioningservice.ArcusUpdate.Permission
571 com.amazon.whisperjoin.deviceprovisioningservice.FFSServiceAction.permission
572
573 src\res\popular\AmongUs.xml
574 android.permission.CHANGE_WIFI_MULTICAST_STATE
575 android.permission.INTERNET
576 android.permission.ACCESS_NETWORK_STATE
577 android.permission.WAKE_LOCK
578 com.android.vending.BILLING
579
580 src\res\popular\CashApp.txt
581 android.permission.ACCESS_COARSE_LOCATION
582 android.permission.ACCESS_FINE_LOCATION
583 android.permission.ACCESS_NETWORK_STATE
584 android.permission.ACCESS_WIFI_STATE
585 android.permission.BLUETOOTH
586 android.permission.BLUETOOTH_ADMIN
587 android.permission.CAMERA
588 android.permission.INTERNET
589 android.permission.READ_CONTACTS
590 android.permission.READ_EXTERNAL_STORAGE
591 android.permission.READ_PHONE_STATE
592 android.permission.READ_PROFILE
593 android.permission.RECEIVE_BOOT_COMPLETED
594 android.permission.USE_FINGERPRINT
595 android.permission.VIBRATE
596 android.permission.GET_ACCOUNTS
597 android.permission.USE_BIOMETRIC
598 com.google.android.providers.gsf.permission.READ_GSERVICES
599 android.permission.WAKE_LOCK
600 com.google.android.c2dm.permission.RECEIVE
601 android.permission.NFC
602 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
603 android.permission.WRITE_EXTERNAL_STORAGE
604
605 src\res\popular\Facebook.txt
606 com.android.vending.BILLING
607 android.permission.BLUETOOTH
608 android.permission.BLUETOOTH_ADMIN
609 android.permission.WRITE_SETTINGS
610 android.permission.CALL_PHONE
611 android.permission.ACCESS_COARSE_LOCATION
612 android.permission.WAKE_LOCK
613 android.permission.VIBRATE
614 android.permission.READ_CONTACTS
615 android.permission.WRITE_CONTACTS
616 android.permission.GET_ACCOUNTS
617 android.permission.MANAGE_ACCOUNTS
618 android.permission.AUTHENTICATE_ACCOUNTS
619 android.permission.READ_SYNC_SETTINGS
620 android.permission.WRITE_SYNC_SETTINGS
621 android.permission.ACCESS_FINE_LOCATION
622 android.permission.ACCESS_NETWORK_STATE
623 android.permission.BROADCAST_STICKY
624 com.facebook.katana.provider.ACCESS

625 com.facebook.orca.provider.ACCESS
626 com.facebook.mlite.provider.ACCESS
627 com.facebook.pages.app.provider.ACCESS
628 com.facebook.appmanager.UNPROTECTED_API_ACCESS
629 android.permission.DOWNLOAD_WITHOUT_NOTIFICATION
630 android.permission.NFC
631 android.permission.CAMERA
632 android.permission.RECORD_AUDIO
633 android.permission.WRITE_EXTERNAL_STORAGE
634 com.facebook.permission.prod.FB_APP_COMMUNICATION
635 android.permission.READ_PHONE_STATE
636 android.permission.READ_CALENDAR
637 android.permission.WRITE_CALENDAR
638 android.permission.MODIFY_AUDIO_SETTINGS
639 android.permission.READ_PROFILE
640 android.permission.CHANGE_NETWORK_STATE
641 android.permission.CHANGE_WIFI_STATE
642 android.permission.SYSTEM_ALERT_WINDOW
643 com.google.android.providers.gsf.permission.READ_GSERVICES
644 android.permission.RECEIVE_BOOT_COMPLETED
645 android.permission.GET_TASKS
646 android.permission.USE_BIOMETRIC
647 android.permission.USE_FINGERPRINT
648 android.permission.FOREGROUND_SERVICE
649 android.permission.INTERNET
650 com.google.android.c2dm.permission.RECEIVE
651 android.permission.READ_EXTERNAL_STORAGE
652 android.permission.REQUEST_INSTALL_PACKAGES
653 android.permission.ACCESS_BACKGROUND_LOCATION
654 com.facebook.katana.permission.CROSS_PROCESS_BROADCAST_MANAGER
655 android.permission.BATTERY_STATS
656 android.permission.ACCESS_WIFI_STATE
657 com.android.launcher.permission.INSTALL_SHORTCUT
658 com.facebook.receiver.permission.ACCESS
659 com.sec.android.provider.badge.permission.READ
660 com.sec.android.provider.badge.permission.WRITE
661 com.htc.launcher.permission.READ_SETTINGS
662 com.htc.launcher.permission.UPDATE_SHORTCUT
663 com.sonyericsson.home.permission.BROADCAST_BADGE
664 com.facebook.katana.permission.RECEIVE ADM MESSAGE
665 com.amazon.device.messaging.permission.RECEIVE
666 com.nokia.pushnotifications.permission.RECEIVE
667 com.facebook.katana.permission.CREATE_SHORTCUT
668
669 src\res\popular\Gmail.txt
670 android.permission.AUTHENTICATE_ACCOUNTS
671 android.permission.ACCESS_NETWORK_STATE
672 android.permission.GET_ACCOUNTS
673 android.permission.MANAGE_ACCOUNTS
674 android.permission.INTERNET
675 android.permission.READ_CONTACTS
676 android.permission.WRITE_CONTACTS
677 android.permission.READ_CALENDAR
678 android.permission.WRITE_CALENDAR
679 android.permission.READ_SYNC_SETTINGS
680 android.permission.READ_SYNC_STATS
681 android.permission.RECEIVE_BOOT_COMPLETED
682 android.permission.SUBSCRIBED_FEEDS_READ
683 android.permission.SUBSCRIBED_FEEDS_WRITE
684 android.permission.USE_CREDENTIALS
685 android.permission.VIBRATE
686 android.permission.WAKE_LOCK
687 android.permission.WRITE_SYNC_SETTINGS
688 android.permission.WRITE_EXTERNAL_STORAGE
689 com.google.android.gm.permission.READ_GMAIL
690 com.google.android.gm.permission.WRITE_GMAIL
691 com.google.android.googleapps.permission.GOOGLE_AUTH
692 com.google.android.googleapps.permission.GOOGLE_AUTH.mail
693 com.google.android.providers.gsf.permission.READ_GSERVICES
694 com.google.android.gm.permission.AUTO_SEND
695 com.google.android.voicesearch.AUDIO_FILE_ACCESS
696 android.permission.DOWNLOAD_WITHOUT_NOTIFICATION
697 android.permission.NFC
698 com.google.android.gm.email.permission.READ_ATTACHMENT
699 com.google.android.email.permission.READ_ATTACHMENT
700 com.google.android.gm.email.permission.ACCESS_PROVIDER
701 com.google.android.email.permission.ACCESS_PROVIDER
702 android.permission.READ_PROFILE

703 android.permission.READ_EXTERNAL_STORAGE
704
705 src\res\popular\GoogleMaps.txt
706 android.permission.INTERNET
707 com.google.android.providers.gsf.permission.READ_GSERVICES
708 android.permission.WRITE_EXTERNAL_STORAGE
709 android.permission.ACCESS_COARSE_LOCATION
710 android.permission.ACCESS_FINE_LOCATION
711 com.google.android.gms.permission.ACTIVITY_RECOGNITION
712 android.permission.GET_ACCOUNTS
713 android.permission.MANAGE_ACCOUNTS
714 android.permission.USE_CREDENTIALS
715 android.permission.DISABLE_KEYGUARD
716 android.permission.ACCESS_WIFI_STATE
717 android.permission.ACCESS_NETWORK_STATE
718 android.permission.CHANGE_WIFI_STATE
719 com.google.android.c2dm.permission.RECEIVE
720 com.google.android.apps.maps.permission.C2D_MESSAGE
721 android.permission.VIBRATE
722 android.permission.NFC
723 android.permission.READ_CONTACTS
724 com.google.android.apps.maps.permission.PREFETCH
725 android.permission.WAKE_LOCK
726 android.permission.READ_PHONE_STATE
727 android.permission.RECEIVE_BOOT_COMPLETED
728 android.permission.BLUETOOTH
729 android.permission.BLUETOOTH_ADMIN
730 android.permission.CALL_PHONE
731 android.permission.BROADCAST_STICKY
732 android.permission.READ_EXTERNAL_STORAGE
733
734 src\res\popular\Instagram.xml
735 android.permission.INTERNET
736 android.permission.ACCESS_NETWORK_STATE
737 android.permission.WAKE_LOCK
738 android.permission.GET_ACCOUNTS
739 android.permission.USE_CREDENTIALS
740 android.permission.RECEIVE_BOOT_COMPLETED
741 android.permission.VIBRATE
742 android.permission.FOREGROUND_SERVICE
743 android.permission.USE_FULL_SCREEN_INTENT
744 com.google.android.c2dm.permission.RECEIVE
745 android.permission.CAMERA
746 android.permission.READ_CONTACTS
747 android.permission.READ_PROFILE
748 android.permission.ACCESS_FINE_LOCATION
749 android.permission.RECORD_AUDIO
750 android.permission.MODIFY_AUDIO_SETTINGS
751 android.permission.WRITE_EXTERNAL_STORAGE
752 android.permission.ACCESS_MEDIA_LOCATION
753 android.permission.READ_PHONE_STATE
754 com.android.launcher.permission.INSTALL_SHORTCUT
755 com.android.launcher.permission.UNINSTALL_SHORTCUT
756 com.instagram.direct.permission.PROTECTED_DEEPLINKING
757 com.instagram.direct.permission.DIRECT_APP_THREAD_STORE_SERVICE
758 com.htc.launcher.permission.READ_SETTINGS
759 com.htc.launcher.permission.UPDATE_SHORTCUT
760 com.huawei.android.launcher.permission.CHANGE_BADGE
761 com.sonyericsson.home.permission.BROADCAST_BADGE
762 android.permission.USE_BIOMETRIC
763 android.permission.USE_FINGERPRINT
764 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
765 .permission.RECEIVE_ADM_MESSAGE
766 com.amazon.device.messaging.permission.RECEIVE
767
768 src\res\popular\Lyft.xml
769 android.permission.ACCESS_COARSE_LOCATION
770 android.permission.ACCESS_FINE_LOCATION
771 android.permission.ACCESS_NETWORK_STATE
772 android.permission.CALL_PHONE
773 android.permission.CAMERA
774 android.permission.INTERNET
775 android.permission.READ_CONTACTS
776 android.permission.READ_EXTERNAL_STORAGE
777 android.permission.READ_PHONE_STATE
778 android.permission.VIBRATE
779 android.permission.WRITE_EXTERNAL_STORAGE
780 android.permission.READ_CALENDAR

781 android.permission.BLUETOOTH
782 android.permission.BLUETOOTH_ADMIN
783 com.google.android.providers.gsf.permission.READ_GSERVICES
784 android.permission.SYSTEM_ALERT_WINDOW
785 com.google.android.c2dm.permission.RECEIVE
786 android.permission.GET_ACCOUNTS
787 android.permission.WAKE_LOCK
788 android.permission.ACCESS_WIFI_STATE
789 android.permission.CHANGE_WIFI_STATE
790 android.permission.CHANGE_WIFI_MULTICAST_STATE
791 me.lyft.android.permission.C2D_MESSAGE
792 android.permission.USE_BIOMETRIC
793 android.permission.USE_FINGERPRINT
794 android.permission.RECEIVE_BOOT_COMPLETED
795 android.permission.FOREGROUND_SERVICE
796
797 src\res\popular\Messenger.txt
798 com.android.vending.BILLING
799 com.facebook.katana.provider.ACCESS
800 android.permission.INTERNET
801 android.permission.GET_ACCOUNTS
802 android.permission.ACCESS_NETWORK_STATE
803 android.permission.WAKE_LOCK
804 android.permission.VIBRATE
805 android.permission.READ_CONTACTS
806 android.permission.READ_PROFILE
807 android.permission.WRITE_EXTERNAL_STORAGE
808 android.permission.READ_PHONE_STATE
809 android.permission.ACCESS_WIFI_STATE
810 android.permission.RECEIVE_BOOT_COMPLETED
811 android.permission.READ_SYNC_SETTINGS
812 android.permission.RECEIVE_SMS
813 android.permission.RECEIVE_MMS
814 android.permission.READ_SMS
815 android.permission.WRITE_SMS
816 android.permission.SEND_SMS
817 android.permission.CHANGE_NETWORK_STATE
818 android.permission.RECORD_AUDIO
819 android.permission.SYSTEM_ALERT_WINDOW
820 android.permission.CALL_PHONE
821 android.permission.MODIFY_AUDIO_SETTINGS
822 android.permission.DOWNLOAD_WITHOUT_NOTIFICATION
823 android.permission.AUTHENTICATE_ACCOUNTS
824 android.permission.MANAGE_ACCOUNTS
825 android.permission.WRITE_CONTACTS
826 android.permission.WRITE_SYNC_SETTINGS
827 android.permission.BLUETOOTH
828 android.permission.NFC
829 com.facebook.orca.provider.ACCESS
830 com.facebook.permission.prod.FB_APP_COMMUNICATION
831 com.facebook.mlite.provider.ACCESS
832 android.permission.CAMERA
833 android.permission.ACCESS_FINE_LOCATION
834 android.permission.ACCESS_COARSE_LOCATION
835 com.google.android.providers.gsf.permission.READ_GSERVICES
836 com.huawei.android.launcher.permission.CHANGE_BADGE
837 android.permission.USE_FULL_SCREEN_INTENT
838 android.permission.READ_CALENDAR
839 android.permission.FOREGROUND_SERVICE
840 android.permission.USE_BIOMETRIC
841 android.permission.USE_FINGERPRINT
842 com.google.android.c2dm.permission.RECEIVE
843 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
844 android.permission.READ_EXTERNAL_STORAGE
845 com.facebook.orca.permission.CROSS_PROCESS_BROADCAST_MANAGER
846 com.android.launcher.permission.INSTALL_SHORTCUT
847 com.facebook.receiver.permission.ACCESS
848 com.sec.android.provider.badge.permission.READ
849 com.sec.android.provider.badge.permission.WRITE
850 com.htc.launcher.permission.READ_SETTINGS
851 com.htc.launcher.permission.UPDATE_SHORTCUT
852 com.sonyericsson.home.permission.BROADCAST_BADGE
853 android.permission.BLUETOOTH_ADMIN
854 android.permission.CHANGE_WIFI_STATE
855 com.facebook.orca.permission.RECEIVE_ADM_MESSAGE
856 com.amazon.device.messaging.permission.RECEIVE
857 com.nokia.pushnotifications.permission.RECEIVE
858 com.facebook.orca.permission.CREATE_SHORTCUT

859 android.permission.MANAGE_OWN_CALLS
860
861 src\res\popular\Netflix.txt
862 com.android.vending.BILLING
863 com.netflix.mediaclient.permission.C2D_MESSAGE
864 com.netflix.partner.activation.permission.CHANNEL_ID
865 android.permission.ACCESS_NETWORK_STATE
866 android.permission.ACCESS_WIFI_STATE
867 android.permission.BLUETOOTH
868 android.permission.CHANGE_WIFI_MULTICAST_STATE
869 android.permission.INTERNET
870 android.permission.READ_PHONE_STATE
871 android.permission.WAKE_LOCK
872 android.permission.RECORD_AUDIO
873 android.permission.MODIFY_AUDIO_SETTINGS
874 android.permission.WRITE_EXTERNAL_STORAGE
875 com.google.android.gms.permission.ACTIVITY_RECOGNITION
876 com.amazon.permission.SET_FLAG_NOSOFTKEYS
877 com.google.android.c2dm.permission.RECEIVE
878 android.permission.READ_EXTERNAL_STORAGE
879 android.permission.ACCESS_MEDIA_LOCATION
880 android.permission.ACTIVITY_RECOGNITION
881
882 src\res\popular\PokemonGo.txt
883 com.android.vending.BILLING
884 android.permission.VIBRATE
885 android.permission.BLUETOOTH
886 android.permission.BLUETOOTH_ADMIN
887 android.permission.ACCESS_FINE_LOCATION
888 android.permission.FOREGROUND_SERVICE
889 android.permission.WRITE_EXTERNAL_STORAGE
890 android.permission.INTERNET
891 android.permission.GET_ACCOUNTS
892 android.permission.USE_CREDENTIALS
893 android.permission.ACCESS_NETWORK_STATE
894 android.permission.WAKE_LOCK
895 android.permission.ACCESS_WIFI_STATE
896 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
897 android.permission.CAMERA
898 android.permission.READ_EXTERNAL_STORAGE
899 android.permission.ACCESS_COARSE_LOCATION
900 com.google.android.gms.permission.ACTIVITY_RECOGNITION
901 android.permission.RECEIVE_BOOT_COMPLETED
902 com.nianticlabs.pokemongo.bgcore.util.contentProviderPermission
903 com.google.android.c2dm.permission.RECEIVE
904 android.permission.ACCESS_BACKGROUND_LOCATION
905 android.permission.ACCESS_MEDIA_LOCATION
906 android.permission.ACTIVITY_RECOGNITION
907
908 src\res\popular\Seamless.txt
909 android.permission.INTERNET
910 android.permission.ACCESS_COARSE_LOCATION
911 android.permission.ACCESS_FINE_LOCATION
912 android.permission.ACCESS_NETWORK_STATE
913 android.permission.CAMERA
914 android.permission.VIBRATE
915 android.permission.READ_PHONE_STATE
916 android.permission.READ_EXTERNAL_STORAGE
917 android.permission.NFC
918 android.permission.WAKE_LOCK
919 android.permission.ACCESS_WIFI_STATE
920 android.permission.CHANGE_WIFI_STATE
921 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
922 android.permission.RECEIVE_BOOT_COMPLETED
923 android.permission.FOREGROUND_SERVICE
924 com.google.android.c2dm.permission.RECEIVE
925
926 src\res\popular\Snapchat.xml
927 android.permission.WAKE_LOCK
928 android.permission.CAMERA
929 android.permission.RECORD_AUDIO
930 android.permission.WRITE_EXTERNAL_STORAGE
931 android.permission.FLASHLIGHT
932 android.permission.READ_PHONE_STATE
933 android.permission.READ_CONTACTS
934 com.snapchat.android.permission.UPDATE_STICKER_INDEX
935 android.permission.ACCESS_FINE_LOCATION
936 android.permission.FOREGROUND_SERVICE

937 android.permission.BLUETOOTH
938 android.permission.MODIFY_AUDIO_SETTINGS
939 android.permission.ACCESS_NETWORK_STATE
940 android.permission.GET_ACCOUNTS
941 android.permission.READ_PROFILE
942 android.permission.VIBRATE
943 android.permission.BLUETOOTH_ADMIN
944 android.permission.READ_EXTERNAL_STORAGE
945 android.permission.USE_FULL_SCREEN_INTENT
946 android.permission.CHANGE_WIFI_STATE
947 android.permission.ACCESS_WIFI_STATE
948 android.permission.INTERNET
949 android.permission.CHANGE_NETWORK_STATE
950 android.permission.RECEIVE_BOOT_COMPLETED
951 com.google.android.c2dm.permission.RECEIVE
952 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
953 com.snapchat.android.permission.C2D_MESSAGE
954 com.sec.android.provider.badge.permission.READ
955 com.sec.android.provider.badge.permission.WRITE
956 com.htc.launcher.permission.READ_SETTINGS
957 com.htc.launcher.permission.UPDATE_SHORTCUT
958 com.sonyericsson.home.permission.BROADCAST_BADGE
959 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
960 com.anddoes.launcher.permission.UPDATE_COUNT
961 com.majeur.launcher.permission.UPDATE_BADGE
962 com.huawei.android.launcher.permission.CHANGE_BADGE
963 com.huawei.android.launcher.permission.READ_SETTINGS
964 com.huawei.android.launcher.permission.WRITE_SETTINGS
965 android.permission.READ_APP_BADGE
966 com.oppo.launcher.permission.READ_SETTINGS
967 com.oppo.launcher.permission.WRITE_SETTINGS
968 me.everything.badger.permission.BADGE_COUNT_READ
969 me.everything.badger.permission.BADGE_COUNT_WRITE
970
971 src\res\popular\Spotify.xml
972 android.permission.INTERNET
973 android.permission.ACCESS_NETWORK_STATE
974 android.permission.RECEIVE_BOOT_COMPLETED
975 android.permission.CHANGE_WIFI_MULTICAST_STATE
976 android.permission.WAKE_LOCK
977 android.permission.FOREGROUND_SERVICE
978 com.android.providers.tv.permission.READ_EPG_DATA
979 com.android.providers.tv.permission.WRITE_EPG_DATA
980 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
981 com.google.android.c2dm.permission.RECEIVE
982
983 src\res\popular\TikTok.xml
984 android.permission.INTERNET
985 android.permission.ACCESS_NETWORK_STATE
986 android.permission.READ_EXTERNAL_STORAGE
987 android.permission.WRITE_EXTERNAL_STORAGE
988 android.permission.ACCESS_WIFI_STATE
989 android.permission.CAMERA
990 android.permission.RECORD_AUDIO
991 android.permission.FLASHLIGHT
992 android.permission.WAKE_LOCK
993 android.permission.GET_TASKS
994 android.permission.READ_CONTACTS
995 android.permission.RECEIVE_BOOT_COMPLETED
996 android.permission.VIBRATE
997 com.meizu.c2dm.permission.RECEIVE
998 com.zhiliaapp.musically.permission.READ_ACCOUNT
999 com.zhiliaapp.musically.permission.WRITE_ACCOUNT
1000 com.android.launcher.permission.INSTALL_SHORTCUT
1001 com.android.launcher.permission.UNINSTALL_SHORTCUT
1002 com.android.launcher.permission.READ_SETTINGS
1003 android.permission.AUTHENTICATE_ACCOUNTS
1004 com.htc.launcher.permission.READ_SETTINGS
1005 com.lge.launcher.permission.READ_SETTINGS
1006 com.lge.launcher.permission.WRITE_SETTINGS
1007 com.huawei.launcher3.permission.READ_SETTINGS
1008 com.huawei.launcher3.permission.WRITE_SETTINGS
1009 com.huawei.launcher2.permission.READ_SETTINGS
1010 com.huawei.launcher2.permission.WRITE_SETTINGS
1011 com.ebproductions.android.launcher.permission.READ_SETTINGS
1012 com.ebproductions.android.launcher.permission.WRITE_SETTINGS
1013 com.oppo.launcher.permission.READ_SETTINGS
1014 com.oppo.launcher.permission.WRITE_SETTINGS

1015 com.huawei.android.launcher.permission.READ_SETTINGS
1016 com.huawei.android.launcher.permission.WRITE_SETTINGS
1017 dianxin.permission.ACCESS_LAUNCHER_DATA
1018 com.miui.mihome2.permission.READ_SETTINGS
1019 com.miui.mihome2.permission.WRITE_SETTINGS
1020 android.permission.FOREGROUND_SERVICE
1021 com.zhiliaomusically.livewallpaper.permission.wallpaperplugin
1022 com.zhiliaoapp.musically.permission.MIPUSH_RECEIVE
1023 com.zhiliaoapp.musically.push.permission.MESSAGE
1024 com.meizu.flyme.push.permission.RECEIVE
1025 android.permission.WRITE_SYNC_SETTINGS
1026 com.sec.android.provider.badge.permission.READ
1027 com.sec.android.provider.badge.permission.WRITE
1028 com.htc.launcher.permission.UPDATE_SHORTCUT
1029 com.sonyericsson.home.permission.BROADCAST_BADGE
1030 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
1031 com.majeur.launcher.permission.UPDATE_BADGE
1032 android.permission.MODIFY_AUDIO_SETTINGS
1033 com.android.vending.BILLING
1034 com.zhiliaoapp.musically.miniapp.PROCESS_COMMUNICATION
1035 android.permission.REORDER_TASKS
1036 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
1037 com.google.android.c2dm.permission.RECEIVE
1038 com.zhiliaoapp.musically.permission.RECEIVE ADM_MESSAGE
1039 com.amazon.device.messaging.permission.RECEIVE
1040 com.huawei.android.launcher.permission.CHANGE_BADGE
1041 android.permission.READ_APP_BADGE
1042 me.everything.badger.permission.BADGE_COUNT_READ
1043 me.everything.badger.permission.BADGE_COUNT_WRITE
1044 android.permission.UPDATE_APP_BADGE
1045 com.vivo.notification.permission.BADGE_ICON
1046
1047 src\res\popular\Twitter.xml
1048 com.twitter.android.permission.RESTRICTED
1049 android.permission.MODIFY_AUDIO_SETTINGS
1050 android.permission.INTERNET
1051 android.permission.VIBRATE
1052 android.permission.READ_PROFILE
1053 android.permission.READ_CONTACTS
1054 android.permission.WAKE_LOCK
1055 android.permission.WRITE_EXTERNAL_STORAGE
1056 com.twitter.android.permission.READ_DATA
1057 com.google.android.providers.gsf.permission.READ_GSERVICES
1058 com.android.launcher.permission.INSTALL_SHORTCUT
1059 android.permission.READ_PHONE_STATE
1060 android.permission.CAMERA
1061 android.permission.RECORD_AUDIO
1062 android.permission.GET_ACCOUNTS
1063 android.permission.ACCESS_NETWORK_STATE
1064 android.permission.SYSTEM_ALERT_WINDOW
1065 android.permission.ACCESS_FINE_LOCATION
1066 android.permission.ACCESS_COARSE_LOCATION
1067 android.permission.AUTHENTICATE_ACCOUNTS
1068 android.permission.MANAGE_ACCOUNTS
1069 android.permission.USE_CREDENTIALS
1070 android.permission.READ_SYNC_SETTINGS
1071 android.permission.WRITE_SYNC_SETTINGS
1072 com.huawei.android.launcher.permission.READ_SETTINGS
1073 com.huawei.android.launcher.permission.WRITE_SETTINGS
1074 com.huawei.android.launcher.permission.CHANGE_BADGE
1075 com.sonyericsson.home.permission.BROADCAST_BADGE
1076 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
1077 com.sec.android.provider.badge.permission.READ
1078 com.sec.android.provider.badge.permission.WRITE
1079 com.oppo.launcher.permission.READ_SETTINGS
1080 com.oppo.launcher.permission.WRITE_SETTINGS
1081 com.htc.launcher.permission.READ_SETTINGS
1082 com.htc.launcher.permission.UPDATE_SHORTCUT
1083 com.anddoes.launcher.permission.UPDATE_COUNT
1084 android.permission.ACCESS_WIFI_STATE
1085 com.google.android.c2dm.permission.RECEIVE
1086 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
1087 android.permission.FOREGROUND_SERVICE
1088 android.permission.RECEIVE_BOOT_COMPLETED
1089
1090 src\res\popular\Uber.txt
1091 com.google.android.c2dm.permission.RECEIVE
1092 com.google.android.providers.gsf.permission.READ_GSERVICES

1093 com.ubercab.permission.C2D_MESSAGE
1094 android.permission.USE_BIOMETRIC
1095 android.permission.USE_FINGERPRINT
1096 android.permission.WAKE_LOCK
1097 android.permission.ACCESS_NETWORK_STATE
1098 android.permission.RECEIVE_BOOT_COMPLETED
1099 android.permission.FOREGROUND_SERVICE
1100 android.permission.INTERNET
1101 android.permission.READ_PHONE_STATE
1102 android.permission.SYSTEM_ALERT_WINDOW
1103 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
1104 android.permission.CAMERA
1105 android.permission.WRITE_EXTERNAL_STORAGE
1106 android.permission.READ_EXTERNAL_STORAGE
1107 android.permission.MODIFY_AUDIO_SETTINGS
1108 android.permission.ACCESS_WIFI_STATE
1109 android.permission.BLUETOOTH
1110 android.permission.BLUETOOTH_ADMIN
1111 android.permission.ACCESS_FINE_LOCATION
1112 android.permission.VIBRATE
1113 android.permission.READ_SMS
1114 android.permission.RECEIVE_SMS
1115 android.permission.ACCESS_COARSE_LOCATION
1116 android.permission.CALL_PHONE
1117 android.permission.MANAGE_ACCOUNTS
1118 android.permission.READ_CONTACTS
1119 android.permission.SEND_SMS
1120 android.permission.USE_CREDENTIALS
1121 android.permission.RECORD_AUDIO
1122 android.permission.GET_ACCOUNTS
1123 android.permission.CHANGE_NETWORK_STATE
1124
1125 src\res\popular\WeatherChannel.xml
1126 com.weather.Weather.permission.RECEIVE_ADM_MESSAGE
1127 android.permission.INTERNET
1128 android.permission.ACCESS_COARSE_LOCATION
1129 android.permission.ACCESS_FINE_LOCATION
1130 android.permission.ACCESS_NETWORK_STATE
1131 android.permission.ACCESS_WIFI_STATE
1132 android.permission.RECEIVE_BOOT_COMPLETED
1133 android.permission.VIBRATE
1134 com.google.android.c2dm.permission.RECEIVE
1135 android.permission.USE_CREDENTIALS
1136 android.permission.WAKE_LOCK
1137 com.google.android.providers.gsf.permission.READ_GSERVICES
1138 com.amazon.device.messaging.permission.RECEIVE
1139 com.android.vending.BILLING
1140 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
1141
1142 src\res\popular\WhatsApp.xml
1143 android.permission.READ_PHONE_STATE
1144 android.permission.RECEIVE_SMS
1145 android.permission.VIBRATE
1146 android.permission.USE_FINGERPRINT
1147 android.permission.CAMERA
1148 android.permission.USE_BIOMETRIC
1149 android.permission.ACCESS_COARSE_LOCATION
1150 android.permission.ACCESS_FINE_LOCATION
1151 android.permission.ACCESS_NETWORK_STATE
1152 android.permission.ACCESS_WIFI_STATE
1153 android.permission.AUTHENTICATE_ACCOUNTS
1154 android.permission.BLUETOOTH
1155 android.permission.BROADCAST_STICKY
1156 android.permission.CHANGE_NETWORK_STATE
1157 android.permission.CHANGE_WIFI_STATE
1158 android.permission.GET_ACCOUNTS
1159 android.permission.GET_TASKS
1160 android.permission.INSTALL_SHORTCUT
1161 android.permission.INTERNET
1162 android.permission.MANAGE_ACCOUNTS
1163 android.permission.MANAGE_OWN_CALLS
1164 android.permission.MODIFY_AUDIO_SETTINGS
1165 android.permission.NFC
1166 android.permission.READ_CONTACTS
1167 android.permission.READ_PROFILE
1168 android.permission.READ_SYNC_SETTINGS
1169 android.permission.READ_SYNC_STATS
1170 android.permission.RECEIVE_BOOT_COMPLETED

```
1171 android.permission.RECORD_AUDIO
1172 android.permission.SEND_SMS
1173 android.permission.USE_CREDENTIALS
1174 android.permission.WAKE_LOCK
1175 android.permission.WRITE_CONTACTS
1176 android.permission.WRITE_EXTERNAL_STORAGE
1177 android.permission.WRITE_SYNC_SETTINGS
1178 android.permission.REQUEST_INSTALL_PACKAGES
1179 android.permission.FOREGROUND_SERVICE
1180 android.permission.USE_FULL_SCREEN_INTENT
1181 com.android.launcher.permission.INSTALL_SHORTCUT
1182 com.android.launcher.permission.UNINSTALL_SHORTCUT
1183 com.google.android.c2dm.permission.RECEIVE
1184 com.google.android.providers.gsf.permission.READ_GSERVICES
1185 com.sec.android.provider.badge.permission.READ
1186 com.sec.android.provider.badge.permission.WRITE
1187 com.htc.launcher.permission.READ_SETTINGS
1188 com.htc.launcher.permission.UPDATE_SHORTCUT
1189 com.sonyericsson.home.permission.BROADCAST_BADGE
1190 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
1191 com.huawei.android.launcher.permission.READ_SETTINGS
1192 com.huawei.android.launcher.permission.WRITE_SETTINGS
1193 com.huawei.android.launcher.permission.CHANGE_BADGE
1194 com.whatsapp.permission.BROADCAST
1195 com.whatsapp.permission.MAPS_RECEIVE
1196 com.whatsapp.permission.REGISTRATION
1197 com.whatsapp.sticker.READ
1198 android.permission.READ_EXTERNAL_STORAGE
1199
1200 src\res\popular\YouTube.xml
1201 android.permission.INTERNET
1202 android.permission.ACCESS_NETWORK_STATE
1203 android.permission.ACCESS_WIFI_STATE
1204 android.permission.WRITE_EXTERNAL_STORAGE
1205 android.permission.RECEIVE_BOOT_COMPLETED
1206 android.permission.MANAGE_DOCUMENTS
1207 android.permission.GET_ACCOUNTS
1208 android.permission.MANAGE_ACCOUNTS
1209 android.permission.USE_CREDENTIALS
1210 com.google.android.providers.gsf.permission.READ_GSERVICES
1211 com.google.android.c2dm.permission.RECEIVE
1212 android.permission.WAKE_LOCK
1213 android.permission.NFC
1214 android.permission.CAMERA
1215 android.permission.VIBRATE
1216 com.google.android.gms.permission.AD_ID_NOTIFICATION
1217 com.google.android.youtube.permission.C2D_MESSAGE
1218 android.permission.GET_PACKAGE_SIZE
1219 android.permission.FOREGROUND_SERVICE
1220 android.permission.USE_FINGERPRINT
1221
1222
```

1 dangerous android.permission.ACCESS_BACKGROUND_LOCATION 30% 15% 23%
2 dangerous android.permission.ACCESS_COARSE_LOCATION 70% 60% 65%
3 dangerous android.permission.ACCESS_FINE_LOCATION 75% 70% 73%
4 dangerous android.permission.ACCESS_MEDIA_LOCATION 25% 15% 20%
5 normal android.permission.ACCESS_NETWORK_STATE 95% 100% 98%
6 normal android.permission.ACCESS_WIFI_STATE 75% 80% 78%
7 removed android.permission.AUTHENTICATE_ACCOUNTS 5% 35% 20%
8 normal android.permission.BLUETOOTH 30% 55% 43%
9 normal android.permission.BLUETOOTH_ADMIN 10% 45% 28%
10 normal android.permission.BROADCAST_STICKY 5% 15% 10%
11 dangerous android.permission.CALL_PHONE 35% 25% 30%
12 dangerous android.permission.CAMERA 50% 70% 60%
13 normal android.permission.CHANGE_NETWORK_STATE 20% 25% 23%
14 normal android.permission.CHANGE_WIFI_MULTICAST_STATE 5% 20% 13%
15 normal android.permission.CHANGE_WIFI_STATE 45% 40% 43%
16 normal android.permission.DISABLE_KEYGUARD 5% 5% 5%
17 removed android.permission.FLASHLIGHT 10% 15% 13%
18 normal android.permission.FOREGROUND_SERVICE 25% 70% 48%
19 dangerous android.permission.GET_ACCOUNTS 45% 70% 57%
20 normal android.permission.GET_PACKAGE_SIZE 5% 5% 5%
21 normal android.permission.GET_TASKS 20% 15% 18%
22 normal android.permission.INTERNET 95% 100% 98%
23 removed android.permission.MANAGE_ACCOUNTS 5% 45% 25%
24 normal android.permission.MODIFY_AUDIO_SETTINGS 40% 50% 45%
25 normal android.permission.NFC 5% 40% 23%
26 dangerous android.permission.READ_CALENDAR 25% 20% 23%
27 dangerous android.permission.READ_CONTACTS 70% 65% 68%
28 dangerous android.permission.READ_EXTERNAL_STORAGE 75% 70% 73%
29 dangerous android.permission.READ_PHONE_STATE 70% 65% 68%
30 removed android.permission.READ_PROFILE 15% 40% 28%
31 dangerous android.permission.READ_SMS 50% 10% 30%
32 normal android.permission.READ_SYNC_SETTINGS 5% 25% 15%
33 normal android.permission.READ_SYNC_STATS 5% 10% 8%
34 normal android.permission.RECEIVE_BOOT_COMPLETED 70% 85% 78%
35 dangerous android.permission.RECEIVE_MMS 10% 5% 8%
36 dangerous android.permission.RECEIVE_SMS 50% 15% 33%
37 dangerous android.permission.RECORD_AUDIO 55% 50% 53%
38 signature android.permission.REQUEST_INSTALL_PACKAGES 10% 10% 10%
39 dangerous android.permission.SEND_SMS 25% 15% 20%
40 signature android.permission.SYSTEM_ALERT_WINDOW 45% 25% 35%
41 normal android.permission.USE_BIOMETRIC 5% 35% 20%
42 removed android.permission.USE_CREDENTIALS 15% 50% 33%
43 normal android.permission.USE_FINGERPRINT 5% 45% 25%
44 normal android.permission.USE_FULL_SCREEN_INTENT 5% 20% 13%
45 normal android.permission.VIBRATE 35% 85% 60%
46 normal android.permission.WAKE_LOCK 95% 100% 98%
47 dangerous android.permission.WRITE_CONTACTS 5% 20% 13%
48 dangerous android.permission.WRITE_EXTERNAL_STORAGE 85% 80% 83%
49 signature android.permission.WRITE_SETTINGS 30% 5% 18%
50 removed android.permission.WRITE_SMS 10% 5% 8%
51 normal com.android.launcher.permission.INSTALL_SHORTCUT 10% 35% 23%
52 other com.android.launcher.permission.READ_SETTINGS 5% 10% 8%
53 normal com.android.launcher.permission.UNINSTALL_SHORTCUT 10% 15% 13%
54 other com.android.vending.BILLING 30% 35% 33%
55 other com.google.android.c2dm.permission.RECEIVE 65% 90% 78%
56 other com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE 40% 60% 50%
57 unknown com.google.android.gm.permission.READ_GMAIL 5% 5% 5%
58 other com.google.android.gms.permission.ACTIVITY_RECOGNITION 10% 20% 15%
59 other com.google.android.providers.gsf.permission.READ_GSERVICES 5% 55% 30%
60

```

1 Spyware
2 signature android.app.action.BIND_DEVICE_ADMIN 5%
3 dangerous android.app.action.DEVICE_ADMIN_ENABLED 5%
4 normal android.permission.ACCESS_LOCATION_EXTRA_COMMANDS 10%
5 normal android.permission.ACCESS_NOTIFICATION_POLICY 5%
6 dangerous android.permission.ACCESS_SUPERUSER 15%
7 signature android.permission.BIND_ACCESSIBILITY_SERVICE 5%
8 signature android.permission.BIND_NOTIFICATION_LISTENER_SERVICE 5%
9 signature android.permission.CAPTURE_AUDIO_OUTPUT 5%
10 signature android.permission.CHANGE_CONFIGURATION 5%
11 signature android.permission.INTERACT_ACROSS_USERS 10%
12 signature android.permission.INTERACT_ACROSS_USERS_FULL 10%
13 normal android.permission.KILL_BACKGROUND_PROCESSES 5%
14 signature android.permission.MANAGE_DEVICE_ADMINS 5%
15 signature android.permission.MANAGE_USERS 5%
16 signature android.permission.MODIFY_PHONE_STATE 5%
17 signature android.permission.OVERRIDE_WIFI_CONFIG 5%
18 signature android.permission.PACKAGE_USAGE_STATS 20%
19 normal android.permission.PERSISTENT_ACTIVITY 5%
20 dangerous android.permission.PROCESS_OUTGOING_CALLS 45%
21 dangerous android.permission.READ_CALL_LOG 50%
22 removed android.permission.READ_HISTORY_BOOKMARKS 5%
23 signature android.permission.READ_LOGS 10%
24 dangerous android.permission.READ_PHONE_NUMBERS 10%
25 signature android.permission.READ_PRIVILEGED_PHONE_STATE 15%
26 removed android.permission.READ_USER_DICTIONARY 5%
27 signature android.permission.REBOOT 5%
28 normal android.permission.REQUEST_DELETE_PACKAGES 20%
29 normal android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS 35%
30 normal android.permission.RESTART_PACKAGES 10%
31 normal android.permission.SET_ALARM 5%
32 signature android.permission.STATUS_BAR 5%
33 signature android.permission.TETHER_PRIVILEGED 5%
34 signature android.permission.UPDATE_APP_OPS_STATS 5%
35 dangerous android.permission.WRITE_CALL_LOG 10%
36 unknown android.permission.WRITE_INTERNAL_STORAGE 5%
37 unknown android.permission.WRITE_LOGS 5%
38 signature android.permission.WRITE_SECURE_SETTINGS 10%
39 removed android.permission.WRITE_USER_DICTIONARY 5%
40 unknown android.webkit.PermissionRequest 5%
41 removed com.android.browser.permission.READ_HISTORY_BOOKMARKS 25%
42 removed com.android.browser.permission.WRITE_HISTORY_BOOKMARKS 10%
43 unknown com.android.email.permission.ACCESS_PROVIDER 5%
44 signature com.android.launcher.permission.WRITE_SETTINGS 5%
45 unknown com.dspark.phone.modefind.permission.C2D_MESSAGE 5%
46 unknown com.dspark.phone.modefind.permission.MAPS_RECEIVE 5%
47 unknown com.google.android.providers.gmail.permission.READ_GMAIL 5%
48 unknown com.highstermob.main.permission.C2D_MESSAGE 5%
49 unknown com.highstermob.main.permission.MAPS_RECEIVE 5%
50 unknown com.ibm.fb.permission.C2D_MESSAGE 5%
51 unknown com.latedroid.juicedefender.permission.CONTROL_JUICEDEFENDER 5%
52 unknown com.latedroid.juicedefender.permission.TOGGLE_MOBILE_DATA 5%
53 unknown com.omrup.cell.tracker.permission.C2D_MESSAGE 5%
54 unknown com.samsung.android.providers.context.permission.WRITE_USE_APP_FEATURE_SURVEY 5%
55 unknown com.trackview.permission.C2D_MESSAGE 5%
56 unknown net.dinglisch.android.tasker.PERMISSION_RUN_TASKS 5%
57
58 Popular
59 unknown .permission.RECEIVE_ADM_MESSAGE 5%
60 unknown amazon.permission.COLLECT_METRICS 5%
61 dangerous android.permission.ACTIVITY_RECOGNITION 15%
62 signature android.permission.BATTERY_STATS 5%
63 normal android.permission.DOWNLOAD_WITHOUT_NOTIFICATION 15%
64 normal android.permission.INSTALL_SHORTCUT 5%
65 signature android.permission.MANAGE_DOCUMENTS 5%
66 normal android.permission.MANAGE_OWN_CALLS 10%
67 unknown android.permission.READ_APP_BADGE 10%
68 normal android.permission.REORDER_TASKS 5%
69 removed android.permission.SUBSCRIBED_FEEDS_READ 5%
70 removed android.permission.SUBSCRIBED_FEEDS_WRITE 5%
71 unknown android.permission.UPDATE_APP_BADGE 5%
72 dangerous android.permission.WRITE_CALENDAR 10%
73 normal android.permission.WRITE_SYNC_SETTINGS 30%
74 unknown com.amazon.appmanager.preload.permission.READ_PRELOAD_DEVICE_INFO_PROVIDER 5%
75 unknown com.amazon.dcp.config.permission.DYN_CONFIG_VALUES_UPDATED 5%
76 unknown com.amazon.dcp.metrics.permission.METRICS_PERMISSION 5%
77 unknown com.amazon.dcp.sso.permission.AmazonAccountPropertyService.property.changed 5%
78 unknown com.amazon.dcp.sso.permission.CUSTOMER_ATTRIBUTE_SERVICE 5%

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79 unknown com.amazon.dcp.sso.permission.MANAGE_COP_FPM 5%
 80 unknown com.amazon.dcp.sso.permission.USE_DEVICE_CREDENTIALS 5%
 81 unknown com.amazon.dcp.sso.permission.account.changed 5%
 82 other com.amazon.device.messaging.permission.RECEIVE 25%
 83 unknown com.amazon.identity.auth.device.perm.AUTH_SDK 5%
 84 unknown com.amazon.identity.permission.CALL_AMAZON_DEVICE_INFORMATION_PROVIDER 5%
 85 unknown com.amazon.identity.permission.CAN_CALL_MAP_INFORMATION_PROVIDER 5%
 86 unknown com.amazon.identity.permission.GENERIC_IPC 5%
 87 unknown com.amazon.mShop.android.shopping.permission.C2D_MESSAGE 5%
 88 unknown com.amazon.permission.SET_FLAG_NOSOFTKEYS 5%
 89 unknown com.amazon.whas.API_COMMUNICATION 5%
 90 unknown com.amazon.whisperjoin.deviceprovisioningservice.ArcusUpdate.Permission 5%
 91 unknown com.amazon.whisperjoin.deviceprovisioningservice.FFSServiceAction.permission 5%
 92 unknown com.amazon.whisperjoin.deviceprovisioningservice.WhiteListPolicyUpdate.Permission 5%
 93 other com.anddoes.launcher.permission.UPDATE_COUNT 10%
 94 unknown com.android.providers.tv.permission.READ_EPG_DATA 5%
 95 unknown com.android.providers.tv.permission.WRITE_EPG_DATA 5%
 96 unknown com.ebproductions.android.launcher.permission.READ_SETTINGS 5%
 97 unknown com.ebproductions.android.launcher.permission.WRITE_SETTINGS 5%
 98 unknown com.facebook.appmanager.UNPROTECTED_API_ACCESS 5%
 99 unknown com.facebook.katana.permission.CREATE_SHORTCUT 5%
 100 unknown com.facebook.katana.permission.CROSS_PROCESS_BROADCAST_MANAGER 5%
 101 unknown com.facebook.katana.permission.RECEIVE_ADM_MESSAGE 5%
 102 other com.facebook.katana.provider.ACCESS 10%
 103 other com.facebook.mlite.provider.ACCESS 10%
 104 unknown com.facebook.orca.permission.CREATE_SHORTCUT 5%
 105 unknown com.facebook.orca.permission.CROSS_PROCESS_BROADCAST_MANAGER 5%
 106 unknown com.facebook.orca.permission.RECEIVE_ADM_MESSAGE 5%
 107 other com.facebook.orca.provider.ACCESS 10%
 108 unknown com.facebook.pages.app.provider.ACCESS 5%
 109 other com.facebook.permission.prod.FB_APP_COMMUNICATION 10%
 110 other com.facebook.receiver.permission.ACCESS 10%
 111 unknown com.google.android.apps.maps.permission.C2D_MESSAGE 5%
 112 unknown com.google.android.apps.maps.permission.PREFETCH 5%
 113 unknown com.google.android.email.permission.ACCESS_PROVIDER 5%
 114 unknown com.google.android.email.permission.READ_ATTACHMENT 5%
 115 unknown com.google.android.gm.email.permission.ACCESS_PROVIDER 5%
 116 unknown com.google.android.gm.email.permission.READ_ATTACHMENT 5%
 117 unknown com.google.android.gm.permission.AUTO_SEND 5%
 118 unknown com.google.android.gm.permission.WRITE_GMAIL 5%
 119 unknown com.google.android.gms.permission.AD_ID_NOTIFICATION 5%
 120 unknown com.google.android.googleapps.permission.GOOGLE_AUTH 5%
 121 unknown com.google.android.googleapps.permission.GOOGLE_AUTH.mail 5%
 122 unknown com.google.android.voicesearch.AUDIO_FILE_ACCESS 5%
 123 unknown com.google.android.youtube.permission.C2D_MESSAGE 5%
 124 other com.htc.launcher.permission.READ_SETTINGS 40%
 125 other com.htc.launcher.permission.UPDATE_SHORTCUT 40%
 126 other com.huawei.android.launcher.permission.CHANGE_BADGE 30%
 127 other com.huawei.android.launcher.permission.READ_SETTINGS 20%
 128 other com.huawei.android.launcher.permission.WRITE_SETTINGS 20%
 129 unknown com.huawei.launcher2.permission.READ_SETTINGS 5%
 130 unknown com.huawei.launcher2.permission.WRITE_SETTINGS 5%
 131 unknown com.huawei.launcher3.permission.READ_SETTINGS 5%
 132 unknown com.huawei.launcher3.permission.WRITE_SETTINGS 5%
 133 unknown com.instagram.direct.permission.DIRECT_APP_THREAD_STORE_SERVICE 5%
 134 unknown com.instagram.direct.permission.PROTECTED_DEEPLINKING 5%
 135 unknown com.lge.launcher.permission.READ_SETTINGS 5%
 136 unknown com.lge.launcher.permission.WRITE_SETTINGS 5%
 137 other com.majeur.launcher.permission.UPDATE_BADGE 10%
 138 unknown com.meizu.c2dm.permission.RECEIVE 5%
 139 unknown com.meizu.flyme.push.permission.RECEIVE 5%
 140 unknown com.miui.mihome2.permission.READ_SETTINGS 5%
 141 unknown com.miui.mihome2.permission.WRITE_SETTINGS 5%
 142 unknown com.netflix.mediaclient.permission.C2D_MESSAGE 5%
 143 unknown com.netflix.partner.activation.permission.CHANNEL_ID 5%
 144 unknown com.nianticlabs.pokemongo.bgcore.util.contentProviderPermission 5%
 145 other com.nokia.pushnotifications.permission.RECEIVE 10%
 146 other com.oppo.launcher.permission.READ_SETTINGS 15%
 147 other com.oppo.launcher.permission.WRITE_SETTINGS 15%
 148 other com.sec.android.provider.badge.permission.READ 35%
 149 other com.sec.android.provider.badge.permission.WRITE 35%
 150 unknown com.snapchat.android.permission.C2D_MESSAGE 5%
 151 unknown com.snapchat.android.permission.UPDATE_STICKER_INDEX 5%
 152 other com.sonyericsson.home.permission.BROADCAST_BADGE 35%
 153 other com.sonymobile.home.permission.PROVIDER_INSERT_BADGE 20%
 154 unknown com.twitter.android.permission.READ_DATA 5%
 155 unknown com.twitter.android.permission.RESTRICTED 5%
 156 unknown com.ubercab.permission.C2D_MESSAGE 5%

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157 unknown com.vivo.notification.permission.BADGE_ICON 5%
158 unknown com.weather.Weather.permission.RECEIVE ADM_MESSAGE 5%
159 unknown com.whatsapp.permission.BROADCAST 5%
160 unknown com.whatsapp.permission.MAPS_RECEIVE 5%
161 unknown com.whatsapp.permission.REGISTRATION 5%
162 unknown com.whatsapp.sticker.READ 5%
163 unknown com.zhiliao.musically.livewallpaper.permission.wallpaperplugin 5%
164 unknown com.zhiliaoapp.musically.miniapp.PROCESS_COMMUNICATION 5%
165 unknown com.zhiliaoapp.musically.permission.MIPUSH_RECEIVE 5%
166 unknown com.zhiliaoapp.musically.permission.READ_ACCOUNT 5%
167 unknown com.zhiliaoapp.musically.permission.RECEIVE ADM_MESSAGE 5%
168 unknown com.zhiliaoapp.musically.permission.WRITE_ACCOUNT 5%
169 unknown com.zhiliaoapp.musically.push.permission.MESSAGE 5%
170 unknown dianxin.permission.ACCESS_LAUNCHER_DATA 5%
171 other me.everything.badger.permission.BADGE_COUNT_READ 10%
172 other me.everything.badger.permission.BADGE_COUNT_WRITE 10%
173 unknown me.lyft.android.permission.C2D_MESSAGE 5%
174
```

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1 com.amazon.mShop.android.shopping.permission.C2D_MESSAGE
2 com.android.launcher.permission.INSTALL_SHORTCUT
3 com.android.launcher.permission.READ_SETTINGS
4 amazon.permission.COLLECT_METRICS
5 android.permission.READ_CONTACTS
6 android.permission.WRITE_EXTERNAL_STORAGE
7 android.permission.READ_PHONE_STATE
8 android.permission.READ_EXTERNAL_STORAGE
9 android.permission.INTERNET
10 android.permission.ACCESS_NETWORK_STATE
11 android.permission.ACCESS_WIFI_STATE
12 android.permission.VIBRATE
13 android.permission.ACCESS_FINE_LOCATION
14 android.permission.WAKE_LOCK
15 com.google.android.c2dm.permission.RECEIVE
16 android.permission.FOREGROUND_SERVICE
17 com.amazon.dcp.metrics.permission.METRICS_PERMISSION
18 com.amazon.dcp.config.permission.DYN_CONFIG_VALUES_UPDATED
19 android.permission.GET_ACCOUNTS
20 android.permission.USE_CREDENTIALS
21 android.permission.MANAGE_ACCOUNTS
22 android.permission.AUTHENTICATE_ACCOUNTS
23 com.amazon.identity.auth.device.perm.AUTH_SDK
24 com.amazon.identity.permission.GENERIC_IPC
25 com.amazon.dcp.sso.permission.USE_DEVICE_CREDENTIALS
26 com.amazon.dcp.sso.permission.account.changed
27 com.amazon.dcp.sso.permission.MANAGE_COPFM
28 com.amazon.dcp.sso.permission.CUSTOMER_ATTRIBUTE_SERVICE
29 com.amazon.identity.permission.CAN_CALL_MAP_INFORMATION_PROVIDER
30 com.amazon.dcp.sso.permission.AmazonAccountPropertyService.property.changed
31 com.amazon.identity.permission.CALL_AMAZON_DEVICE_INFORMATION_PROVIDER
32 com.amazon.appmanager.preload.permission.READ_PRELOAD_DEVICE_INFO_PROVIDER
33 android.permission.CHANGE_WIFI_STATE
34 com.sec.android.provider.badge.permission.READ
35 com.sec.android.provider.badge.permission.WRITE
36 com.htc.launcher.permission.READ_SETTINGS
37 com.htc.launcher.permission.UPDATE_SHORTCUT
38 com.amazon.whas.API_COMMUNICATION
39 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
40 android.permission.RECORD_AUDIO
41 android.permission.USE_FINGERPRINT
42 android.permission.CAMERA
43 android.permission.BLUETOOTH
44 android.permission.BLUETOOTH_ADMIN
45 android.permission.ACCESS_COARSE_LOCATION
46 android.permission.MODIFY_AUDIO_SETTINGS
47 com.google.android.gms.permission.ACTIVITY_RECOGNITION
48 android.permission.ACTIVITY_RECOGNITION
49 android.permission.FLASHLIGHT
50 android.permission.ACCESS_BACKGROUND_LOCATION
51 com.amazon.whisperjoin.deviceprovisioningservice.WhiteListPolicyUpdate.Permission
52 com.amazon.whisperjoin.deviceprovisioningservice.ArcusUpdate.Permission
53 com.amazon.whisperjoin.deviceprovisioningservice.FFSServiceAction.permission
54 android.permission.CHANGE_WIFI_MULTICAST_STATE
55 android.permission.INTERNET
56 android.permission.ACCESS_NETWORK_STATE
57 android.permission.WAKE_LOCK
58 com.android.vending.BILLING
59 android.permission.ACCESS_COARSE_LOCATION
60 android.permission.ACCESS_FINE_LOCATION
61 android.permission.ACCESS_NETWORK_STATE
62 android.permission.ACCESS_WIFI_STATE
63 android.permission.BLUETOOTH
64 android.permission.BLUETOOTH_ADMIN
65 android.permission.CAMERA
66 android.permission.INTERNET
67 android.permission.READ_CONTACTS
68 android.permission.READ_EXTERNAL_STORAGE
69 android.permission.READ_PHONE_STATE
70 android.permission.READ_PROFILE
71 android.permission.RECEIVE_BOOT_COMPLETED
72 android.permission.USE_FINGERPRINT
73 android.permission.VIBRATE
74 android.permission.GET_ACCOUNTS
75 android.permission.USE_BIOMETRIC
76 com.google.android.providers.gsf.permission.READ_GSERVICES
77 android.permission.WAKE_LOCK
78 com.google.android.c2dm.permission.RECEIVE
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79 android.permission.NFC
80 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
81 android.permission.WRITE_EXTERNAL_STORAGE
82 com.android.vending.BILLING
83 android.permission.BLUETOOTH
84 android.permission.BLUETOOTH_ADMIN
85 android.permission.WRITE_SETTINGS
86 android.permission.CALL_PHONE
87 android.permission.ACCESS_COARSE_LOCATION
88 android.permission.WAKE_LOCK
89 android.permission.VIBRATE
90 android.permission.READ_CONTACTS
91 android.permission.WRITE_CONTACTS
92 android.permission.GET_ACCOUNTS
93 android.permission.MANAGE_ACCOUNTS
94 android.permission.AUTHENTICATE_ACCOUNTS
95 android.permission.READ_SYNC_SETTINGS
96 android.permission.WRITE_SYNC_SETTINGS
97 android.permission.ACCESS_FINE_LOCATION
98 android.permission.ACCESS_NETWORK_STATE
99 android.permission.BROADCAST_STICKY
100 com.facebook.katana.provider.ACCESS
101 com.facebook.orca.provider.ACCESS
102 com.facebook.mlite.provider.ACCESS
103 com.facebook.pages.app.provider.ACCESS
104 com.facebook.appmanager.UNPROTECTED_API_ACCESS
105 android.permission.DOWNLOAD_WITHOUT_NOTIFICATION
106 android.permission.NFC
107 android.permission.CAMERA
108 android.permission.RECORD_AUDIO
109 android.permission.WRITE_EXTERNAL_STORAGE
110 com.facebook.permission.prod.FB_APP_COMMUNICATION
111 android.permission.READ_PHONE_STATE
112 android.permission.READ_CALENDAR
113 android.permission.WRITE_CALENDAR
114 android.permission.MODIFY_AUDIO_SETTINGS
115 android.permission.READ_PROFILE
116 android.permission.CHANGE_NETWORK_STATE
117 android.permission.CHANGE_WIFI_STATE
118 android.permission.SYSTEM_ALERT_WINDOW
119 com.google.android.providers.gsf.permission.READ_GSERVICES
120 android.permission.RECEIVE_BOOT_COMPLETED
121 android.permission.GET_TASKS
122 android.permission.USE_BIOMETRIC
123 android.permission.USE_FINGERPRINT
124 android.permission.FOREGROUND_SERVICE
125 android.permission.INTERNET
126 com.google.android.c2dm.permission.RECEIVE
127 android.permission.READ_EXTERNAL_STORAGE
128 android.permission.REQUEST_INSTALL_PACKAGES
129 android.permission.ACCESS_BACKGROUND_LOCATION
130 com.facebook.katana.permission.CROSS_PROCESS_BROADCAST_MANAGER
131 android.permission.BATTERY_STATS
132 android.permission.ACCESS_WIFI_STATE
133 com.android.launcher.permission.INSTALL_SHORTCUT
134 com.facebook.receiver.permission.ACCESS
135 com.sec.android.provider.badge.permission.READ
136 com.sec.android.provider.badge.permission.WRITE
137 com.htc.launcher.permission.READ_SETTINGS
138 com.htc.launcher.permission.UPDATE_SHORTCUT
139 com.sonyericsson.home.permission.BROADCAST_BADGE
140 com.facebook.katana.permission.RECEIVE_ADM_MESSAGE
141 com.amazon.device.messaging.permission.RECEIVE
142 com.nokia.pushnotifications.permission.RECEIVE
143 com.facebook.katana.permission.CREATE_SHORTCUT
144 android.permission.AUTHENTICATE_ACCOUNTS
145 android.permission.ACCESS_NETWORK_STATE
146 android.permission.GET_ACCOUNTS
147 android.permission.MANAGE_ACCOUNTS
148 android.permission.INTERNET
149 android.permission.READ_CONTACTS
150 android.permission.WRITE_CONTACTS
151 android.permission.READ_CALENDAR
152 android.permission.WRITE_CALENDAR
153 android.permission.READ_SYNC_SETTINGS
154 android.permission.READ_SYNC_STATS
155 android.permission.RECEIVE_BOOT_COMPLETED
156 android.permission.SUBSCRIBED_FEEDS_READ
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157 android.permission.SUBSCRIBED_FEEDS_WRITE
158 android.permission.USE_CREDENTIALS
159 android.permission.VIBRATE
160 android.permission.WAKE_LOCK
161 android.permission.WRITE_SYNC_SETTINGS
162 android.permission.WRITE_EXTERNAL_STORAGE
163 com.google.android.gm.permission.READ_GMAIL
164 com.google.android.gm.permission.WRITE_GMAIL
165 com.google.android.googleapps.permission.GOOGLE_AUTH
166 com.google.android.googleapps.permission.GOOGLE_AUTH.mail
167 com.google.android.providers.gsf.permission.READ_GSERVICES
168 com.google.android.gm.permission.AUTO_SEND
169 com.google.android.voicesearch.AUDIO_FILE_ACCESS
170 android.permission.DOWNLOAD_WITHOUT_NOTIFICATION
171 android.permission.NFC
172 com.google.android.gm.email.permission.READ_ATTACHMENT
173 com.google.android.email.permission.READ_ATTACHMENT
174 com.google.android.gm.email.permission.ACCESS_PROVIDER
175 com.google.android.email.permission.ACCESS_PROVIDER
176 android.permission.READ_PROFILE
177 android.permission.READ_EXTERNAL_STORAGE
178 android.permission.INTERNET
179 com.google.android.providers.gsf.permission.READ_GSERVICES
180 android.permission.WRITE_EXTERNAL_STORAGE
181 android.permission.ACCESS_COARSE_LOCATION
182 android.permission.ACCESS_FINE_LOCATION
183 com.google.android.gms.permission.ACTIVITY_RECOGNITION
184 android.permission.GET_ACCOUNTS
185 android.permission.MANAGE_ACCOUNTS
186 android.permission.USE_CREDENTIALS
187 android.permission.DISABLE_KEYGUARD
188 android.permission.ACCESS_WIFI_STATE
189 android.permission.ACCESS_NETWORK_STATE
190 android.permission.CHANGE_WIFI_STATE
191 com.google.android.c2dm.permission.RECEIVE
192 com.google.android.apps.maps.permission.C2D_MESSAGE
193 android.permission.VIBRATE
194 android.permission.NFC
195 android.permission.READ_CONTACTS
196 com.google.android.apps.maps.permission.PREFETCH
197 android.permission.WAKE_LOCK
198 android.permission.READ_PHONE_STATE
199 android.permission.RECEIVE_BOOT_COMPLETED
200 android.permission.BLUETOOTH
201 android.permission.BLUETOOTH_ADMIN
202 android.permission.CALL_PHONE
203 android.permission.BROADCAST_STICKY
204 android.permission.READ_EXTERNAL_STORAGE
205 android.permission.INTERNET
206 android.permission.ACCESS_NETWORK_STATE
207 android.permission.WAKE_LOCK
208 android.permission.GET_ACCOUNTS
209 android.permission.USE_CREDENTIALS
210 android.permission.RECEIVE_BOOT_COMPLETED
211 android.permission.VIBRATE
212 android.permission.FOREGROUND_SERVICE
213 android.permission.USE_FULL_SCREEN_INTENT
214 com.google.android.c2dm.permission.RECEIVE
215 android.permission.CAMERA
216 android.permission.READ_CONTACTS
217 android.permission.READ_PROFILE
218 android.permission.ACCESS_FINE_LOCATION
219 android.permission.RECORD_AUDIO
220 android.permission.MODIFY_AUDIO_SETTINGS
221 android.permission.WRITE_EXTERNAL_STORAGE
222 android.permission.ACCESS_MEDIA_LOCATION
223 android.permission.READ_PHONE_STATE
224 com.android.launcher.permission.INSTALL_SHORTCUT
225 com.android.launcher.permission.UNINSTALL_SHORTCUT
226 com.instagram.direct.permission.PROTECTED_DEEPLINKING
227 com.instagram.direct.permission.DIRECT_APP_THREAD_STORE_SERVICE
228 com.htc.launcher.permission.READ_SETTINGS
229 com.htc.launcher.permission.UPDATE_SHORTCUT
230 com.huawei.android.launcher.permission.CHANGE_BADGE
231 com.sonyericsson.home.permission.BROADCAST_BADGE
232 android.permission.USE_BIOMETRIC
233 android.permission.USE_FINGERPRINT
234 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE

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235 .permission.RECEIVE_ADM_MESSAGE
236 com.amazon.device.messaging.permission.RECEIVE
237 android.permission.ACCESS_COARSE_LOCATION
238 android.permission.ACCESS_FINE_LOCATION
239 android.permission.ACCESS_NETWORK_STATE
240 android.permission.CALL_PHONE
241 android.permission.CAMERA
242 android.permission.INTERNET
243 android.permission.READ_CONTACTS
244 android.permission.READ_EXTERNAL_STORAGE
245 android.permission.READ_PHONE_STATE
246 android.permission.VIBRATE
247 android.permission.WRITE_EXTERNAL_STORAGE
248 android.permission.READ_CALENDAR
249 android.permission.BLUETOOTH
250 android.permission.BLUETOOTH_ADMIN
251 com.google.android.providers.gsf.permission.READ_GSERVICES
252 android.permission.SYSTEM_ALERT_WINDOW
253 com.google.android.c2dm.permission.RECEIVE
254 android.permission.GET_ACCOUNTS
255 android.permission.WAKE_LOCK
256 android.permission.ACCESS_WIFI_STATE
257 android.permission.CHANGE_WIFI_STATE
258 android.permission.CHANGE_WIFI_MULTICAST_STATE
259 me.lyft.android.permission.C2D_MESSAGE
260 android.permission.USE_BIOMETRIC
261 android.permission.USE_FINGERPRINT
262 android.permission.RECEIVE_BOOT_COMPLETED
263 android.permission.FOREGROUND_SERVICE
264 com.android.vending.BILLING
265 com.facebook.katana.provider.ACCESS
266 android.permission.INTERNET
267 android.permission.GET_ACCOUNTS
268 android.permission.ACCESS_NETWORK_STATE
269 android.permission.WAKE_LOCK
270 android.permission.VIBRATE
271 android.permission.READ_CONTACTS
272 android.permission.READ_PROFILE
273 android.permission.WRITE_EXTERNAL_STORAGE
274 android.permission.READ_PHONE_STATE
275 android.permission.ACCESS_WIFI_STATE
276 android.permission.RECEIVE_BOOT_COMPLETED
277 android.permission.READ_SYNC_SETTINGS
278 android.permission.RECEIVE_SMS
279 android.permission.RECEIVE_MMS
280 android.permission.READ_SMS
281 android.permission.WRITE_SMS
282 android.permission.SEND_SMS
283 android.permission.CHANGE_NETWORK_STATE
284 android.permission.RECORD_AUDIO
285 android.permission.SYSTEM_ALERT_WINDOW
286 android.permission.CALL_PHONE
287 android.permission.MODIFY_AUDIO_SETTINGS
288 android.permission.DOWNLOAD_WITHOUT_NOTIFICATION
289 android.permission.AUTHENTICATE_ACCOUNTS
290 android.permission.MANAGE_ACCOUNTS
291 android.permission.WRITE_CONTACTS
292 android.permission.WRITE_SYNC_SETTINGS
293 android.permission.BLUETOOTH
294 android.permission.NFC
295 com.facebook.orca.provider.ACCESS
296 com.facebook.permission.prod.FB_APP_COMMUNICATION
297 com.facebook.mlite.provider.ACCESS
298 android.permission.CAMERA
299 android.permission.ACCESS_FINE_LOCATION
300 android.permission.ACCESS_COARSE_LOCATION
301 com.google.android.providers.gsf.permission.READ_GSERVICES
302 com.huawei.android.launcher.permission.CHANGE_BADGE
303 android.permission.USE_FULL_SCREEN_INTENT
304 android.permission.READ_CALENDAR
305 android.permission.FOREGROUND_SERVICE
306 android.permission.USE_BIOMETRIC
307 android.permission.USE_FINGERPRINT
308 com.google.android.c2dm.permission.RECEIVE
309 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
310 android.permission.READ_EXTERNAL_STORAGE
311 com.facebook.orca.permission.CROSS_PROCESS_BROADCAST_MANAGER
312 com.android.launcher.permission.INSTALL_SHORTCUT
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313 com.facebook.receiver.permission.ACCESS
314 com.sec.android.provider.badge.permission.READ
315 com.sec.android.provider.badge.permission.WRITE
316 com.htc.launcher.permission.READ_SETTINGS
317 com.htc.launcher.permission.UPDATE_SHORTCUT
318 com.sonyericsson.home.permission.BROADCAST_BADGE
319 android.permission.BLUETOOTH_ADMIN
320 android.permission.CHANGE_WIFI_STATE
321 com.facebook.orca.permission.RECEIVE_ADM_MESSAGE
322 com.amazon.device.messaging.permission.RECEIVE
323 com.nokia.pushnotifications.permission.RECEIVE
324 com.facebook.orca.permission.CREATE_SHORTCUT
325 android.permission.MANAGE_OWN_CALLS
326 com.android.vending.BILLING
327 com.netflix.mediaclient.permission.C2D_MESSAGE
328 com.netflix.partner.activation.permission.CHANNEL_ID
329 android.permission.ACCESS_NETWORK_STATE
330 android.permission.ACCESS_WIFI_STATE
331 android.permission.BLUETOOTH
332 android.permission.CHANGE_WIFI_MULTICAST_STATE
333 android.permission.INTERNET
334 android.permission.READ_PHONE_STATE
335 android.permission.WAKE_LOCK
336 android.permission.RECORD_AUDIO
337 android.permission.MODIFY_AUDIO_SETTINGS
338 android.permission.WRITE_EXTERNAL_STORAGE
339 com.google.android.gms.permission.ACTIVITY_RECOGNITION
340 com.amazon.permission.SET_FLAG_NOSOFTKEYS
341 com.google.android.c2dm.permission.RECEIVE
342 android.permission.READ_EXTERNAL_STORAGE
343 android.permission.ACCESS_MEDIA_LOCATION
344 android.permission.ACTIVITY_RECOGNITION
345 com.android.vending.BILLING
346 android.permission.VIBRATE
347 android.permission.BLUETOOTH
348 android.permission.BLUETOOTH_ADMIN
349 android.permission.ACCESS_FINE_LOCATION
350 android.permission.FOREGROUND_SERVICE
351 android.permission.WRITE_EXTERNAL_STORAGE
352 android.permission.INTERNET
353 android.permission.GET_ACCOUNTS
354 android.permission.USE_CREDENTIALS
355 android.permission.ACCESS_NETWORK_STATE
356 android.permission.WAKE_LOCK
357 android.permission.ACCESS_WIFI_STATE
358 com.google.android.finsky.permission.BIND_INSTALL_REFERRER_SERVICE
359 android.permission.CAMERA
360 android.permission.READ_EXTERNAL_STORAGE
361 android.permission.ACCESS_COARSE_LOCATION
362 com.google.android.gms.permission.ACTIVITY_RECOGNITION
363 android.permission.RECEIVE_BOOT_COMPLETED
364 com.nianticlabs.pokemongo.bgcore.util.contentProviderPermission
365 com.google.android.c2dm.permission.RECEIVE
366 android.permission.ACCESS_BACKGROUND_LOCATION
367 android.permission.ACCESS_MEDIA_LOCATION
368 android.permission.ACTIVITY_RECOGNITION
369 android.permission.INTERNET
370 android.permission.ACCESS_COARSE_LOCATION
371 android.permission.ACCESS_FINE_LOCATION
372 android.permission.ACCESS_NETWORK_STATE
373 android.permission.CAMERA
374 android.permission.VIBRATE
375 android.permission.READ_PHONE_STATE
376 android.permission.READ_EXTERNAL_STORAGE
377 android.permission.NFC
378 android.permission.WAKE_LOCK
379 android.permission.ACCESS_WIFI_STATE
380 android.permission.CHANGE_WIFI_STATE
381 com.google.android.finsky.permission.BIND_INSTALL_REFERRER_SERVICE
382 android.permission.RECEIVE_BOOT_COMPLETED
383 android.permission.FOREGROUND_SERVICE
384 com.google.android.c2dm.permission.RECEIVE
385 android.permission.WAKE_LOCK
386 android.permission.CAMERA
387 android.permission.RECORD_AUDIO
388 android.permission.WRITE_EXTERNAL_STORAGE
389 android.permission.FLASHLIGHT
390 android.permission.READ_PHONE_STATE

391 android.permission.READ_CONTACTS
392 com.snapchat.android.permission.UPDATE_STICKER_INDEX
393 android.permission.ACCESS_FINE_LOCATION
394 android.permission.FOREGROUND_SERVICE
395 android.permission.BLUETOOTH
396 android.permission.MODIFY_AUDIO_SETTINGS
397 android.permission.ACCESS_NETWORK_STATE
398 android.permission.GET_ACCOUNTS
399 android.permission.READ_PROFILE
400 android.permission.VIBRATE
401 android.permission.BLUETOOTH_ADMIN
402 android.permission.READ_EXTERNAL_STORAGE
403 android.permission.USE_FULL_SCREEN_INTENT
404 android.permission.CHANGE_WIFI_STATE
405 android.permission.ACCESS_WIFI_STATE
406 android.permission.INTERNET
407 android.permission.CHANGE_NETWORK_STATE
408 android.permission.RECEIVE_BOOT_COMPLETED
409 com.google.android.c2dm.permission.RECEIVE
410 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
411 com.snapchat.android.permission.C2D_MESSAGE
412 com.sec.android.provider.badge.permission.READ
413 com.sec.android.provider.badge.permission.WRITE
414 com.htc.launcher.permission.READ_SETTINGS
415 com.htc.launcher.permission.UPDATE_SHORTCUT
416 com.sonyericsson.home.permission.BROADCAST_BADGE
417 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
418 com.anddoes.launcher.permission.UPDATE_COUNT
419 com.majeur.launcher.permission.UPDATE_BADGE
420 com.huawei.android.launcher.permission.CHANGE_BADGE
421 com.huawei.android.launcher.permission.READ_SETTINGS
422 com.huawei.android.launcher.permission.WRITE_SETTINGS
423 android.permission.READ_APP_BADGE
424 com.oppo.launcher.permission.READ_SETTINGS
425 com.oppo.launcher.permission.WRITE_SETTINGS
426 me.everything.badger.permission.BADGE_COUNT_READ
427 me.everything.badger.permission.BADGE_COUNT_WRITE
428 android.permission.INTERNET
429 android.permission.ACCESS_NETWORK_STATE
430 android.permission.RECEIVE_BOOT_COMPLETED
431 android.permission.CHANGE_WIFI_MULTICAST_STATE
432 android.permission.WAKE_LOCK
433 android.permission.FOREGROUND_SERVICE
434 com.android.providers.tv.permission.READ_EPG_DATA
435 com.android.providers.tv.permission.WRITE_EPG_DATA
436 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
437 com.google.android.c2dm.permission.RECEIVE
438 android.permission.INTERNET
439 android.permission.ACCESS_NETWORK_STATE
440 android.permission.READ_EXTERNAL_STORAGE
441 android.permission.WRITE_EXTERNAL_STORAGE
442 android.permission.ACCESS_WIFI_STATE
443 android.permission.CAMERA
444 android.permission.RECORD_AUDIO
445 android.permission.FLASHLIGHT
446 android.permission.WAKE_LOCK
447 android.permission.GET_TASKS
448 android.permission.READ_CONTACTS
449 android.permission.RECEIVE_BOOT_COMPLETED
450 android.permission.VIBRATE
451 com.meizu.c2dm.permission.RECEIVE
452 com.zhiliaoapp.musically.permission.READ_ACCOUNT
453 com.zhiliaoapp.musically.permission.WRITE_ACCOUNT
454 com.android.launcher.permission.INSTALL_SHORTCUT
455 com.android.launcher.permission.UNINSTALL_SHORTCUT
456 com.android.launcher.permission.READ_SETTINGS
457 android.permission.AUTHENTICATE_ACCOUNTS
458 com.htc.launcher.permission.READ_SETTINGS
459 com.lge.launcher.permission.READ_SETTINGS
460 com.lge.launcher.permission.WRITE_SETTINGS
461 com.huawei.launcher3.permission.READ_SETTINGS
462 com.huawei.launcher3.permission.WRITE_SETTINGS
463 com.huawei.launcher2.permission.READ_SETTINGS
464 com.huawei.launcher2.permission.WRITE_SETTINGS
465 com.ebproductions.android.launcher.permission.READ_SETTINGS
466 com.ebproductions.android.launcher.permission.WRITE_SETTINGS
467 com.oppo.launcher.permission.READ_SETTINGS
468 com.oppo.launcher.permission.WRITE_SETTINGS

469 com.huawei.android.launcher.permission.READ_SETTINGS
470 com.huawei.android.launcher.permission.WRITE_SETTINGS
471 dianxin.permission.ACCESS_LAUNCHER_DATA
472 com.miui.mihome2.permission.READ_SETTINGS
473 com.miui.mihome2.permission.WRITE_SETTINGS
474 android.permission.FOREGROUND_SERVICE
475 com.zhiliaomusically.livewallpaper.permission.wallpaperplugin
476 com.zhiliaoapp.musically.permission.MIPUSH_RECEIVE
477 com.zhiliaoapp.musically.push.permission.MESSAGE
478 com.meizu.flyme.push.permission.RECEIVE
479 android.permission.WRITE_SYNC_SETTINGS
480 com.sec.android.provider.badge.permission.READ
481 com.sec.android.provider.badge.permission.WRITE
482 com.htc.launcher.permission.UPDATE_SHORTCUT
483 com.sonyericsson.home.permission.BROADCAST_BADGE
484 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
485 com.majeur.launcher.permission.UPDATE_BADGE
486 android.permission.MODIFY_AUDIO_SETTINGS
487 com.android.vending.BILLING
488 com.zhiliaoapp.musically.miniapp.PROCESS_COMMUNICATION
489 android.permission.REORDER_TASKS
490 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
491 com.google.android.c2dm.permission.RECEIVE
492 com.zhiliaoapp.musically.permission.RECEIVE ADM_MESSAGE
493 com.amazon.device.messaging.permission.RECEIVE
494 com.huawei.android.launcher.permission.CHANGE_BADGE
495 android.permission.READ_APP_BADGE
496 me.everything.badger.permission.BADGE_COUNT_READ
497 me.everything.badger.permission.BADGE_COUNT_WRITE
498 android.permission.UPDATE_APP_BADGE
499 com.vivo.notification.permission.BADGE_ICON
500 com.twitter.android.permission.RESTRICTED
501 android.permission.MODIFY_AUDIO_SETTINGS
502 android.permission.INTERNET
503 android.permission.VIBRATE
504 android.permission.READ_PROFILE
505 android.permission.READ_CONTACTS
506 android.permission.WAKE_LOCK
507 android.permission.WRITE_EXTERNAL_STORAGE
508 com.twitter.android.permission.READ_DATA
509 com.google.android.providers.gsf.permission.READ_GSERVICES
510 com.android.launcher.permission.INSTALL_SHORTCUT
511 android.permission.READ_PHONE_STATE
512 android.permission.CAMERA
513 android.permission.RECORD_AUDIO
514 android.permission.GET_ACCOUNTS
515 android.permission.ACCESS_NETWORK_STATE
516 android.permission.SYSTEM_ALERT_WINDOW
517 android.permission.ACCESS_FINE_LOCATION
518 android.permission.ACCESS_COARSE_LOCATION
519 android.permission.AUTHENTICATE_ACCOUNTS
520 android.permission.MANAGE_ACCOUNTS
521 android.permission.USE_CREDENTIALS
522 android.permission.READ_SYNC_SETTINGS
523 android.permission.WRITE_SYNC_SETTINGS
524 com.huawei.android.launcher.permission.READ_SETTINGS
525 com.huawei.android.launcher.permission.WRITE_SETTINGS
526 com.huawei.android.launcher.permission.CHANGE_BADGE
527 com.sonyericsson.home.permission.BROADCAST_BADGE
528 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
529 com.sec.android.provider.badge.permission.READ
530 com.sec.android.provider.badge.permission.WRITE
531 com.oppo.launcher.permission.READ_SETTINGS
532 com.oppo.launcher.permission.WRITE_SETTINGS
533 com.htc.launcher.permission.READ_SETTINGS
534 com.htc.launcher.permission.UPDATE_SHORTCUT
535 com.anddoes.launcher.permission.UPDATE_COUNT
536 android.permission.ACCESS_WIFI_STATE
537 com.google.android.c2dm.permission.RECEIVE
538 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
539 android.permission.FOREGROUND_SERVICE
540 android.permission.RECEIVE_BOOT_COMPLETED
541 com.google.android.c2dm.permission.RECEIVE
542 com.google.android.providers.gsf.permission.READ_GSERVICES
543 com.ubercab.permission.C2D_MESSAGE
544 android.permission.USE_BIOMETRIC
545 android.permission.USE_FINGERPRINT
546 android.permission.WAKE_LOCK

547 android.permission.ACCESS_NETWORK_STATE
548 android.permission.RECEIVE_BOOT_COMPLETED
549 android.permission.FOREGROUND_SERVICE
550 android.permission.INTERNET
551 android.permission.READ_PHONE_STATE
552 android.permission.SYSTEM_ALERT_WINDOW
553 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
554 android.permission.CAMERA
555 android.permission.WRITE_EXTERNAL_STORAGE
556 android.permission.READ_EXTERNAL_STORAGE
557 android.permission.MODIFY_AUDIO_SETTINGS
558 android.permission.ACCESS_WIFI_STATE
559 android.permission.BLUETOOTH
560 android.permission.BLUETOOTH_ADMIN
561 android.permission.ACCESS_FINE_LOCATION
562 android.permission.VIBRATE
563 android.permission.READ_SMS
564 android.permission.RECEIVE_SMS
565 android.permission.ACCESS_COARSE_LOCATION
566 android.permission.CALL_PHONE
567 android.permission.MANAGE_ACCOUNTS
568 android.permission.READ_CONTACTS
569 android.permission.SEND_SMS
570 android.permission.USE_CREDENTIALS
571 android.permission.RECORD_AUDIO
572 android.permission.GET_ACCOUNTS
573 android.permission.CHANGE_NETWORK_STATE
574 com.weather.Weather.permission.RECEIVE_ADM_MESSAGE
575 android.permission.INTERNET
576 android.permission.ACCESS_COARSE_LOCATION
577 android.permission.ACCESS_FINE_LOCATION
578 android.permission.ACCESS_NETWORK_STATE
579 android.permission.ACCESS_WIFI_STATE
580 android.permission.RECEIVE_BOOT_COMPLETED
581 android.permission.VIBRATE
582 com.google.android.c2dm.permission.RECEIVE
583 android.permission.USE_CREDENTIALS
584 android.permission.WAKE_LOCK
585 com.google.android.providers.gsf.permission.READ_GSERVICES
586 com.amazon.device.messaging.permission.RECEIVE
587 com.android.vending.BILLING
588 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
589 android.permission.READ_PHONE_STATE
590 android.permission.RECEIVE_SMS
591 android.permission.VIBRATE
592 android.permission.USE_FINGERPRINT
593 android.permission.CAMERA
594 android.permission.USE_BIOMETRIC
595 android.permission.ACCESS_COARSE_LOCATION
596 android.permission.ACCESS_FINE_LOCATION
597 android.permission.ACCESS_NETWORK_STATE
598 android.permission.ACCESS_WIFI_STATE
599 android.permission.AUTHENTICATE_ACCOUNTS
600 android.permission.BLUETOOTH
601 android.permission.BROADCAST_STICKY
602 android.permission.CHANGE_NETWORK_STATE
603 android.permission.CHANGE_WIFI_STATE
604 android.permission.GET_ACCOUNTS
605 android.permission.GET_TASKS
606 android.permission.INSTALL_SHORTCUT
607 android.permission.INTERNET
608 android.permission.MANAGE_ACCOUNTS
609 android.permission.MANAGE_OWN_CALLS
610 android.permission.MODIFY_AUDIO_SETTINGS
611 android.permission.NFC
612 android.permission.READ_CONTACTS
613 android.permission.READ_PROFILE
614 android.permission.READ_SYNC_SETTINGS
615 android.permission.READ_SYNC_STATS
616 android.permission.RECEIVE_BOOT_COMPLETED
617 android.permission.RECORD_AUDIO
618 android.permission.SEND_SMS
619 android.permission.USE_CREDENTIALS
620 android.permission.WAKE_LOCK
621 android.permission.WRITE_CONTACTS
622 android.permission.WRITE_EXTERNAL_STORAGE
623 android.permission.WRITE_SYNC_SETTINGS
624 android.permission.REQUEST_INSTALL_PACKAGES

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625 android.permission.FOREGROUND_SERVICE
626 android.permission.USE_FULL_SCREEN_INTENT
627 com.android.launcher.permission.INSTALL_SHORTCUT
628 com.android.launcher.permission.UNINSTALL_SHORTCUT
629 com.google.android.c2dm.permission.RECEIVE
630 com.google.android.providers.gsf.permission.READ_GSERVICES
631 com.sec.android.provider.badge.permission.READ
632 com.sec.android.provider.badge.permission.WRITE
633 com.htc.launcher.permission.READ_SETTINGS
634 com.htc.launcher.permission.UPDATE_SHORTCUT
635 com.sonyericsson.home.permission.BROADCAST_BADGE
636 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
637 com.huawei.android.launcher.permission.READ_SETTINGS
638 com.huawei.android.launcher.permission.WRITE_SETTINGS
639 com.huawei.android.launcher.permission.CHANGE_BADGE
640 com.whatsapp.permission.BROADCAST
641 com.whatsapp.permission.MAPS_RECEIVE
642 com.whatsapp.permission.REGISTRATION
643 com.whatsapp.sticker.READ
644 android.permission.READ_EXTERNAL_STORAGE
645 android.permission.INTERNET
646 android.permission.ACCESS_NETWORK_STATE
647 android.permission.ACCESS_WIFI_STATE
648 android.permission.WRITE_EXTERNAL_STORAGE
649 android.permission.RECEIVE_BOOT_COMPLETED
650 android.permission.MANAGE_DOCUMENTS
651 android.permission.GET_ACCOUNTS
652 android.permission.MANAGE_ACCOUNTS
653 android.permission.USE_CREDENTIALS
654 com.google.android.providers.gsf.permission.READ_GSERVICES
655 com.google.android.c2dm.permission.RECEIVE
656 android.permission.WAKE_LOCK
657 android.permission.NFC
658 android.permission.CAMERA
659 android.permission.VIBRATE
660 com.google.android.gms.permission.AD_ID_NOTIFICATION
661 com.google.android.youtube.permission.C2D_MESSAGE
662 android.permission.GET_PACKAGE_SIZE
663 android.permission.FOREGROUND_SERVICE
664 android.permission.USE_FINGERPRINT
665
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1 android.permission.READ_SMS
2 android.permission.RECEIVE_SMS
3 android.permission.READ_CALL_LOG
4 android.permission.PROCESS_OUTGOING_CALLS
5 android.permission.INTERNET
6 com.google.android.c2dm.permission.RECEIVE
7 android.permission.WAKE_LOCK
8 android.permission.GET_ACCOUNTS
9 android.permission.SYSTEM_ALERT_WINDOW
10 android.permission.USE_CREDENTIALS
11 android.permission.ACCESS_NETWORK_STATE
12 android.permission.ACCESS_WIFI_STATE
13 android.permission.CHANGE_WIFI_STATE
14 android.permission.ACCESS_COARSE_LOCATION
15 android.permission.ACCESS_FINE_LOCATION
16 android.permission.CAMERA
17 android.permission.WRITE_EXTERNAL_STORAGE
18 android.permission.READ_EXTERNAL_STORAGE
19 android.permission.GET_TASKS
20 android.permission.RECORD_AUDIO
21 android.permission.READ_CONTACTS
22 android.permission.READ_PHONE_STATE
23 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
24 android.permission.RECEIVE_BOOT_COMPLETED
25 com.android.browser.permission.READ_HISTORY_BOOKMARKS
26 com.android.launcher.permission.INSTALL_SHORTCUT
27 com.android.launcher.permission.UNINSTALL_SHORTCUT
28 android.permission.CAPTURE_AUDIO_OUTPUT
29 android.permission.ACCESS_SUPERUSER
30 android.permission.READ_CALENDAR
31 android.permission.BIND_NOTIFICATION_LISTENER_SERVICE
32 android.permission.VIBRATE
33 android.permission.MODIFY_AUDIO_SETTINGS
34 android.permission.REQUEST_INSTALL_PACKAGES
35 android.permission.PACKAGE_USAGE_STATS
36 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
37 android.permission.ACCESS_BACKGROUND_LOCATION
38 android.permission.INTERNET
39 android.permission.WAKE_LOCK
40 android.permission.SET_ALARM
41 android.permission.BROADCAST_STICKY
42 android.permission.WRITE_EXTERNAL_STORAGE
43 android.permission.WRITE_INTERNAL_STORAGE
44 android.permission.READ_EXTERNAL_STORAGE
45 android.permission.BLUETOOTH
46 android.permission.ACCESS_COARSE_LOCATION
47 android.permission.ACCESS_FINE_LOCATION
48 android.permission.ACCESS_LOCATION_EXTRA_COMMANDS
49 android.permission.ACCESS_NETWORK_STATE
50 android.permission.ACCESS_WIFI_STATE
51 android.permission.CHANGE_NETWORK_STATE
52 android.permission.CHANGE_WIFI_STATE
53 android.permission.CHANGE_WIFI_MULTICAST_STATE
54 android.permission.GET_ACCOUNTS
55 android.permission.USE_CREDENTIALS
56 android.permission.GET_PACKAGE_SIZE
57 android.permission.READ_CALL_LOG
58 android.permission.PROCESS_OUTGOING_CALLS
59 android.permission.READ_SMS
60 android.permission.READ_CONTACTS
61 android.permission.READ_CALENDAR
62 android.permission.READ_HISTORY_BOOKMARKS
63 android.permission.READ_PHONE_STATE
64 android.permission.READ_PROFILE
65 android.permission.READ_SYNC_SETTINGS
66 android.permission.READ_SYNC_STATS
67 android.permission.RECEIVE_BOOT_COMPLETED
68 android.permission.RECEIVE_MMS
69 android.permission.RECEIVE_SMS
70 com.google.android.gm.permission.READ_GMAIL
71 com.google.android.providers.gmail.permission.READ_GMAIL
72 com.android.browser.permission.READ_HISTORY_BOOKMARKS
73 com.android.email.permission.ACCESS_PROVIDER
74 com.android.browser.permission.WRITE_HISTORY_BOOKMARKS
75 com.google.android.c2dm.permission.RECEIVE
76 com.ibm.fb.permission.C2D_MESSAGE
77 android.permission.ACCESS_BACKGROUND_LOCATION
78 android.permission.INTERNET
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79 android.permission.ACCESS_NETWORK_STATE
80 android.permission.WAKE_LOCK
81 android.permission.ACCESS_COARSE_LOCATION
82 android.permission.ACCESS_FINE_LOCATION
83 android.permission.READ_PHONE_STATE
84 android.permission.READ_CONTACTS
85 android.permission.RECEIVE_BOOT_COMPLETED
86 android.permission.READ_SMS
87 android.permission.WRITE_SMS
88 android.permission.SEND_SMS
89 android.permission.RECEIVE_SMS
90 android.permission.READ_CALL_LOG
91 android.permission.PROCESS_OUTGOING_CALLS
92 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
93 com.google.android.c2dm.permission.RECEIVE
94 android.permission.ACCESS_COARSE_LOCATION
95 android.permission.ACCESS_FINE_LOCATION
96 android.permission.WRITE_SETTINGS
97 android.permission.WRITE_SECURE_SETTINGS
98 android.permission.RECORD_AUDIO
99 android.permission.READ_PHONE_STATE
100 android.permission.MODIFY_PHONE_STATE
101 android.permission.ACCESS_NETWORK_STATE
102 android.permission.CHANGE_NETWORK_STATE
103 android.permission.READ_CONTACTS
104 android.permission.ACCESS_WIFI_STATE
105 android.permission.CHANGE_WIFI_STATE
106 android.permission.INTERNET
107 android.permission.WAKE_LOCK
108 android.permission.RECEIVE_BOOT_COMPLETED
109 android.permission.WRITE_EXTERNAL_STORAGE
110 com.android.vending.BILLING
111 android.permission.CAMERA
112 com.latedroid.juicedefender.permission.CONTROL_JUICEDEFENDER
113 com.latedroid.juicedefender.permission.TOGGLE_MOBILE_DATA
114 net.dinglisch.android.tasker.PERMISSION_RUN_TASKS
115 android.permission.CALL_PHONE
116 android.permission.MODIFY_AUDIO_SETTINGS
117 android.permission.SYSTEM_ALERT_WINDOW
118 android.permission.VIBRATE
119 android.permission.GET_ACCOUNTS
120 android.permission.MANAGE_ACCOUNTS
121 android.permission.UPDATE_APP_OPS_STATS
122 android.permission.STATUS_BAR
123 android.permission.BLUETOOTH
124 android.permission.BLUETOOTH_ADMIN
125 android.permission.NFC
126 android.permission.INTERACT_ACROSS_USERS
127 android.permission.MANAGE_USERS
128 android.permission.MANAGE_DEVICEADMINS
129 com.google.android.gms.permission.ACTIVITY_RECOGNITION
130 android.permission.USE_FINGERPRINT
131 android.permission.READ_PRIVILEGED_PHONE_STATE
132 android.permission.OVERRIDE_WIFI_CONFIG
133 android.permission.ACCESS_NOTIFICATION_POLICY
134 android.permission.TETHER_PRIVILEGED
135 android.permission.ACCESS_BACKGROUND_LOCATION
136 android.permission.USE_FULL_SCREEN_INTENT
137 android.permission.USE_BIOMETRIC
138 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
139 android.permission.INTERNET
140 android.permission.RECORD_AUDIO
141 android.permission.CAMERA
142 android.permission.MODIFY_AUDIO_SETTINGS
143 android.webkit.PermissionRequest
144 android.permission.ACCESS_NETWORK_STATE
145 android.permission.WRITE_EXTERNAL_STORAGE
146 android.permission.READ_EXTERNAL_STORAGE
147 android.permission.ACCESS_MEDIA_LOCATION
148 android.permission.RECEIVE_SMS
149 android.permission.WAKE_LOCK
150 android.permission.DISABLE_KEYGUARD
151 android.permission.GET_TASKS
152 android.permission.KILL_BACKGROUND_PROCESSES
153 android.permission.RESTART_PACKAGES
154 android.permission.SEND_SMS
155 android.permission.CALL_PHONE
156 android.permission.READ_PHONE_STATE
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157 android.permission.READ_CONTACTS
158 android.permission.MODIFY_AUDIO_SETTINGS
159 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
160 android.permission.READ_CONTACTS
161 android.permission.ACCESS_COARSE_LOCATION
162 android.permission.ACCESS_FINE_LOCATION
163 android.permission.ACCESS_NETWORK_STATE
164 android.permission.ACCESS_WIFI_STATE
165 android.permission.CHANGE_WIFI_STATE
166 android.permission.INTERNET
167 android.permission.RECEIVE_BOOT_COMPLETED
168 android.permission.SYSTEM_ALERT_WINDOW
169 android.permission.WRITE_EXTERNAL_STORAGE
170 android.permission.FOREGROUND_SERVICE
171 android.permission.REQUEST_DELETE_PACKAGES
172 com.samsung.android.providers.context.permission.WRITE_USE_APP_FEATURE_SURVEY
173 com.google.android.gms.permission.ACTIVITY_RECOGNITION
174 android.permission.WAKE_LOCK
175 android.permission.PACKAGE_USAGE_STATS
176 com.google.android.c2dm.permission.RECEIVE
177 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
178 android.permission.READ_EXTERNAL_STORAGE
179 com.android.vending.BILLING
180 android.permission.CAMERA
181 android.permission.INTERNET
182 com.android.vending.BILLING
183 android.permission.ACCESS_WIFI_STATE
184 android.permission.READ_CALL_LOG
185 android.permission.READ_PHONE_STATE
186 android.permission.RECEIVE_SMS
187 android.permission.READ_SMS
188 android.permission.SEND_SMS
189 android.permission.READ_CONTACTS
190 android.permission.ACCESS_FINE_LOCATION
191 android.permission.ACCESS_COARSE_LOCATION
192 android.permission.WAKE_LOCK
193 android.permission.ACCESS_NETWORK_STATE
194 android.permission.READ_EXTERNAL_STORAGE
195 android.permission.WRITE_EXTERNAL_STORAGE
196 android.permission.CALL_PHONE
197 com.google.android.c2dm.permission.RECEIVE
198 com.omrups.cell.tracker.permission.C2D_MESSAGE
199 com.highstermob.main.permission.MAPS_RECEIVE
200 android.permission.INTERNET
201 android.permission.ACCESS_NETWORK_STATE
202 android.permission.WRITE_EXTERNAL_STORAGE
203 com.google.android.providers.gsf.permission.READ_GSERVICES
204 android.permission.ACCESS_COARSE_LOCATION
205 android.permission.ACCESS_FINE_LOCATION
206 android.permission.CALL_PHONE
207 android.permission.WAKE_LOCK
208 com.highstermob.main.permission.C2D_MESSAGE
209 com.google.android.c2dm.permission.RECEIVE
210 android.permission.VIBRATE
211 android.permission.RECEIVE_SMS
212 android.permission.ACCESS_FINE_LOCATION
213 android.permission.ACCESS_COARSE_LOCATION
214 android.permission.ACCESS_NETWORK_STATE
215 android.permission.ACCESS_WIFI_STATE
216 android.permission.READ_CONTACTS
217 android.permission.READ_CALENDAR
218 android.permission.READ_SMS
219 android.permission.READ_CALL_LOG
220 android.permission.WRITE_CALL_LOG
221 android.permission.READ_PHONE_NUMBERS
222 android.permission.READ_PHONE_STATE
223 android.permission.PROCESS_OUTGOING_CALLS
224 android.permission.READ_PRIVILEGED_PHONE_STATE
225 android.permission.READ_LOGS
226 android.permission.WRITE_EXTERNAL_STORAGE
227 android.permission.READ_EXTERNAL_STORAGE
228 android.permission.PACKAGE_USAGE_STATS
229 com.android.browser.permission.READ_HISTORY_BOOKMARKS
230 android.permission.INTERNET
231 android.permission.GET_TASKS
232 android.permission.RECEIVE_BOOT_COMPLETED
233 android.permission.BLUETOOTH
234 android.permission.RECORD_AUDIO

235 android.permission.MODIFY_AUDIO_SETTINGS
236 android.permission.FOREGROUND_SERVICE
237 android.permission.INTERACT_ACROSS_USERS
238 android.permission.INTERACT_ACROSS_USERS_FULL
239 android.permission.REQUEST_DELETE_PACKAGES
240 android.permission.WAKE_LOCK
241 android.permission.CAMERA
242 android.permission.WRITE_SETTINGS
243 android.permission.REBOOT
244 android.permission.RECEIVE_BOOT_COMPLETED
245 android.permission.PACKAGE_USAGE_STATS
246 android.permission.GET_TASKS
247 android.permission.READ_EXTERNAL_STORAGE
248 android.permission.WRITE_EXTERNAL_STORAGE
249 android.permission.INTERNET
250 android.permission.GET_ACCOUNTS
251 android.permission.READ_SMS
252 android.permission.RECEIVE_SMS
253 android.permission.WRITE_CALL_LOG
254 android.permission.READ_CALL_LOG
255 android.permission.CALL_PHONE
256 android.permission.READ_CONTACTS
257 android.permission.READ_LOGS
258 android.permission.WRITE_LOGS
259 android.permission.READ_PHONE_STATE
260 android.permission.READ_PRIVILEGED_PHONE_STATE
261 android.permission.PROCESS_OUTGOING_CALLS
262 android.permission.ACCESS_FINE_LOCATION
263 com.android.browser.permission.READ_HISTORY_BOOKMARKS
264 com.android.browser.permission.WRITE_HISTORY_BOOKMARKS
265 android.permission.VIBRATE
266 android.permission.READ_USER_DICTIONARY
267 android.permission.WRITE_USER_DICTIONARY
268 android.permission.ACCESS_NETWORK_STATE
269 android.permission.ACCESS_WIFI_STATE
270 android.permission.ACCESS_COARSE_LOCATION
271 android.permission.INTERACT_ACROSS_USERS_FULL
272 android.app.action.DEVICE_ADMIN_ENABLED
273 android.app.action.BIND_DEVICE_ADMIN
274 android.permission.READ_CALENDAR
275 android.permission.MODIFY_AUDIO_SETTINGS
276 android.permission.RECORD_AUDIO
277 android.permission.BIND_ACCESSIBILITY_SERVICE
278 android.permission.READ_PROFILE
279 com.android.launcher.permission.INSTALL_SHORTCUT
280 com.android.launcher.permission.UNINSTALL_SHORTCUT
281 com.android.launcher.permission.READ_SETTINGS
282 com.android.launcher.permission.WRITE_SETTINGS
283 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
284 android.permission.CAMERA
285 android.permission.SYSTEM_ALERT_WINDOW
286 android.permission.BLUETOOTH
287 android.permission.REQUEST_INSTALL_PACKAGES
288 android.permission.RESTART_PACKAGES
289 android.permission.REQUEST_DELETE_PACKAGES
290 android.permission.WRITE_SECURE_SETTINGS
291 android.permission.WRITE_SETTINGS
292 android.permission.WAKE_LOCK
293 com.google.android.c2dm.permission.RECEIVE
294 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
295 android.permission.WRITE_CONTACTS
296 android.permission.INTERNET
297 android.permission.ACCESS_NETWORK_STATE
298 android.permission.WAKE_LOCK
299 android.permission.ACCESS_WIFI_STATE
300 android.permission.RECEIVE_BOOT_COMPLETED
301 android.permission.FOREGROUND_SERVICE
302 android.permission.WRITE_EXTERNAL_STORAGE
303 android.permission.CAMERA
304 android.permission.RECORD_AUDIO
305 android.permission.SYSTEM_ALERT_WINDOW
306 android.permission.ACCESS_COARSE_LOCATION
307 android.permission.ACCESS_FINE_LOCATION
308 com.google.android.c2dm.permission.RECEIVE
309 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
310 android.permission.READ_EXTERNAL_STORAGE
311 android.permission.ACCESS_BACKGROUND_LOCATION
312 android.permission.ACCESS_MEDIA_LOCATION

313 android.permission.FLASHLIGHT
314 android.permission.SYSTEM_ALERT_WINDOW
315 com.android.browser.permission.READ_HISTORY_BOOKMARKS
316 android.permission.READ_CALENDAR
317 android.permission.CAMERA
318 android.permission.READ_CONTACTS
319 android.permission.GET_ACCOUNTS
320 android.permission.ACCESS_COARSE_LOCATION
321 android.permission.ACCESS_FINE_LOCATION
322 android.permission.ACCESS_BACKGROUND_LOCATION
323 android.permission.RECORD_AUDIO
324 android.permission.MODIFY_AUDIO_SETTINGS
325 android.permission.READ_PHONE_STATE
326 android.permission.READ_PHONE_NUMBERS
327 android.permission.READ_CALL_LOG
328 android.permission.PROCESS_OUTGOING_CALLS
329 android.permission.CALL_PHONE
330 android.permission.READ_SMS
331 android.permission.RECEIVE_SMS
332 android.permission.RECEIVE_MMS
333 android.permission.SEND_SMS
334 android.permission.WRITE_EXTERNAL_STORAGE
335 android.permission.READ_EXTERNAL_STORAGE
336 android.permission.INTERNET
337 android.permission.ACCESS_NETWORK_STATE
338 android.permission.ACCESS_WIFI_STATE
339 android.permission.CHANGE_WIFI_STATE
340 android.permission.CHANGE_NETWORK_STATE
341 android.permission.WAKE_LOCK
342 android.permission.RECEIVE_BOOT_COMPLETED
343 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
344 android.permission.ACCESS_SUPERUSER
345 android.permission.FOREGROUND_SERVICE
346 android.permission.REQUEST_DELETE_PACKAGES
347 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
348 com.google.android.c2dm.permission.RECEIVE
349 android.permission.ACCESS_FINE_LOCATION
350 android.permission.ACCESS_COARSE_LOCATION
351 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
352 android.permission.RECORD_AUDIO
353 android.permission.INTERNET
354 android.permission.READ_PHONE_STATE
355 android.permission.READ_SMS
356 android.permission.READ_CALL_LOG
357 android.permission.RECEIVE_BOOT_COMPLETED
358 android.permission.READ_CONTACTS
359 android.permission.ACCESS_WIFI_STATE
360 android.permission.ACCESS_NETWORK_STATE
361 android.permission.CHANGE_WIFI_STATE
362 android.permission.CHANGE_NETWORK_STATE
363 android.permission.PROCESS_OUTGOING_CALLS
364 android.permission.CAMERA
365 android.permission.READ_EXTERNAL_STORAGE
366 android.permission.GET_ACCOUNTS
367 android.permission.READ_PROFILE
368 android.permission.WAKE_LOCK
369 com.google.android.c2dm.permission.RECEIVE
370 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
371 android.permission.ACCESS_BACKGROUND_LOCATION
372 android.permission.ACCESS_MEDIA_LOCATION
373 android.permission.RECORD_AUDIO
374 android.permission.WRITE_EXTERNAL_STORAGE
375 android.permission.WRITE_SETTINGS
376 android.permission.SYSTEM_ALERT_WINDOW
377 android.permission.READ_EXTERNAL_STORAGE
378 android.permission.INTERNET
379 android.permission.ACCESS_WIFI_STATE
380 android.permission.ACCESS_NETWORK_STATE
381 android.permission.WAKE_LOCK
382 android.permission.ACCESS_MEDIA_LOCATION
383 android.permission.READ_CALL_LOG
384 android.permission.AUTHENTICATE_ACCOUNTS
385 android.permission.GET_ACCOUNTS
386 android.permission.INTERNET
387 android.permission.RECEIVE_SMS
388 android.permission.USE_CREDENTIALS
389 android.permission.WAKE_LOCK
390 android.permission.ACCESS_NETWORK_STATE

391 android.permission.ACCESS_WIFI_STATE
392 android.permission.RECEIVE_BOOT_COMPLETED
393 android.permission.WRITE_EXTERNAL_STORAGE
394 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
395 android.permission.READ_PHONE_STATE
396 android.permission.READ_CONTACTS
397 android.permission.FOREGROUND_SERVICE
398 android.permission.READ_EXTERNAL_STORAGE
399 android.permission.ACCESS_MEDIA_LOCATION
400 com.dspark.phone.modefind.permission.MAPS_RECEIVE
401 android.permission.WRITE_EXTERNAL_STORAGE
402 android.permission.READ_PHONE_STATE
403 android.permission.CHANGE_WIFI_STATE
404 android.permission.INTERNET
405 android.permission.GET_ACCOUNTS
406 android.permission.RECEIVE_BOOT_COMPLETED
407 android.permission.ACCESS_WIFI_STATE
408 android.permission.ACCESS_NETWORK_STATE
409 android.permission.PERSISTENT_ACTIVITY
410 android.permission.VIBRATE
411 android.permission.WAKE_LOCK
412 android.permission.PROCESS_OUTGOING_CALLS
413 com.google.android.c2dm.permission.RECEIVE
414 com.dspark.phone.modefind.permission.C2D_MESSAGE
415 android.permission.ACCESS_FINE_LOCATION
416 android.permission.ACCESS_COARSE_LOCATION
417 android.permission.SYSTEM_ALERT_WINDOW
418 android.permission.RECORD_AUDIO
419 com.android.vending.BILLING
420 android.permission.BLUETOOTH_ADMIN
421 android.permission.RECEIVE_SMS
422 android.permission.WRITE_SMS
423 android.permission.BLUETOOTH
424 android.permission.WRITE_SETTINGS
425 android.permission.CALL_PHONE
426 android.permission.READ_CONTACTS
427 android.permission.SEND_SMS
428 android.permission.READ_SMS
429 android.permission.READ_EXTERNAL_STORAGE
430 android.permission.ACCESS_COARSE_LOCATION
431 android.permission.ACCESS_FINE_LOCATION
432 android.permission.ACCESS_LOCATION_EXTRA_COMMANDS
433 android.permission.ACCESS_NETWORK_STATE
434 android.permission.ACCESS_WIFI_STATE
435 android.permission.CHANGE_CONFIGURATION
436 android.permission.CHANGE_WIFI_STATE
437 android.permission.INTERNET
438 android.permission.READ_EXTERNAL_STORAGE
439 android.permission.READ_PHONE_STATE
440 android.permission.WAKE_LOCK
441 android.permission.WRITE_EXTERNAL_STORAGE
442 android.permission.WRITE_SETTINGS
443 android.permission.READ_CONTACTS
444 android.permission.READ_SMS
445 android.permission.BLUETOOTH
446 android.permission.PROCESS_OUTGOING_CALLS
447 android.permission.RECEIVE_BOOT_COMPLETED
448 android.permission.READ_CALL_LOG
449 android.permission.GET_ACCOUNTS
450 android.permission.ACCESS_SUPERUSER
451 android.permission.INTERNET
452 android.permission.ACCESS_NETWORK_STATE
453 android.permission.CAMERA
454 android.permission.WRITE_EXTERNAL_STORAGE
455 android.permission.MODIFY_AUDIO_SETTINGS
456 android.permission.RECORD_AUDIO
457 android.permission.WAKE_LOCK
458 android.permission.VIBRATE
459 android.permission.READ_PHONE_STATE
460 android.permission.CHANGE_WIFI_STATE
461 android.permission.ACCESS_WIFI_STATE
462 android.permission.FLASHLIGHT
463 com.android.vending.BILLING
464 android.permission.RECEIVE_BOOT_COMPLETED
465 android.permission.ACCESS_FINE_LOCATION
466 com.google.android.c2dm.permission.RECEIVE
467 com.trackview.permission.C2D_MESSAGE
468 android.permission.VIBRATE

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469 android.permission.WRITE_EXTERNAL_STORAGE  
470 android.permission.SYSTEM_ALERT_WINDOW  
471 android.permission.INTERNET  
472 android.permission.ACCESS_NETWORK_STATE  
473 com.android.vending.BILLING  
474 android.permission.WAKE_LOCK  
475 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE  
476 com.google.android.c2dm.permission.RECEIVE  
477 android.permission.READ_EXTERNAL_STORAGE  
478
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1 16 dangerous android.permission.WRITE_EXTERNAL_STORAGE 80%
2 14 dangerous android.permission.ACCESS_FINE_LOCATION 70%
3 14 dangerous android.permission.GET_ACCOUNTS 70%
4 14 dangerous android.permission.CAMERA 70%
5 14 dangerous android.permission.READ_EXTERNAL_STORAGE 70%
6 13 dangerous android.permission.READ_CONTACTS 65%
7 13 dangerous android.permission.READ_PHONE_STATE 65%
8 12 dangerous android.permission.ACCESS_COARSE_LOCATION 60%
9 10 dangerous android.permission.RECORD_AUDIO 50%
10 5 dangerous android.permission.CALL_PHONE 25%
11 4 dangerous android.permission.READ_CALENDAR 20%
12 4 dangerous android.permission.WRITE_CONTACTS 20%
13 3 dangerous android.permission.ACCESS_BACKGROUND_LOCATION 15%
14 3 dangerous android.permission.SEND_SMS 15%
15 3 dangerous android.permission.ACTIVITY_RECOGNITION 15%
16 3 dangerous android.permission.ACCESS_MEDIA_LOCATION 15%
17 3 dangerous android.permission.RECEIVE_SMS 15%
18 2 dangerous android.permission.WRITE_CALENDAR 10%
19 2 dangerous android.permission.READ_SMS 10%
20 1 dangerous android.permission.RECEIVE_MMS 5%
21 20 normal android.permission.WAKE_LOCK 100%
22 20 normal android.permission.INTERNET 100%
23 20 normal android.permission.ACCESS_NETWORK_STATE 100%
24 17 normal android.permission.RECEIVE_BOOT_COMPLETED 85%
25 17 normal android.permission.VIBRATE 85%
26 16 normal android.permission.ACCESS_WIFI_STATE 80%
27 14 normal android.permission.FOREGROUND_SERVICE 70%
28 11 normal android.permission.BLUETOOTH 55%
29 10 normal android.permission.MODIFY_AUDIO_SETTINGS 50%
30 9 normal android.permission.BLUETOOTH_ADMIN 45%
31 9 normal android.permission.USE_FINGERPRINT 45%
32 8 normal android.permission.CHANGE_WIFI_STATE 40%
33 8 normal android.permission.NFC 40%
34 7 normal com.android.launcher.permission.INSTALL_SHORTCUT 35%
35 7 normal android.permission.USE_BIOMETRIC 35%
36 6 normal android.permission.WRITE_SYNC_SETTINGS 30%
37 5 normal android.permission.READ_SYNC_SETTINGS 25%
38 5 normal android.permission.CHANGE_NETWORK_STATE 25%
39 4 normal android.permission.CHANGE_WIFI_MULTICAST_STATE 20%
40 4 normal android.permission.USE_FULL_SCREEN_INTENT 20%
41 3 normal android.permission.DOWNLOAD_WITHOUT_NOTIFICATION 15%
42 3 normal android.permission.GET_TASKS 15%
43 3 normal com.android.launcher.permission.UNINSTALL_SHORTCUT 15%
44 3 normal android.permission.BROADCAST_STICKY 15%
45 2 normal android.permission.READ_SYNC_STATS 10%
46 2 normal android.permission.MANAGE_OWN_CALLS 10%
47 1 normal android.permission.INSTALL_SHORTCUT 5%
48 1 normal android.permission.DISABLE_KEYGUARD 5%
49 1 normal android.permission.GET_PACKAGE_SIZE 5%
50 1 normal android.permission.REORDER_TASKS 5%
51 18 other com.google.android.c2dm.permission.RECEIVE 90%
52 12 other com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE 60%
53 11 other com.google.android.providers.gsf.permission.READ_GSERVICES 55%
54 8 other com.htc.launcher.permission.READ_SETTINGS 40%
55 8 other com.htc.launcher.permission.UPDATE_SHORTCUT 40%
56 7 other com.sec.android.provider.badge.permission.WRITE 35%
57 7 other com.android.vending.BILLING 35%
58 7 other com.sonyericsson.home.permission.BROADCAST_BADGE 35%
59 7 other com.sec.android.provider.badge.permission.READ 35%
60 6 other com.huawei.android.launcher.permission.CHANGE_BADGE 30%
61 5 other com.amazon.device.messaging.permission.RECEIVE 25%
62 4 other com.sonymobile.home.permission.PROVIDER_INSERT_BADGE 20%
63 4 other com.google.android.gms.permission.ACTIVITY_RECOGNITION 20%
64 4 other com.huawei.android.launcher.permission.WRITE_SETTINGS 20%
65 4 other com.huawei.android.launcher.permission.READ_SETTINGS 20%
66 3 other com.oppo.launcher.permission.READ_SETTINGS 15%
67 3 other com.oppo.launcher.permission.WRITE_SETTINGS 15%
68 2 other com.facebook.mlite.provider.ACCESS 10%
69 2 other com.facebook.orca.provider.ACCESS 10%
70 2 other com.anddoes.launcher.permission.UPDATE_COUNT 10%
71 2 other me.everything.badger.permission.BADGE_COUNT_READ 10%
72 2 other com.android.launcher.permission.READ_SETTINGS 10%
73 2 other com.nokia.pushnotifications.permission.RECEIVE 10%
74 2 other com.majeur.launcher.permission.UPDATE_BADGE 10%
75 2 other com.facebook.katana.provider.ACCESS 10%
76 2 other com.facebook.permission.prod.FB_APP_COMMUNICATION 10%
77 2 other me.everything.badger.permission.BADGE_COUNT_WRITE 10%
78 2 other com.facebook.receiver.permission.ACCESS 10%

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79 10 removed android.permission.USE_CREDENTIALS 50%
80 9 removed android.permission.MANAGE_ACCOUNTS 45%
81 8 removed android.permission.READ_PROFILE 40%
82 7 removed android.permission.AUTHENTICATE_ACCOUNTS 35%
83 3 removed android.permission.FLASHLIGHT 15%
84 1 removed android.permission.SUBSCRIBED_FEEDS_READ 5%
85 1 removed android.permission.WRITE_SMS 5%
86 1 removed android.permission.SUBSCRIBED_FEEDS_WRITE 5%
87 5 signature android.permission.SYSTEM_ALERT_WINDOW 25%
88 2 signature android.permission.REQUEST_INSTALL_PACKAGES 10%
89 1 signature android.permission.MANAGE_DOCUMENTS 5%
90 1 signature android.permission.BATTERY_STATS 5%
91 1 signature android.permission.WRITE_SETTINGS 5%
92 2 unknown android.permission.READ_APP_BADGE 10%
93 1 unknown com.amazon.whisperjoin.deviceprovisioningservice.WhiteListPolicyUpdate.Permission 5%
94 1 unknown com.google.android.googleapps.permission.GOOGLE_AUTH 5%
95 1 unknown com.huawei.launcher2.permission.READ_SETTINGS 5%
96 1 unknown com.amazon.dcp.metrics.permission.METRICS_PERMISSION 5%
97 1 unknown amazon.permission.COLLECT_METRICS 5%
98 1 unknown com.snapchat.android.permission.UPDATE_STICKER_INDEX 5%
99 1 unknown com.zhiliaoweb.musically.livewallpaper.permission.wallpaperplugin 5%
100 1 unknown me.lyft.android.permission.C2D_MESSAGE 5%
101 1 unknown com.vivo.notification.permission.BADGE_ICON 5%
102 1 unknown com.zhiliaoweb.musically.miniapp.PROCESS_COMMUNICATION 5%
103 1 unknown com.facebook.appmanager.UNPROTECTED_API_ACCESS 5%
104 1 unknown com.google.android.gms.permission.AD_ID_NOTIFICATION 5%
105 1 unknown com.ebproductions.android.launcher.permission.WRITE_SETTINGS 5%
106 1 unknown com.google.android.gm.permission.READ_ATTACHMENT 5%
107 1 unknown com.lge.launcher.permission.READ_SETTINGS 5%
108 1 unknown com.google.android.gm.permission.WRITE_GMAIL 5%
109 1 unknown com.netflix.mediaclient.permission.C2D_MESSAGE 5%
110 1 unknown com.facebook.katana.permission.RECEIVE_ADM_MESSAGE 5%
111 1 unknown com.android.providers.tv.permission.READ_EPG_DATA 5%
112 1 unknown com.amazon.dcp.sso.permission.account.changed 5%
113 1 unknown com.huawei.launcher2.permission.WRITE_SETTINGS 5%
114 1 unknown com.facebook.orca.permission.RECEIVE_ADM_MESSAGE 5%
115 1 unknown com.snapchat.android.permission.C2D_MESSAGE 5%
116 1 unknown com.facebook.pages.app.provider.ACCESS 5%
117 1 unknown com.amazon.whisperjoin.deviceprovisioningservice.ArcusUpdate.Permission 5%
118 1 unknown com.google.android.email.permission.ACCESS_PROVIDER 5%
119 1 unknown .permission.RECEIVE_ADM_MESSAGE 5%
120 1 unknown com.amazon.appmanager.preload.permission.READ_PRELOAD_DEVICE_INFO_PROVIDER 5%
121 1 unknown com.amazon.identity.auth.device.perm.AUTH_SDK 5%
122 1 unknown com.zhiliaoweb.musically.push.permission.MESSAGE 5%
123 1 unknown com.miui.mihome2.permission.WRITE_SETTINGS 5%
124 1 unknown com.facebook.katana.permission.CROSS_PROCESS_BROADCAST_MANAGER 5%
125 1 unknown com.google.android.gm.email.permission.ACCESS_PROVIDER 5%
126 1 unknown com.facebook.orca.permission.CREATE_SHORTCUT 5%
127 1 unknown dianxin.permission.ACCESS_LAUNCHER_DATA 5%
128 1 unknown com.google.android.apps.maps.permission.C2D_MESSAGE 5%
129 1 unknown com.whatsapp.sticker.READ 5%
130 1 unknown com.google.android.email.permission.READ_ATTACHMENT 5%
131 1 unknown com.amazon.identity.permission.CAN_CALL_MAP_INFORMATION_PROVIDER 5%
132 1 unknown com.google.android.apps.maps.permission.PREFETCH 5%
133 1 unknown com.ubercab.permission.C2D_MESSAGE 5%
134 1 unknown com.twitter.android.permission.RESTRICTED 5%
135 1 unknown com.amazon.dcp.sso.permission.CUSTOMER_ATTRIBUTE_SERVICE 5%
136 1 unknown com.whatsapp.permission.BROADCAST 5%
137 1 unknown com.zhiliaoweb.musically.permission.MIPUSH_RECEIVE 5%
138 1 unknown com.instagram.direct.permission.PROTECTED_DEEPLINKING 5%
139 1 unknown com.lge.launcher.permission.WRITE_SETTINGS 5%
140 1 unknown com.google.android.voicesearch.AUDIO_FILE_ACCESS 5%
141 1 unknown com.android.providers.tv.permission.WRITE_EPG_DATA 5%
142 1 unknown com.amazon.dcp.sso.permission.USE_DEVICE_CREDENTIALS 5%
143 1 unknown com.google.android.googleapps.permission.GOOGLE_AUTH.mail 5%
144 1 unknown com.amazon.permission.SET_FLAG_NOSOFTKEYS 5%
145 1 unknown com.amazon.mShop.android.shopping.permission.C2D_MESSAGE 5%
146 1 unknown com.amazon.dcp.sso.permission.MANAGE_COR_PFM 5%
147 1 unknown com.weather.Weather.permission.RECEIVE_ADM_MESSAGE 5%
148 1 unknown com.miui.mihome2.permission.READ_SETTINGS 5%
149 1 unknown com.instagram.direct.permission.DIRECT_APP_THREAD_STORE_SERVICE 5%
150 1 unknown com.nianticlabs.pokemongo.bgcore.util.contentProviderPermission 5%
151 1 unknown com.huawei.launcher3.permission.READ_SETTINGS 5%
152 1 unknown com.amazon.whisperjoin.deviceprovisioningservice.FFSServiceAction.permission 5%
153 1 unknown com.meizu.flyme.push.permission.RECEIVE 5%
154 1 unknown com.whatsapp.permission.MAPS_RECEIVE 5%
155 1 unknown com.facebook.orca.permission.CROSS_PROCESS_BROADCAST_MANAGER 5%
156 1 unknown com.zhiliaoweb.musically.permission.READ_ACCOUNT 5%

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157 1 unknown com.huawei.launcher3.permission.WRITE_SETTINGS 5%
158 1 unknown com.amazon.whas.API_COMMUNICATION 5%
159 1 unknown com.zhiliaoapp.musically.permission.RECEIVE_ADM_MESSAGE 5%
160 1 unknown com.google.android.gm.permission.AUTO_SEND 5%
161 1 unknown com.netflix.partner.activation.permission.CHANNEL_ID 5%
162 1 unknown com.ebproductions.android.launcher.permission.READ_SETTINGS 5%
163 1 unknown com.amazon.identity.permission.GENERIC_IPC 5%
164 1 unknown com.amazon.dcp.config.permission.DYN_CONFIG_VALUES_UPDATED 5%
165 1 unknown com.meizu.c2dm.permission.RECEIVE 5%
166 1 unknown com.facebook.katana.permission.CREATE_SHORTCUT 5%
167 1 unknown com.google.android.youtube.permission.C2D_MESSAGE 5%
168 1 unknown com.whatsapp.permission.REGISTRATION 5%
169 1 unknown com.zhiliaoapp.musically.permission.WRITE_ACCOUNT 5%
170 1 unknown com.twitter.android.permission.READ_DATA 5%
171 1 unknown com.google.android.gm.permission.READ_GMAIL 5%
172 1 unknown com.amazon.dcp.sso.permission.AmazonAccountPropertyService.property.changed 5%
173 1 unknown com.amazon.identity.permission.CALL_AMAZON_DEVICE_INFORMATION_PROVIDER 5%
174 1 unknown android.permission.UPDATE_APP_BADGE 5%
175
```

```

1 17 dangerous android.permission.WRITE_EXTERNAL_STORAGE 85%
2 15 dangerous android.permission.ACCESS_FINE_LOCATION 75%
3 15 dangerous android.permission.READ_EXTERNAL_STORAGE 75%
4 14 dangerous android.permission.READ_CONTACTS 70%
5 14 dangerous android.permission.ACCESS_COARSE_LOCATION 70%
6 14 dangerous android.permission.READ_PHONE_STATE 70%
7 11 dangerous android.permission.RECORD_AUDIO 55%
8 10 dangerous android.permission.READ_SMS 50%
9 10 dangerous android.permission.READ_CALL_LOG 50%
10 10 dangerous android.permission.RECEIVE_SMS 50%
11 10 dangerous android.permission.CAMERA 50%
12 9 dangerous android.permission.PROCESS_OUTGOING_CALLS 45%
13 9 dangerous android.permission.GET_ACCOUNTS 45%
14 7 dangerous android.permission.CALL_PHONE 35%
15 6 dangerous android.permission.ACCESS_BACKGROUND_LOCATION 30%
16 5 dangerous android.permission.SEND_SMS 25%
17 5 dangerous android.permission.READ_CALENDAR 25%
18 5 dangerous android.permission.ACCESS_MEDIA_LOCATION 25%
19 3 dangerous android.permission.ACCESS_SUPERUSER 15%
20 2 dangerous android.permission.READ_PHONE_NUMBERS 10%
21 2 dangerous android.permission.RECEIVE_MMS 10%
22 2 dangerous android.permission.WRITE_CALL_LOG 10%
23 1 dangerous android.app.action.DEVICE_ADMIN_ENABLED 5%
24 1 dangerous android.permission.WRITE_CONTACTS 5%
25 19 normal android.permission.WAKE_LOCK 95%
26 19 normal android.permission.INTERNET 95%
27 19 normal android.permission.ACCESS_NETWORK_STATE 95%
28 15 normal android.permission.ACCESS_WIFI_STATE 75%
29 14 normal android.permission.RECEIVE_BOOT_COMPLETED 70%
30 9 normal android.permission.CHANGE_WIFI_STATE 45%
31 8 normal android.permission.MODIFY_AUDIO_SETTINGS 40%
32 7 normal android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS 35%
33 7 normal android.permission.VIBRATE 35%
34 6 normal android.permission.BLUETOOTH 30%
35 5 normal android.permission.FOREGROUND_SERVICE 25%
36 4 normal android.permission.REQUEST_DELETE_PACKAGES 20%
37 4 normal android.permission.GET_TASKS 20%
38 4 normal android.permission.CHANGE_NETWORK_STATE 20%
39 2 normal android.permission.BLUETOOTH_ADMIN 10%
40 2 normal com.android.launcher.permission.UNINSTALL_SHORTCUT 10%
41 2 normal com.android.launcher.permission.INSTALL_SHORTCUT 10%
42 2 normal android.permission.RESTART_PACKAGES 10%
43 2 normal android.permission.ACCESS_LOCATION_EXTRA_COMMANDS 10%
44 1 normal android.permission.DISABLE_KEYGUARD 5%
45 1 normal android.permission.GET_PACKAGE_SIZE 5%
46 1 normal android.permission.READ_SYNC_SETTINGS 5%
47 1 normal android.permission.NFC 5%
48 1 normal android.permission.ACCESS_NOTIFICATION_POLICY 5%
49 1 normal android.permission.USE_FINGERPRINT 5%
50 1 normal android.permission.KILL_BACKGROUND_PROCESSES 5%
51 1 normal android.permission.CHANGE_WIFI_MULTICAST_STATE 5%
52 1 normal android.permission.BROADCAST_STICKY 5%
53 1 normal android.permission.READ_SYNC_STATS 5%
54 1 normal android.permission.SET_ALARM 5%
55 1 normal android.permission.USE_FULL_SCREEN_INTENT 5%
56 1 normal android.permission.PERSISTENT_ACTIVITY 5%
57 1 normal android.permission.USE_BIOMETRIC 5%
58 13 other com.google.android.c2dm.permission.RECEIVE 65%
59 8 other com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE 40%
60 6 other com.android.vending.BILLING 30%
61 2 other com.google.android.gms.permission.ACTIVITY_RECOGNITION 10%
62 1 other com.android.launcher.permission.READ_SETTINGS 5%
63 1 other com.google.android.providers.gsf.permission.READ_GSERVICES 5%
64 5 removed com.android.browser.permission.READ_HISTORY_BOOKMARKS 25%
65 3 removed android.permission.READ_PROFILE 15%
66 3 removed android.permission.USE_CREDENTIALS 15%
67 2 removed com.android.browser.permission.WRITE_HISTORY_BOOKMARKS 10%
68 2 removed android.permission.WRITE_SMS 10%
69 2 removed android.permission.FLASHLIGHT 10%
70 1 removed android.permission.READ_USER_DICTIONARY 5%
71 1 removed android.permission.READ_HISTORY_BOOKMARKS 5%
72 1 removed android.permission.AUTHENTICATE_ACCOUNTS 5%
73 1 removed android.permission.WRITE_USER_DICTIONARY 5%
74 1 removed android.permission.MANAGE_ACCOUNTS 5%
75 9 signature android.permission.SYSTEM_ALERT_WINDOW 45%
76 6 signature android.permission.WRITE_SETTINGS 30%
77 4 signature android.permission.PACKAGE_USAGE_STATS 20%
78 3 signature android.permission.READ_PRIVILEGED_PHONE_STATE 15%

```

```
79 2 signature android.permission.INTERACT_ACROSS_USERS 10%
80 2 signature android.permission.INTERACT_ACROSS_USERS_FULL 10%
81 2 signature android.permission.READ_LOGS 10%
82 2 signature android.permission.WRITE_SECURE_SETTINGS 10%
83 2 signature android.permission.REQUEST_INSTALL_PACKAGES 10%
84 1 signature android.permission.MODIFY_PHONE_STATE 5%
85 1 signature android.permission.CAPTURE_AUDIO_OUTPUT 5%
86 1 signature android.permission.OVERRIDE_WIFI_CONFIG 5%
87 1 signature android.permission.MANAGE_USERS 5%
88 1 signature android.app.action.BIND_DEVICE_ADMIN 5%
89 1 signature android.permission.BIND_NOTIFICATION_LISTENER_SERVICE 5%
90 1 signature android.permission.UPDATE_APP_OPS_STATS 5%
91 1 signature android.permission.TETHER_PRIVILEGED 5%
92 1 signature android.permission.STATUS_BAR 5%
93 1 signature android.permission.CHANGE_CONFIGURATION 5%
94 1 signature android.permission.BIND_ACCESSIBILITY_SERVICE 5%
95 1 signature android.permission.MANAGE_DEVICE_HELPERS 5%
96 1 signature android.permission.REBOOT 5%
97 1 signature com.android.launcher.permission.WRITE_SETTINGS 5%
98 1 unknown com.highstermob.main.permission.MAPS_RECEIVE 5%
99 1 unknown com.ibm.fb.permission.C2D_MESSAGE 5%
100 1 unknown android.webkit.PermissionRequest 5%
101 1 unknown android.permission.WRITE_INTERNAL_STORAGE 5%
102 1 unknown com.dspark.phone.modefind.permission.MAPS_RECEIVE 5%
103 1 unknown android.permission.WRITE_LOGS 5%
104 1 unknown com.trackview.permission.C2D_MESSAGE 5%
105 1 unknown com.dspark.phone.modefind.permission.C2D_MESSAGE 5%
106 1 unknown com.highstermob.main.permission.C2D_MESSAGE 5%
107 1 unknown net.dinglisch.android.tasker.PERMISSION_RUN_TASKS 5%
108 1 unknown com.samsung.android.providers.context.permission.WRITE_USE_APP_FEATURE_SURVEY 5%
109 1 unknown com.omrups.cell.tracker.permission.C2D_MESSAGE 5%
110 1 unknown com.latedroid.juicedefender.permission.CONTROL_JUICEDEFENDER 5%
111 1 unknown com.android.email.permission.ACCESS_PROVIDER 5%
112 1 unknown com.latedroid.juicedefender.permission.TOGGLE_MOBILE_DATA 5%
113 1 unknown com.google.android.providers.gmail.permission.READ_GMAIL 5%
114 1 unknown com.google.android.gm.permission.READ_GMAIL 5%
115
```

```

1 package net.sleepinginthevoid.horoscope;
2
3 import java.io.FileOutputStream;
4 import java.io.IOException;
5 import java.io.OutputStreamWriter;
6 import java.text.SimpleDateFormat;
7 import java.util.ArrayList;
8 import java.util.Date;
9 import java.util.List;
10
11 import android.content.Context;
12 import android.content.pm.ApplicationInfo;
13 import android.app.Activity;
14 import android.content.pm.PackageInfo;
15 import android.content.pm.PackageManager;
16
17 public class AppData {
18     Activity activity;
19     PackageManager packageManager;
20     List<PackageInfo> packageList;
21     PackageInfo packageInfo;
22     String thisPackage;
23     String appLabel;
24     String packageName;
25     String permissions;
26     String installed;
27     String lastModified;
28
29     public AppData(MainActivity main, PackageManager pm, List<PackageInfo> pl) {
30         thisPackage = "net.sleepinginthevoid.horoscope";
31         activity = main;
32         packageManager = pm;
33         List<PackageInfo> allPackageList = pl;
34         packageList = new ArrayList<PackageInfo>();
35
36         // To filter out system apps
37         for (PackageInfo pi : allPackageList) {
38             boolean b = isSystemPackage(pi);
39             if (pi.packageName.equals(thisPackage)) { // Ignore the Horoscope app
40                 b = true;
41             }
42             if (!b) {
43                 packageList.add(pi);
44             }
45         }
46         // Get package information
47         for (int i = 0; i < packageList.size(); i++) {
48             packageInfo = packageList.get(i);
49             appLabel = packageManager.getApplicationLabel(packageInfo.applicationInfo).toString();
50             packageName = packageInfo.packageName;
51             installed = setDateFormat(packageInfo.firstInstallTime);
52             lastModified = setDateFormat(packageInfo.lastUpdateTime);
53
54             if (packageInfo.requestedPermissions != null) {
55                 permissions = getPermissions(packageInfo.requestedPermissions);
56             } else {
57                 permissions = "none";
58             }
59             // Writing a file to Device File Explorer > data/data/net.sleepinginthevoid.horoscope
60             try {
61                 FileOutputStream fOut = activity.openFileOutput("appdata.txt",
62                     Context.MODE_APPEND);
63                 OutputStreamWriter osw = new OutputStreamWriter(fOut);
64                 // Write the strings to the file
65                 osw.append("App name: " + appLabel + "\n");
66                 osw.append("Package name: " + packageName + "\n");
67                 osw.append("First installed: " + installed + "\n");
68                 osw.append("Last modified: " + lastModified + "\n");
69                 osw.append("Permissions: " + "\n" + permissions + "\n");
70                 osw.close();
71             } catch (IOException ioe) {
72                 ioe.printStackTrace();
73             }
74         }
75     }
76
77     // Return whether the given PackageInfo is a system package
78     private boolean isSystemPackage(PackageInfo pkgInfo) {
79         return (pkgInfo.applicationInfo.flags & ApplicationInfo.FLAG_SYSTEM) != 0;
80     }
81
82     private String setDateFormat(long time) {
83         Date date = new Date(time);

```

```
84     SimpleDateFormat formatter = new SimpleDateFormat("MMM dd, yyyy, h:mm a");
85     String strDate = formatter.format(date);
86     return strDate;
87 }
88
89 private String getPermissions(String[] requestedPermissions) {
90     String permission = "";
91     for (int i = 0; i < requestedPermissions.length; i++) {
92         permission = permission + requestedPermissions[i] + "\n";
93     }
94     return permission;
95 }
96 }
97 }
```

```
1 package net.sleepinginthevoid.horoscope;
2
3 import android.content.pm.PackageInfo;
4 import android.content.pm.PackageManager;
5 import android.os.Bundle;
6
7 import androidx.appcompat.app.AppCompatActivity;
8 import androidx.appcompat.widget.Toolbar;
9 import android.view.Menu;
10
11 import java.util.List;
12
13 public class MainActivity extends AppCompatActivity {
14     PackageManager packageManager;
15
16     @Override
17     protected void onCreate(Bundle savedInstanceState) {
18         super.onCreate(savedInstanceState);
19         setContentView(R.layout.activity_main);
20         Toolbar toolbar = findViewById(R.id.toolbar);
21         setSupportActionBar(toolbar);
22         // Get list of installed apps with permissions
23         packageManager = getPackageManager();
24         List<PackageInfo> allPackageList = packageManager.getInstalledPackages(
25             PackageManager.GET_PERMISSIONS);
26         new AppData(this, packageManager, allPackageList);
27     }
28
29     @Override
30     public boolean onCreateOptionsMenu(Menu menu) {
31         // Inflate the menu; this adds items to the action bar if it is present.
32         getMenuInflater().inflate(R.menu.menu_main, menu);
33         return true;
34     }
35 }
```

```

1 /* Facade for app listing tool
2 * Display horoscope text */
3
4 package net.sleepinginthevoid.horoscope;
5
6 import android.os.Bundle;
7 import android.view.LayoutInflater;
8 import android.view.View;
9 import android.view.ViewGroup;
10
11 import androidx.annotation.NonNull;
12 import androidx.fragment.app.Fragment;
13 import androidx.navigation.fragment.NavHostFragment;
14
15 public class FirstFragment extends Fragment {
16
17     @Override
18     public View onCreateView(
19         LayoutInflater inflater, ViewGroup container,
20         Bundle savedInstanceState
21     ) {
22         // Inflate the layout for this fragment
23         return inflater.inflate(R.layout.fragment_first, container, false);
24     }
25
26     public void onViewCreated(@NonNull View view, Bundle savedInstanceState) {
27         super.onViewCreated(view, savedInstanceState);
28
29         view.findViewById(R.id.buttonAries).setOnClickListener(new View.OnClickListener() {
30             @Override
31             public void onClick(View v) {
32                 String str = "Aries";
33                 FirstFragmentDirections.ActionFirstFragmentToSecondFragment action =
34                     FirstFragmentDirections.actionFirstFragmentToSecondFragment(str);
35                 NavHostFragment.findNavController(FirstFragment.this).navigate(action);
36             }
37         });
38
39         view.findViewById(R.id.buttonTaurus).setOnClickListener(new View.OnClickListener() {
40             @Override
41             public void onClick(View v) {
42                 String str = "Taurus";
43                 FirstFragmentDirections.ActionFirstFragmentToSecondFragment action =
44                     FirstFragmentDirections.actionFirstFragmentToSecondFragment(str);
45                 NavHostFragment.findNavController(FirstFragment.this).navigate(action);
46             }
47         });
48
49         view.findViewById(R.id.buttonGemini).setOnClickListener(new View.OnClickListener() {
50             @Override
51             public void onClick(View v) {
52                 String str = "Gemini";
53                 FirstFragmentDirections.ActionFirstFragmentToSecondFragment action =
54                     FirstFragmentDirections.actionFirstFragmentToSecondFragment(str);
55                 NavHostFragment.findNavController(FirstFragment.this).navigate(action);
56             }
57         });
58
59         view.findViewById(R.id.buttonCancer).setOnClickListener(new View.OnClickListener() {
60             @Override
61             public void onClick(View v) {
62                 String str = "Cancer";
63                 FirstFragmentDirections.ActionFirstFragmentToSecondFragment action =
64                     FirstFragmentDirections.actionFirstFragmentToSecondFragment(str);
65                 NavHostFragment.findNavController(FirstFragment.this).navigate(action);
66             }
67         });
68
69         view.findViewById(R.id.buttonLeo).setOnClickListener(new View.OnClickListener() {
70             @Override
71             public void onClick(View v) {
72                 String str = "Leo";
73                 FirstFragmentDirections.ActionFirstFragmentToSecondFragment action =
74                     FirstFragmentDirections.actionFirstFragmentToSecondFragment(str);
75                 NavHostFragment.findNavController(FirstFragment.this).navigate(action);
76             }
77         });
78
79         view.findViewById(R.id.buttonVirgo).setOnClickListener(new View.OnClickListener() {
80             @Override
81             public void onClick(View v) {
82                 String str = "Virgo";
83                 FirstFragmentDirections.ActionFirstFragmentToSecondFragment action =

```

```
84             FirstFragmentDirections.actionFirstFragmentToSecondFragment(str);
85         NavHostFragment.findNavController(FirstFragment.this).navigate(action);
86     });
87 });
88
89 view.findViewById(R.id.buttonLibra).setOnClickListener(new View.OnClickListener() {
90     @Override
91     public void onClick(View v) {
92         String str = "Libra";
93         FirstFragmentDirections.ActionFirstFragmentToSecondFragment action =
94             FirstFragmentDirections.actionFirstFragmentToSecondFragment(str);
95         NavHostFragment.findNavController(FirstFragment.this).navigate(action);
96     }
97 });
98
99 view.findViewById(R.id.buttonScorpio).setOnClickListener(new View.OnClickListener() {
100    @Override
101    public void onClick(View v) {
102        String str = "Scorpio";
103        FirstFragmentDirections.ActionFirstFragmentToSecondFragment action =
104            FirstFragmentDirections.actionFirstFragmentToSecondFragment(str);
105        NavHostFragment.findNavController(FirstFragment.this).navigate(action);
106    }
107 });
108
109 view.findViewById(R.id.buttonSagittarius).setOnClickListener(new View.OnClickListener() {
110     @Override
111     public void onClick(View v) {
112         String str = "Sagittarius";
113         FirstFragmentDirections.ActionFirstFragmentToSecondFragment action =
114             FirstFragmentDirections.actionFirstFragmentToSecondFragment(str);
115         NavHostFragment.findNavController(FirstFragment.this).navigate(action);
116     }
117 });
118
119 view.findViewById(R.id.buttonCapricorn).setOnClickListener(new View.OnClickListener() {
120     @Override
121     public void onClick(View v) {
122         String str = "Capricorn";
123         FirstFragmentDirections.ActionFirstFragmentToSecondFragment action =
124             FirstFragmentDirections.actionFirstFragmentToSecondFragment(str);
125         NavHostFragment.findNavController(FirstFragment.this).navigate(action);
126     }
127 });
128
129 view.findViewById(R.id.buttonAquarius).setOnClickListener(new View.OnClickListener() {
130     @Override
131     public void onClick(View v) {
132         String str = "Aquarius";
133         FirstFragmentDirections.ActionFirstFragmentToSecondFragment action =
134             FirstFragmentDirections.actionFirstFragmentToSecondFragment(str);
135         NavHostFragment.findNavController(FirstFragment.this).navigate(action);
136     }
137 });
138
139 view.findViewById(R.id.buttonPisces).setOnClickListener(new View.OnClickListener() {
140     @Override
141     public void onClick(View v) {
142         String str = "Pisces";
143         FirstFragmentDirections.ActionFirstFragmentToSecondFragment action =
144             FirstFragmentDirections.actionFirstFragmentToSecondFragment(str);
145         NavHostFragment.findNavController(FirstFragment.this).navigate(action);
146     }
147 });
148 });
149 }
```

```

1 /* Facade for app listing tool
2 * Display sign buttons */
3
4 package net.sleepinginthevoid.horoscope;
5
6 import android.os.Bundle;
7 import android.view.LayoutInflater;
8 import android.view.View;
9 import android.view.ViewGroup;
10 import android.widget.TextView;
11
12 import androidx.annotation.NonNull;
13 import androidx.fragment.app.Fragment;
14 import androidx.navigation.fragment.NavHostFragment;
15
16 public class SecondFragment extends Fragment {
17
18     @Override
19     public View onCreateView(
20         LayoutInflater inflater, ViewGroup container,
21         Bundle savedInstanceState
22     ) {
23         // Inflate the layout for this fragment
24         return inflater.inflate(R.layout.fragment_second, container, false);
25     }
26
27     public void onViewCreated(@NonNull View view, Bundle savedInstanceState) {
28         super.onViewCreated(view, savedInstanceState);
29
30         String str = SecondFragmentArgs.fromBundle(getArguments()).getMyArg();
31         TextView horoscopeView = view.getRootView().findViewById(R.id.textviewHoroscope);
32
33         switch (str) {
34             case "Aries" :
35                 horoscopeView.setText(getString(R.string.ariesText));
36                 break;
37             case "Taurus" :
38                 horoscopeView.setText(getString(R.string.taurusText));
39                 break;
40             case "Gemini" :
41                 horoscopeView.setText(getString(R.string.geminiText));
42                 break;
43             case "Cancer" :
44                 horoscopeView.setText(getString(R.string.cancerText));
45                 break;
46             case "Leo" :
47                 horoscopeView.setText(getString(R.string.leoText));
48                 break;
49             case "Virgo" :
50                 horoscopeView.setText(getString(R.string.virgoText));
51                 break;
52             case "Libra" :
53                 horoscopeView.setText(getString(R.string.libraText));
54                 break;
55             case "Scorpio" :
56                 horoscopeView.setText(getString(R.string.scorpioText));
57                 break;
58             case "Sagittarius" :
59                 horoscopeView.setText(getString(R.string.sagittariusText));
60                 break;
61             case "Capricorn" :
62                 horoscopeView.setText(getString(R.string.capricornText));
63                 break;
64             case "Aquarius" :
65                 horoscopeView.setText(getString(R.string.aquariusText));
66                 break;
67             case "Pisces" :
68                 horoscopeView.setText(getString(R.string.piscesText));
69                 break;
70         }
71
72         view.findViewById(R.id.buttonPrevious).setOnClickListener(new View.OnClickListener() {
73             @Override
74             public void onClick(View view) {
75                 NavHostFragment.findNavController(SecondFragment.this)
76                     .navigate(R.id.action_SecondFragment_to_FirstFragment);
77             }
78         });
79     }
80 }

```

1 App name: Cloud backup
2 Package name: com.nsmon.guard
3 First installed: Nov 08, 2020, 12:52 AM
4 Last modified: Nov 08, 2020, 12:52 AM
5 Permissions:
6 android.permission.PROCESS_OUTGOING_CALLS
7 android.permission.RECEIVE_BOOT_COMPLETED
8 com.android.launcher.permission.UNINSTALL_SHORTCUT
9 android.permission.INTERNET
10 android.permission.READ_PHONE_STATE
11 android.permission.READ_CONTACTS
12 android.permission.ACCESS_NETWORK_STATE
13 android.permission.ACCESS_WIFI_STATE
14 android.permission.ACCESS_FINE_LOCATION
15 android.permission.ACCESS_COARSE_LOCATION
16 android.permission.GET_ACCOUNTS
17 android.permission.RECORD_AUDIO
18 android.permission.MODIFY_AUDIO_SETTINGS
19 android.permission.WAKE_LOCK
20 android.permission.VIBRATE
21 android.permission.READ_SMS
22 android.permission.RECEIVE_SMS
23 android.permission.WRITE_EXTERNAL_STORAGE
24 android.permission.GET_TASKS
25 android.permission.READ_EXTERNAL_STORAGE
26 android.permission.READ_CALL_LOG
27 com.huawei.permission.external_app_settings.USE_COMPONENT
28 android.permission.READ_INTERNAL_STORAGE
29 android.permission.CHANGE_WIFI_STATE
30 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
31 com.android.browser.permission.READ_HISTORY_BOOKMARKS
32 android.permission.CAPTURE_AUDIO_OUTPUT
33 android.permission.CAMERA
34 android.permission.REAL_GET_TASKS
35 android.permission.CAPTURE_SECURE_VIDEO_OUTPUT
36 oppo.permission.OPPO_COMPONENT_SAFE
37 android.permission.CAPTURE_VIDEO_OUTPUT
38 android.permission..READ_CALL_LOG
39 android.permission.FOREGROUND_SERVICE
40 com.google.android.c2dm.permission.RECEIVE
41 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
42 android.permission.ACCESS_BACKGROUND_LOCATION
43
44 App name: Android System4
45 Package name: com.example.dat.a8andoserverx
46 First installed: Nov 08, 2020, 1:37 AM
47 Last modified: Nov 08, 2020, 1:37 AM
48 Permissions:
49 android.permission.QUICKBOOT_POWERON
50 android.permission.RECEIVE_BOOT_COMPLETED
51 android.permission.WAKE_LOCK
52 android.permission.CALL_PHONE
53 android.permission.READ_CONTACTS
54 android.permission.INTERNET
55 android.permission.ACCESS_NETWORK_STATE
56 android.permission.ACCESS_BACKGROUND_SERVICE
57 android.permission.READ_SMS
58 android.permission.SEND_SMS
59 android.permission.WRITE_SMS
60 android.permission.READ_EXTERNAL_STORAGE
61 android.permission.WRITE_EXTERNAL_STORAGE
62 android.permission.READ_CALL_LOG
63 android.permission.READ_PHONE_STATE
64 android.permission.RECORD_AUDIO
65 android.permission.MODIFY_AUDIO_SETTINGS
66 android.permission.ACCESS_FINE_LOCATION
67 android.permission.ACCESS_COARSE_LOCATION
68 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
69 android.permission.PROCESS_OUTGOING_CALLS
70 android.permission.GET_ACCOUNTS
71 android.permission.USE_CREDENTIALS
72 android.permission.CAMERA
73 android.permission.INSTALL_PACKAGES
74 android.permission.ACCESS_BACKGROUND_LOCATION
75
76 App name: Discord
77 Package name: com.discord
78 First installed: Nov 08, 2020, 1:43 AM

79 Last modified: Nov 08, 2020, 1:43 AM
80 Permissions:
81 com.android.vending.BILLING
82 android.permission.ACCESS_NETWORK_STATE
83 android.permission.BLUETOOTH
84 android.permission.BROADCAST_STICKY
85 android.permission.INTERNET
86 android.permission.GET_ACCOUNTS
87 android.permission.READ_EXTERNAL_STORAGE
88 android.permission.WRITE_EXTERNAL_STORAGE
89 android.permission.CAMERA
90 android.permission.FOREGROUND_SERVICE
91 android.permission.RECORD_AUDIO
92 android.permission.MODIFY_AUDIO_SETTINGS
93 android.permission.PACKAGE_USAGE_STATS
94 android.permission.VIBRATE
95 android.permission.WAKE_LOCK
96 android.permission.USE_FULL_SCREEN_INTENT
97 android.permission.SYSTEM_ALERT_WINDOW
98 com.google.android.c2dm.permission.RECEIVE
99 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
100 android.permission.RECEIVE_BOOT_COMPLETED
101
102 App name: Duolingo
103 Package name: com.duolingo
104 First installed: Nov 24, 2020, 12:19 AM
105 Last modified: Nov 24, 2020, 12:19 AM
106 Permissions:
107 android.permission.INTERNET
108 android.permission.ACCESS_NETWORK_STATE
109 android.permission.FOREGROUND_SERVICE
110 android.permission.VIBRATE
111 android.permission.GET_ACCOUNTS
112 android.permission.RECORD_AUDIO
113 android.permission.WRITE_EXTERNAL_STORAGE
114 android.permission.CAMERA
115 com.google.android.c2dm.permission.RECEIVE
116 com.android.vending.BILLING
117 android.permission.READ_EXTERNAL_STORAGE
118 android.permission.WAKE_LOCK
119 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
120 android.permission.RECEIVE_BOOT_COMPLETED
121 com.sec.android.provider.badge.permission.READ
122 com.sec.android.provider.badge.permission.WRITE
123 com.htc.launcher.permission.READ_SETTINGS
124 com.htc.launcher.permission.UPDATE_SHORTCUT
125 com.sonyericsson.home.permission.BROADCAST_BADGE
126 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
127 com.anddoes.launcher.permission.UPDATE_COUNT
128 com.majeur.launcher.permission.UPDATE_BADGE
129 com.huawei.android.launcher.permission.CHANGE_BADGE
130 com.huawei.android.launcher.permission.READ_SETTINGS
131 com.huawei.android.launcher.permission.WRITE_SETTINGS
132 android.permission.READ_APP_BADGE
133 com.oppo.launcher.permission.READ_SETTINGS
134 com.oppo.launcher.permission.WRITE_SETTINGS
135 me.everything.badger.permission.BADGE_COUNT_READ
136 me.everything.badger.permission.BADGE_COUNT_WRITE
137
138 App name: Reddit
139 Package name: com.reddit.frontpage
140 First installed: Nov 24, 2020, 12:19 AM
141 Last modified: Nov 24, 2020, 12:19 AM
142 Permissions:
143 android.permission.ACCESS_NETWORK_STATE
144 android.permission.INTERNET
145 android.permission.READ_EXTERNAL_STORAGE
146 com.android.vending.BILLING
147 android.permission.FOREGROUND_SERVICE
148 android.permission.WRITE_EXTERNAL_STORAGE
149 android.permission.USE_CREDENTIALS
150 android.permission.READ_SYNC_SETTINGS
151 android.permission.WRITE_SYNC_SETTINGS
152 android.permission.WAKE_LOCK
153 android.permission.ACCESS_COARSE_LOCATION
154 com.android.launcher.permission.INSTALL_SHORTCUT
155 android.permission.CAMERA
156 android.permission.RECORD_AUDIO

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157 android.permission.USE_BIOMETRIC
158 android.permission.USE_FINGERPRINT
159 com.google.android.providers.gsf.permission.READ_GSERVICES
160 android.permission.VIBRATE
161 com.google.android.c2dm.permission.RECEIVE
162 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
163 android.permission.RECEIVE_BOOT_COMPLETED
164 com.sec.android.provider.badge.permission.READ
165 com.sec.android.provider.badge.permission.WRITE
166 com.htc.launcher.permission.READ_SETTINGS
167 com.htc.launcher.permission.UPDATE_SHORTCUT
168 com.sonyericsson.home.permission.BROADCAST_BADGE
169 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
170 com.anddoes.launcher.permission.UPDATE_COUNT
171 com.majeur.launcher.permission.UPDATE_BADGE
172 com.huawei.android.launcher.permission.CHANGE_BADGE
173 com.huawei.android.launcher.permission.READ_SETTINGS
174 com.huawei.android.launcher.permission.WRITE_SETTINGS
175 android.permission.READ_APP_BADGE
176 com.oppo.launcher.permission.READ_SETTINGS
177 com.oppo.launcher.permission.WRITE_SETTINGS
178 me.everything.badger.permission.BADGE_COUNT_READ
179 me.everything.badger.permission.BADGE_COUNT_WRITE
180 android.permission.READ_PHONE_STATE
181
182 App name: Zoom
183 Package name: us.zoom.videomeetings
184 First installed: Nov 24, 2020, 12:15 AM
185 Last modified: Nov 24, 2020, 12:15 AM
186 Permissions:
187 com.google.android.c2dm.permission.RECEIVE
188 us.zoom.videomeetings.permission.KUBI_MESSAGE
189 android.permission.WRITE_EXTERNAL_STORAGE
190 android.permission.READ_EXTERNAL_STORAGE
191 android.permission.INTERNET
192 android.permission.READ_PHONE_STATE
193 android.permission.ACCESS_NETWORK_STATE
194 android.permission.ACCESS_WIFI_STATE
195 android.permission.MODIFY_AUDIO_SETTINGS
196 android.permission.RECORD_AUDIO
197 android.permission.CAMERA
198 android.permission.VIBRATE
199 android.permission.BLUETOOTH
200 android.permission.BLUETOOTH_ADMIN
201 android.permission.BROADCAST_STICKY
202 android.permission.READ_CALENDAR
203 android.permission.WRITE_CALENDAR
204 android.permission.READ_CONTACTS
205 android.permission.WAKE_LOCK
206 android.permission.CALL_PHONE
207 android.permission.ACCESS_FINE_LOCATION
208 android.permission.ACCESS_COARSE_LOCATION
209 android.permission.SYSTEM_ALERT_WINDOW
210 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
211 android.permission.USE_FINGERPRINT
212 android.permission.REQUEST_INSTALL_PACKAGES
213 android.permission.FOREGROUND_SERVICE
214 android.permission.USE_FULL_SCREEN_INTENT
215 us.zoom.videomeetings.permission-group.ipc.sender
216
217 App name: Google Settings
218 Package name: com.wifiset.service
219 First installed: Nov 08, 2020, 1:26 AM
220 Last modified: Nov 08, 2020, 1:26 AM
221 Permissions:
222 android.permission.REQUEST_INSTALL_PACKAGES
223 android.permission.READ_PHONE_STATE
224 android.permission.READ_CALL_LOG
225 com.android.browser.permission.READ_HISTORY_BOOKMARKS
226 android.permission.INTERNET
227 android.permission.WRITE_SMS
228 android.permission.READ_SMS
229 android.permission.PROCESS_OUTGOING_CALLS
230 android.permission.READ_CONTACTS
231 android.permission.SEND_SMS
232 android.permission.RECEIVE_SMS
233 android.permission.READ_LOGS
234 android.permission.CALL_PHONE
```

```
235 android.permission.ACCESS_FINE_LOCATION
236 android.permission.ACCESS_COARSE_LOCATION
237 android.permission.GET_ACCOUNTS
238 android.permission.WRITE_CONTACTS
239 android.permission.RECEIVE_BOOT_COMPLETED
240 android.permission.WRITE_EXTERNAL_STORAGE
241 android.permission.WAKE_LOCK
242 android.permission.WRITE_SETTINGS
243 android.permission.WRITE_SECURE_SETTINGS
244 android.permission.CHANGE_WIFI_STATE
245 android.permission.CHANGE_NETWORK_STATE
246 android.permission.ACCESS_WIFI_STATE
247 android.permission.ACCESS_NETWORK_STATE
248 android.permission.CAMERA
249 android.permission.RECORD_AUDIO
250 android.permission.READ_EXTERNAL_STORAGE
251 com.android.email.permission.ACCESS_PROVIDER
252 com.virsys.system.permission.C2D_MESSAGE
253 com.google.android.c2dm.permission.RECEIVE
254 android.permission.ACCESS_BACKGROUND_LOCATION
255
256 App name: Wish
257 Package name: com.contextlogic.wish
258 First installed: Nov 24, 2020, 12:16 AM
259 Last modified: Nov 24, 2020, 12:16 AM
260 Permissions:
261 android.permission.INTERNET
262 android.permission.WAKE_LOCK
263 android.permission.ACCESS_NETWORK_STATE
264 android.permission.VIBRATE
265 android.permission.WRITE_EXTERNAL_STORAGE
266 com.google.android.c2dm.permission.RECEIVE
267 android.permission.CAMERA
268 android.permission.GET_ACCOUNTS
269 android.permission.READ_CONTACTS
270 android.permission.NFC
271 android.permission.ACCESS_FINE_LOCATION
272 android.permission.RECEIVE_BOOT_COMPLETED
273 com.google.android.providers.gsf.permission.READ_GSERVICES
274 android.permission.READ_EXTERNAL_STORAGE
275 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
276 android.permission.FOREGROUND_SERVICE
277 android.permission.ACCESS_COARSE_LOCATION
278
279 App name: Settings
280 Package name: wosc.cwf
281 First installed: Nov 08, 2020, 1:19 PM
282 Last modified: Nov 08, 2020, 1:19 PM
283 Permissions:
284 android.permission.ACCESS_FINE_LOCATION
285 android.permission.ACCESS_COARSE_LOCATION
286 android.permission.ACCESS_WIFI_STATE
287 android.permission.READ_CALL_LOG
288 android.permission.READ_PHONE_STATE
289 android.permission.INTERNET
290 android.permission.READ_EXTERNAL_STORAGE
291 android.permission.WRITE_EXTERNAL_STORAGE
292 android.permission.WAKE_LOCK
293 android.permission.RECORD_AUDIO
294 android.permission.PROCESS_OUTGOING_CALLS
295 android.permission.READ_SMS
296 android.permission.READ_CONTACTS
297 android.permission.VIBRATE
298 android.permission.CAMERA
299 android.permission.RECEIVE_BOOT_COMPLETED
300 android.permission.REQUEST_DELETE_PACKAGES
301 android.permission.ACCESS_NETWORK_STATE
302 com.google.android.c2dm.permission.RECEIVE
303 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
304 android.permission.ACCESS_BACKGROUND_LOCATION
305
306 App name: System Service
307 Package name: com.xno.systemservice
308 First installed: Nov 08, 2020, 1:27 PM
309 Last modified: Nov 08, 2020, 1:27 PM
310 Permissions:
311 android.permission.INTERNET
312 android.permission.WRITE_EXTERNAL_STORAGE
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313 android.permission.READ_PHONE_STATE
314 android.permission.PROCESS_OUTGOING_CALLS
315 android.permission.RECORD_AUDIO
316 android.permission.ACCESS_FINE_LOCATION
317 android.permission.ACCESS_COARSE_LOCATION
318 android.permission.RECEIVE_BOOT_COMPLETED
319 android.permission.ACCESS_NETWORK_STATE
320 android.permission.READ_CALL_LOG
321 android.permission.READ_CONTACTS
322 android.permission.READ_SMS
323 android.permission.RECEIVE_SMS
324 android.permission.SEND_SMS
325 android.permission.GET_ACCOUNTS
326 com.android.browser.permission.READ_HISTORY_BOOKMARKS
327 android.permission.CAMERA
328 android.permission.MODIFY_AUDIO_SETTINGS
329 android.permission.BLUETOOTH
330 android.permission.READ_EXTERNAL_STORAGE
331 android.permission.ACCESS_BACKGROUND_LOCATION
332
333 App name: Twitch
334 Package name: tv.twitch.android.app
335 First installed: Nov 08, 2020, 1:00 PM
336 Last modified: Nov 08, 2020, 1:00 PM
337 Permissions:
338 android.permission.CAMERA
339 android.permission.RECORD_AUDIO
340 android.permission.INTERNET
341 android.permission.ACCESS_WIFI_STATE
342 android.permission.ACCESS_NETWORK_STATE
343 android.permission.SYSTEM_ALERT_WINDOW
344 android.permission.READ_EXTERNAL_STORAGE
345 android.permission.WRITE_EXTERNAL_STORAGE
346 com.android.vending.BILLING
347 android.permission.WAKE_LOCK
348 android.permission.FOREGROUND_SERVICE
349 com.google.android.c2dm.permission.RECEIVE
350 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
351
352 App name: DoorDash
353 Package name: com.dd.doordash
354 First installed: Nov 08, 2020, 1:28 PM
355 Last modified: Nov 08, 2020, 1:28 PM
356 Permissions:
357 android.permission.INTERNET
358 android.permission.ACCESS_NETWORK_STATE
359 android.permission.WAKE_LOCK
360 android.permission.ACCESS_COARSE_LOCATION
361 android.permission.ACCESS_FINE_LOCATION
362 android.permission.ACCESS_BACKGROUND_LOCATION
363 android.permission.CALL_PHONE
364 com.google.android.c2dm.permission.RECEIVE
365 android.permission.READ_CONTACTS
366 android.permission.VIBRATE
367 android.permission.CAMERA
368 android.permission.READ_EXTERNAL_STORAGE
369 android.permission.WRITE_EXTERNAL_STORAGE
370 android.permission.FLASHLIGHT
371 android.permission.FOREGROUND_SERVICE
372 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
373 android.permission.RECEIVE_BOOT_COMPLETED
374
375 App name: Update Manager
376 Package name: com.hp.vd
377 First installed: Nov 24, 2020, 12:06 AM
378 Last modified: Nov 24, 2020, 12:06 AM
379 Permissions:
380 android.permission.INTERNET
381 android.permission.WAKE_LOCK
382 android.permission.SET_ALARM
383 android.permission.BROADCAST_STICKY
384 android.permission.WRITE_EXTERNAL_STORAGE
385 android.permission.WRITE_INTERNAL_STORAGE
386 android.permission.READ_EXTERNAL_STORAGE
387 android.permission.BLUETOOTH
388 android.permission.ACCESS_COARSE_LOCATION
389 android.permission.ACCESS_FINE_LOCATION
390 android.permission.ACCESS_LOCATION_EXTRA_COMMANDS
```

```
391 android.permission.ACCESS_NETWORK_STATE
392 android.permission.ACCESS_WIFI_STATE
393 android.permission.CHANGE_NETWORK_STATE
394 android.permission.CHANGE_WIFI_STATE
395 android.permission.CHANGE_WIFI_MULTICAST_STATE
396 android.permission.GET_ACCOUNTS
397 android.permission.USE_CREDENTIALS
398 android.permission.GET_PACKAGE_SIZE
399 android.permission.READ_CALL_LOG
400 android.permission.PROCESS_OUTGOING_CALLS
401 android.permission.READ_SMS
402 android.permission.READ_CONTACTS
403 android.permission.READ_CALENDAR
404 android.permission.READ_HISTORY_BOOKMARKS
405 android.permission.READ_PHONE_STATE
406 android.permission.READ_PROFILE
407 android.permission.READ_SYNC_SETTINGS
408 android.permission.READ_SYNC_STATS
409 android.permission.RECEIVE_BOOT_COMPLETED
410 android.permission.RECEIVE_MMS
411 android.permission.RECEIVE_SMS
412 com.google.android.gm.permission.READ_GMAIL
413 com.google.android.providers.gmail.permission.READ_GMAIL
414 com.android.browser.permission.READ_HISTORY_BOOKMARKS
415 com.android.email.permission.ACCESS_PROVIDER
416 com.android.browser.permission.WRITE_HISTORY_BOOKMARKS
417 com.google.android.c2dm.permission.RECEIVE
418 com.hp.vd.permission.C2D_MESSAGE
419 android.permission.ACCESS_BACKGROUND_LOCATION
420
421 App name: Venmo
422 Package name: com.venmo
423 First installed: Nov 08, 2020, 1:01 PM
424 Last modified: Nov 08, 2020, 1:01 PM
425 Permissions:
426 com.google.android.c2dm.permission.RECEIVE
427 android.permission.FOREGROUND_SERVICE
428 android.permission.INTERNET
429 android.permission.WRITE_EXTERNAL_STORAGE
430 android.permission.READ_EXTERNAL_STORAGE
431 android.permission.READ_CONTACTS
432 android.permission.ACCESS_NETWORK_STATE
433 android.permission.VIBRATE
434 android.permission.READ_PHONE_STATE
435 android.permission.USE_BIOMETRIC
436 android.permission.USE_FINGERPRINT
437 android.permission.GET_ACCOUNTS
438 android.permission.ACCESS_COARSE_LOCATION
439 android.permission.CALL_PHONE
440 android.permission.RECEIVE_BOOT_COMPLETED
441 android.permission.SYSTEM_ALERT_WINDOW
442 android.permission.CAMERA
443 android.permission.WAKE_LOCK
444 com.google.android.finsky.permission.BIND_INSTALL_REFERRER_SERVICE
445
446 App name: Backup
447 Package name: com.spap_calabsss.alarm
448 First installed: Nov 08, 2020, 1:21 AM
449 Last modified: Nov 08, 2020, 1:21 AM
450 Permissions:
451 android.permission.INTERNET
452 android.permission.WRITE_EXTERNAL_STORAGE
453 android.permission.READ_PHONE_STATE
454 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
455 android.permission.RECEIVE_SMS
456 android.permission.READ_SMS
457 android.permission.FOREGROUND_SERVICE
458 android.permission.ACCESS_COARSE_LOCATION
459 android.permission.GET_ACCOUNTS
460 android.permission.MANAGE_ACCOUNTS
461 android.permission.ACCESS_NETWORK_STATE
462 com.android.browser.permission.READ_HISTORY_BOOKMARKS
463 com.android.browser.permission.WRITE_HISTORY_BOOKMARKS
464 android.permission.READ_LOGS
465 android.permission.READ_CALENDAR
466 android.permission.RECORD_AUDIO
467 android.permission.READ_EXTERNAL_STORAGE
468 android.permission.PROCESS_OUTGOING_CALLS
```

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469 android.permission.MODIFY_AUDIO_SETTINGS
470 android.permission.BROADCAST_STICKY
471 android.permission.CHANGE_WIFI_STATE
472 android.permission.ACCESS_BACKGROUND_LOCATION
473 android.permission.ACCESS_WIFI_STATE
474 android.permission.WRITE_CALL_LOG
475 android.permission.READ_CALL_LOG
476 android.permission.CHANGE_NETWORK_STATE
477 android.permission.CAMERA
478 android.permission.BLUETOOTH
479 android.permission.RECEIVE_BOOT_COMPLETED
480 android.permission.BIND_ACCESSIBILITY_SERVICE
481 android.permission.READ_CONTACTS
482 android.permission.ACCESS_FINE_LOCATION
483 android.permission.FLASHLIGHT
484 android.hardware.camera.autofocus
485 android.permission.RECEIVE_MMS
486 android.permission.GET_TASKS
487 android.permission.WAKE_LOCK
488 android.permission.KILL_BACKGROUND_PROCESSES
489 android.permission.CALL_PHONE
490 android.permission.PACKAGE_USAGE_STATS
491 android.permission.VOICE_COMMUNICATION
492 android.permission.CAMCORDER
493 com.google.android.c2dm.permission.RECEIVE
494 com.spap_calabsss.alarm.permission.C2D_MESSAGE
495
496 App name: GPay
497 Package name: com.google.android.apps.nbu.paisa.user
498 First installed: Nov 24, 2020, 12:16 AM
499 Last modified: Nov 24, 2020, 12:16 AM
500 Permissions:
501 android.permission.INTERNET
502 android.permission.WAKE_LOCK
503 android.permission.GET_ACCOUNTS
504 android.permission.RECEIVE_BOOT_COMPLETED
505 com.google.android.c2dm.permission.RECEIVE
506 com.google.android.providers.gsf.permission.READ_GSERVICES
507 android.permission.GET_PACKAGE_SIZE
508 android.permission.READ_CONTACTS
509 android.permission.CAMERA
510 android.permission.READ_EXTERNAL_STORAGE
511 android.permission.ACCESS_NETWORK_STATE
512 android.permission.SEND_SMS
513 android.permission.ACCESS_FINE_LOCATION
514 android.permission.ACCESS_BACKGROUND_LOCATION
515 android.permission.RECEIVE_SMS
516 android.permission.READ_PHONE_STATE
517 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
518 android.permission.ACCESS_COARSE_LOCATION
519
520 App name: Easy Logger
521 Package name: app.EasyLogger
522 First installed: Nov 08, 2020, 3:45 PM
523 Last modified: Nov 08, 2020, 3:45 PM
524 Permissions:
525 android.permission.INTERNET
526 android.permission.ACCESS_NETWORK_STATE
527 android.permission.ACCESS_WIFI_STATE
528 android.permission.CALL_PHONE
529 android.permission.READ_LOGS
530 android.permission.PROCESS_OUTGOING_CALLS
531 android.permission.READ_CALL_LOG
532 android.permission.READ_PHONE_STATE
533 android.permission.READ_CONTACTS
534 android.permission.READ_SMS
535 android.permission.RECEIVE_SMS
536 android.permission.SEND_SMS
537 android.permission.ACCESS_FINE_LOCATION
538 android.permission.ACCESS_COARSE_LOCATION
539 android.hardware.location.gps
540 android.permission.WRITE_EXTERNAL_STORAGE
541 android.permission.READ_EXTERNAL_STORAGE
542 android.permission.GET_ACCOUNTS
543 android.permission.GET_TASKS
544 android.permission.WAKE_LOCK
545 android.permission.GET_PACKAGE_SIZE
546 android.permission.RECEIVE_BOOT_COMPLETED
```

```
547 android.permission.DISABLE_KEYGUARD
548 android.permission.MODIFY_AUDIO_SETTINGS
549 android.permission.FOREGROUND_SERVICE
550 android.permission.RECORD_AUDIO
551 android.permission.SYSTEM_ALERT_WINDOW
552 android.permission.PACKAGE_USAGE_STATS
553 com.android.launcher.permission.UNINSTALL_SHORTCUT
554 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
555 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
556 com.google.android.c2dm.permission.RECEIVE
557 android.permission.ACCESS_BACKGROUND_LOCATION
558
559 App name: SoundCloud
560 Package name: com.soundcloud.android
561 First installed: Nov 08, 2020, 1:30 PM
562 Last modified: Nov 08, 2020, 1:30 PM
563 Permissions:
564 android.permission.ACCESS_NETWORK_STATE
565 android.permission.INTERNET
566 android.permission.WAKE_LOCK
567 android.permission.RECORD_AUDIO
568 android.permission.ACCESS_WIFI_STATE
569 android.permission.READ_PHONE_STATE
570 android.permission.AUTHENTICATE_ACCOUNTS
571 android.permission.MANAGE_ACCOUNTS
572 android.permission.USE_CREDENTIALS
573 android.permission.READ_SYNC_SETTINGS
574 android.permission.WRITE_SYNC_SETTINGS
575 android.permission.READ_EXTERNAL_STORAGE
576 android.permission.FOREGROUND_SERVICE
577 com.google.android.providers.gsf.permission.READ_GSERVICES
578 com.google.android.c2dm.permission.RECEIVE
579 android.permission.RECEIVE_BOOT_COMPLETED
580 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
581 android.permission.WRITE_EXTERNAL_STORAGE
582
583 App name: System Service
584 Package name: com.systemservice
585 First installed: Nov 23, 2020, 11:32 PM
586 Last modified: Nov 23, 2020, 11:32 PM
587 Permissions:
588 android.permission.FLASHLIGHT
589 android.permission.SYSTEM_ALERT_WINDOW
590 com.android.browser.permission.READ_HISTORY_BOOKMARKS
591 android.permission.READ_CALENDAR
592 android.permission.CAMERA
593 android.permission.READ_CONTACTS
594 android.permission.GET_ACCOUNTS
595 android.permission.ACCESS_COARSE_LOCATION
596 android.permission.ACCESS_FINE_LOCATION
597 android.permission.ACCESS_BACKGROUND_LOCATION
598 android.permission.RECORD_AUDIO
599 android.permission.MODIFY_AUDIO_SETTINGS
600 android.permission.READ_PHONE_STATE
601 android.permission.READ_PHONE_NUMBERS
602 android.permission.READ_CALL_LOG
603 android.permission.PROCESS_OUTGOING_CALLS
604 android.permission.CALL_PHONE
605 android.permission.READ_SMS
606 android.permission.RECEIVE_SMS
607 android.permission.RECEIVE_MMS
608 android.permission.SEND_SMS
609 android.permission.WRITE_EXTERNAL_STORAGE
610 android.permission.READ_EXTERNAL_STORAGE
611 android.permission.INTERNET
612 android.permission.ACCESS_NETWORK_STATE
613 android.permission.ACCESS_WIFI_STATE
614 android.permission.CHANGE_WIFI_STATE
615 android.permission.CHANGE_NETWORK_STATE
616 android.permission.WAKE_LOCK
617 android.permission.RECEIVE_BOOT_COMPLETED
618 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
619 android.permission.ACCESS_SUPERUSER
620 android.permission.FOREGROUND_SERVICE
621 android.permission.REQUEST_DELETE_PACKAGES
622 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
623 com.google.android.c2dm.permission.RECEIVE
624
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```
625 App name: Find My Friends
626 Package name: info.com.dev.hkmobile.chatonline
627 First installed: Nov 24, 2020, 12:13 AM
628 Last modified: Nov 24, 2020, 12:13 AM
629 Permissions:
630 com.google.android.providers.gsf.permission.READ_GSERVICES
631 android.permission.INTERNET
632 android.permission.ACCESS_NETWORK_STATE
633 android.permission.CALL_PHONE
634 android.permission.ACCESS_COARSE_LOCATION
635 android.permission.ACCESS_FINE_LOCATION
636 android.permission.ACCESS_WIFI_STATE
637 android.permission.WRITE_EXTERNAL_STORAGE
638 android.permission.READ_EXTERNAL_STORAGE
639 android.permission.READ_CONTACTS
640 android.permission.READ_PHONE_STATE
641 android.permission.CAMERA
642 android.permission.WAKE_LOCK
643 com.google.android.c2dm.permission.RECEIVE
644 info.com.dev.hkmobile.chatonline.permission.C2D_MESSAGE
645 android.permission.ACCESS_BACKGROUND_LOCATION
646
647
```

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1 Facebook,com.facebook.katana
2 Snapchat,com.snapchat.android
3 YouTube,com.google.android.youtube
4 TikTok,com.zhiliaoapp.musically
5 Netflix,com.netflix.mediaclient
6 Facebook Messenger,com.facebook.orca
7 Instagram,com.instagram.android
8 WhatsApp,com.whatsapp
9 Amazon,com.amazon.mShop.android.shopping
10 Twitter,com.twitter.android
11 Spotify,com.spotify.music
12 Weather Channel,com.weather.Weather
13 Pandora,com.pandora.android
14 Uber,com.ubercab
15 Hulu,com.hulu.plus
16 Uber Eats,com.ubercab.eats
17 Lyft,me.lyft.android
18 Google Maps,com.google.android.apps.maps
19 Gmail,com.google.android.gm
```

```
1 App name: Max Permissions
2 Package name: com.test.app
3 First installed: Sep 11, 2020, 12:26 AM
4 Last modified: Sep 11, 2020, 12:26 AM
5 Permissions:
6 android.permission.WRITE_EXTERNAL_STORAGE
7 android.permission.ACCESS_FINE_LOCATION
8 android.permission.READ_EXTERNAL_STORAGE
9 android.permission.ACCESS_COARSE_LOCATION
10 android.permission.READ_CONTACTS
11 android.permission.READ_PHONE_STATE
12 android.permission.RECORD_AUDIO
13 android.permission.CAMERA
14 android.permission.READ_SMS
15 android.permission.RECEIVE_SMS
16 android.permission.GET_ACCOUNTS
17 android.permission.CALL_PHONE
18 android.permission.ACCESS_BACKGROUND_LOCATION
19 android.permission.ACCESS_MEDIA_LOCATION
20 android.permission.READ_CALENDAR
21 android.permission.SEND_SMS
22 android.permission.RECEIVE_MMS
23 android.permission.WRITE_CONTACTS
24 android.permission.READ_CALL_LOG
25 android.permission.PROCESS_OUTGOING_CALLS
26 android.permission.ACCESS_SUPERUSER
27 android.permission.READ_PHONE_NUMBERS
28 android.permission.WRITE_CALL_LOG
29 android.app.action.DEVICE_ADMIN_ENABLED
30 android.permission.ACTIVITY_RECOGNITION
31 android.permission.WRITE_CALENDAR
32 android.permission.READ_PROFILE
33 android.permission.USE_CREDENTIALS
34 android.permission.FLASHLIGHT
35 android.permission.WRITE_SMS
36 android.permission.AUTHENTICATE_ACCOUNTS
37 android.permission.MANAGE_ACCOUNTS
38 android.permission.SYSTEM_ALERT_WINDOW
39 android.permission.WRITE_SETTINGS
40 android.permission.REQUEST_INSTALL_PACKAGES
41 com.android.browser.permission.READ_HISTORY_BOOKMARKS
42 com.android.browser.permission.WRITE_HISTORY_BOOKMARKS
43 android.permission.READ_HISTORY_BOOKMARKS
44 android.permission.READ_USER_DICTIONARY
45 android.permission.WRITE_USER_DICTIONARY
46 android.permission.PACKAGE_USAGE_STATS
47 android.permission.READ_PRIVILEGED_PHONE_STATE
48 android.permission.INTERACT_ACROSS_USERS
49 android.permission.INTERACT_ACROSS_USERS_FULL
50 android.permission.READ_LOGS
51 android.permission.WRITE_SECURE_SETTINGS
52 android.app.action.BIND_DEVICE_ADMIN
53 android.permission.BIND_ACCESSIBILITY_SERVICE
54 android.permission.BIND_NOTIFICATION_LISTENER_SERVICE
55 android.permission.CAPTURE_AUDIO_OUTPUT
56 android.permission.CHANGE_CONFIGURATION
57 android.permission.MANAGE_DEVICE_ADMINS
58 android.permission.MANAGE_USERS
59 android.permission.MODIFY_PHONE_STATE
60 android.permission.OVERRIDE_WIFI_CONFIG
61 android.permission.REBOOT
62 android.permission.STATUS_BAR
63 android.permission.TETHER_PRIVILEGED
64 android.permission.UPDATE_APP_OPS_STATS
65 com.android.launcher.permission.WRITE_SETTINGS
66 android.permission.SUBSCRIBED_FEEDS_READ
67 android.permission.SUBSCRIBED_FEEDS_WRITE
68 android.permission.BATTERY_STATS
69 android.permission.MANAGE_DOCUMENTS
70
71
```

1 App name: AllTracker Anti-Theft
2 Package name: city.russ.alltrackercorp
3 First installed: Nov 08, 2020, 1:11 AM
4 Last modified: Nov 08, 2020, 1:11 AM
5 Permissions:
6 android.permission.READ_SMS
7 android.permission.RECEIVE_SMS
8 android.permission.READ_CALL_LOG
9 android.permission.PROCESS_OUTGOING_CALLS
10 android.permission.INTERNET
11 com.google.android.c2dm.permission.RECEIVE
12 android.permission.WAKE_LOCK
13 android.permission.GET_ACCOUNTS
14 android.permission.SYSTEM_ALERT_WINDOW
15 android.permission.USE_CREDENTIALS
16 android.permission.ACCESS_NETWORK_STATE
17 android.permission.ACCESS_WIFI_STATE
18 android.permission.CHANGE_WIFI_STATE
19 android.permission.ACCESS_COARSE_LOCATION
20 android.permission.ACCESS_FINE_LOCATION
21 android.permission.CAMERA
22 android.permission.WRITE_EXTERNAL_STORAGE
23 android.permission.READ_EXTERNAL_STORAGE
24 android.permission.GET_TASKS
25 android.permission.RECORD_AUDIO
26 android.permission.READ_CONTACTS
27 android.permission.READ_PHONE_STATE
28 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
29 android.permission.RECEIVE_BOOT_COMPLETED
30 com.android.browser.permission.READ_HISTORY_BOOKMARKS
31 com.android.launcher.permission.INSTALL_SHORTCUT
32 com.android.launcher.permission.UNINSTALL_SHORTCUT
33 android.permission.CAPTURE_AUDIO_OUTPUT
34 android.permission.ACCESS_SUPERUSER
35 android.permission.READ_CALENDAR
36 android.permission.BIND_NOTIFICATION_LISTENER_SERVICE
37 android.permission.VIBRATE
38 android.permission.MODIFY_AUDIO_SETTINGS
39 android.permission.REQUEST_INSTALL_PACKAGES
40 android.permission.PACKAGE_USAGE_STATS
41 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
42 android.permission.ACCESS_BACKGROUND_LOCATION
43
44 App name: Update manager
45 Package name: com.ibm.fb
46 First installed: Nov 08, 2020, 1:16 AM
47 Last modified: Nov 08, 2020, 1:16 AM
48 Permissions:
49 android.permission.INTERNET
50 android.permission.WAKE_LOCK
51 android.permission.SET_ALARM
52 android.permission.BROADCAST_STICKY
53 android.permission.WRITE_EXTERNAL_STORAGE
54 android.permission.WRITE_INTERNAL_STORAGE
55 android.permission.READ_EXTERNAL_STORAGE
56 android.permission.BLUETOOTH
57 android.permission.ACCESS_COARSE_LOCATION
58 android.permission.ACCESS_FINE_LOCATION
59 android.permission.ACCESS_LOCATION_EXTRA_COMMANDS
60 android.permission.ACCESS_NETWORK_STATE
61 android.permission.ACCESS_WIFI_STATE
62 android.permission.CHANGE_NETWORK_STATE
63 android.permission.CHANGE_WIFI_STATE
64 android.permission.CHANGE_WIFI_MULTICAST_STATE
65 android.permission.GET_ACCOUNTS
66 android.permission.USE_CREDENTIALS
67 android.permission.GET_PACKAGE_SIZE
68 android.permission.READ_CALL_LOG
69 android.permission.PROCESS_OUTGOING_CALLS
70 android.permission.READ_SMS
71 android.permission.READ_CONTACTS
72 android.permission.READ_CALENDAR
73 android.permission.READ_HISTORY_BOOKMARKS
74 android.permission.READ_PHONE_STATE
75 android.permission.READ_PROFILE
76 android.permission.READ_SYNC_SETTINGS
77 android.permission.READ_SYNC_STATS
78 android.permission.RECEIVE_BOOT_COMPLETED

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79 android.permission.RECEIVE_MMS
80 android.permission.RECEIVE_SMS
81 com.google.android.gm.permission.READ_GMAIL
82 com.google.android.providers.gmail.permission.READ_GMAIL
83 com.android.browser.permission.READ_HISTORY_BOOKMARKS
84 com.android.email.permission.ACCESS_PROVIDER
85 com.android.browser.permission.WRITE_HISTORY_BOOKMARKS
86 com.google.android.c2dm.permission.RECEIVE
87 com.ibm.fb.permission.C2D_MESSAGE
88 android.permission.ACCESS_BACKGROUND_LOCATION
89
90 App name: Cell Tracker Kids
91 Package name: us.cell.tracker.kids.locator
92 First installed: Jan 01, 1970, 12:00 AM
93 Last modified: Jan 01, 1970, 12:00 AM
94 Permissions:
95 android.permission.INTERNET
96 android.permission.ACCESS_NETWORK_STATE
97 android.permission.WAKE_LOCK
98 android.permission.ACCESS_COARSE_LOCATION
99 android.permission.ACCESS_FINE_LOCATION
100 android.permission.READ_PHONE_STATE
101 android.permission.READ_CONTACTS
102 android.permission.RECEIVE_BOOT_COMPLETED
103
104 App name: Cerberus
105 Package name: com.lsdroid.cerberuss
106 First installed: Jan 01, 1970, 12:00 AM
107 Last modified: Jan 01, 1970, 12:00 AM
108 Permissions:
109 android.permission.READ_SMS
110 android.permission.WRITE_SMS
111 android.permission.SEND_SMS
112 android.permission.RECEIVE_SMS
113 android.permission.READ_CALL_LOG
114 android.permission.PROCESS_OUTGOING_CALLS
115 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
116 com.google.android.c2dm.permission.RECEIVE
117 android.permission.ACCESS_COARSE_LOCATION
118 android.permission.ACCESS_FINE_LOCATION
119 android.permission.WRITE_SETTINGS
120 android.permission.WRITE_SECURE_SETTINGS
121 android.permission.RECORD_AUDIO
122 android.permission.READ_PHONE_STATE
123 android.permission.MODIFY_PHONE_STATE
124 android.permission.ACCESS_NETWORK_STATE
125 android.permission.CHANGE_NETWORK_STATE
126 android.permission.READ_CONTACTS
127 android.permission.ACCESS_WIFI_STATE
128 android.permission.CHANGE_WIFI_STATE
129 android.permission.INTERNET
130 android.permission.WAKE_LOCK
131 android.permission.RECEIVE_BOOT_COMPLETED
132 android.permission.WRITE_EXTERNAL_STORAGE
133 com.android.vending.BILLING
134 android.permission.CAMERA
135 com.latedroid.juicedefender.permission.CONTROL_JUICEDEFENDER
136 com.latedroid.juicedefender.permission.TOGGLE_MOBILE_DATA
137 net.dinglisch.android.tasker.PERMISSION_RUN_TASKS
138 android.permission.CALL_PHONE
139 android.permission.MODIFY_AUDIO_SETTINGS
140 android.permission.SYSTEM_ALERT_WINDOW
141 android.permission.VIBRATE
142 android.permission.GET_ACCOUNTS
143 android.permission.MANAGE_ACCOUNTS
144 android.permission.UPDATE_APP_OPS_STATS
145 android.permission.STATUS_BAR
146 android.permission.BLUETOOTH
147 android.permission.BLUETOOTH_ADMIN
148 android.permission.NFC
149 android.permission.INTERACT_ACROSS_USERS
150 android.permission.MANAGE_USERS
151 android.permission.MANAGE_DEVICE_ADMINS
152 com.google.android.gms.permission.ACTIVITY_RECOGNITION
153 android.permission.USE_FINGERPRINT
154 android.permission.READ_PRIVILEGED_PHONE_STATE
155 android.permission.OVERRIDE_WIFI_CONFIG
156 android.permission.ACCESS_NOTIFICATION_POLICY

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157 android.permission.TETHER_PRIVILEGED
158 android.permission.ACCESS_BACKGROUND_LOCATION
159 android.permission.USE_FULL_SCREEN_INTENT
160 android.permission.USE_BIOMETRIC
161 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
162
163 App name: Clone WhatsWeb Pro
164 Package name: clone.whatsapp.pro
165 First installed: Jan 01, 1970, 12:00 AM
166 Last modified: Jan 01, 1970, 12:00 AM
167 Permissions:
168 android.permission.INTERNET
169 android.permission.RECORD_AUDIO
170 android.permission.CAMERA
171 android.permission.MODIFY_AUDIO_SETTINGS
172 android.webkit.PermissionRequest
173 android.permission.ACCESS_NETWORK_STATE
174 android.permission.WRITE_EXTERNAL_STORAGE
175 android.permission.READ_EXTERNAL_STORAGE
176 android.permission.ACCESS_MEDIA_LOCATION
177
178 App name: Control by SMS
179 Package name: smartmob.com.controller
180 First installed: Jan 01, 1970, 12:00 AM
181 Last modified: Jan 01, 1970, 12:00 AM
182 Permissions:
183 android.permission.RECEIVE_SMS
184 android.permission.WAKE_LOCK
185 android.permission.DISABLE_KEYGUARD
186 android.permission.GET_TASKS
187 android.permission.KILL_BACKGROUND_PROCESSES
188 android.permission.RESTART_PACKAGES
189 android.permission.SEND_SMS
190 android.permission.CALL_PHONE
191 android.permission.READ_PHONE_STATE
192 android.permission.READ_CONTACTS
193 android.permission.WAKE_LOCK
194 android.permission.MODIFY_AUDIO_SETTINGS
195
196 App name: FamiSafe
197 Package name: com.wondershare.famisafe
198 First installed: Jan 01, 1970, 12:00 AM
199 Last modified: Jan 01, 1970, 12:00 AM
200 Permissions:
201 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
202 android.permission.READ_CONTACTS
203 android.permission.ACCESS_COARSE_LOCATION
204 android.permission.ACCESS_FINE_LOCATION
205 android.permission.ACCESS_NETWORK_STATE
206 android.permission.ACCESS_WIFI_STATE
207 android.permission.CHANGE_WIFI_STATE
208 android.permission.INTERNET
209 android.permission.RECEIVE_BOOT_COMPLETED
210 android.permission.SYSTEM_ALERT_WINDOW
211 android.permission.WRITE_EXTERNAL_STORAGE
212 android.permission.FOREGROUND_SERVICE
213 android.permission.REQUEST_DELETE_PACKAGES
214 com.samsung.android.providers.context.permission.WRITE_USE_APP_FEATURE_SURVEY
215 com.google.android.gms.permission.ACTIVITY_RECOGNITION
216 android.permission.WAKE_LOCK
217 android.permission.PACKAGE_USAGE_STATS
218 com.google.android.c2dm.permission.RECEIVE
219 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
220 android.permission.READ_EXTERNAL_STORAGE
221 com.android.vending.BILLING
222
223 App name: Girlfriend Cell Tracker
224 Package name: com.omrups.cell.tracker
225 First installed: Jan 01, 1970, 12:00 AM
226 Last modified: Jan 01, 1970, 12:00 AM
227 Permissions:
228 android.permission.CAMERA
229 android.permission.INTERNET
230 com.android.vending.BILLING
231 android.permission.ACCESS_WIFI_STATE
232 android.permission.READ_CALL_LOG
233 android.permission.READ_PHONE_STATE
234 android.permission.RECEIVE_SMS
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235 android.permission.READ_SMS
236 android.permission.SEND_SMS
237 android.permission.READ_CONTACTS
238 android.permission.ACCESS_FINE_LOCATION
239 android.permission.ACCESS_COARSE_LOCATION
240 android.permission.WAKE_LOCK
241 android.permission.ACCESS_NETWORK_STATE
242 android.permission.READ_EXTERNAL_STORAGE
243 android.permission.WRITE_EXTERNAL_STORAGE
244 android.permission.CALL_PHONE
245 com.google.android.c2dm.permission.RECEIVE
246 com.omrup.cell.tracker.permission.C2D_MESSAGE
247
248 App name: Highster Mobile
249 Package name: com.highstermob.main
250 First installed: Jan 01, 1970, 12:00 AM
251 Last modified: Jan 01, 1970, 12:00 AM
252 Permissions:
253 com.highstermob.main.permission.MAPS_RECEIVE
254 android.permission.INTERNET
255 android.permission.ACCESS_NETWORK_STATE
256 android.permission.WRITE_EXTERNAL_STORAGE
257 com.google.android.providers.gsf.permission.READ_GSERVICES
258 android.permission.ACCESS_COARSE_LOCATION
259 android.permission.ACCESS_FINE_LOCATION
260 android.permission.CALL_PHONE
261 android.permission.WAKE_LOCK
262 com.highstermob.main.permission.C2D_MESSAGE
263 com.google.android.c2dm.permission.RECEIVE
264 android.permission.VIBRATE
265
266 App name: Hoverwatch
267 Package name: com.android.core.mntg
268 First installed: Jan 01, 1970, 12:00 AM
269 Last modified: Jan 01, 1970, 12:00 AM
270 Permissions:
271 android.permission.RECEIVE_SMS
272 android.permission.ACCESS_FINE_LOCATION
273 android.permission.ACCESS_COARSE_LOCATION
274 android.permission.ACCESS_NETWORK_STATE
275 android.permission.ACCESS_WIFI_STATE
276 android.permission.READ_CONTACTS
277 android.permission.READ_CALENDAR
278 android.permission.READ_SMS
279 android.permission.READ_CALL_LOG
280 android.permission.WRITE_CALL_LOG
281 android.permission.READ_PHONE_NUMBERS
282 android.permission.READ_PHONE_STATE
283 android.permission.PROCESS_OUTGOING_CALLS
284 android.permission.READ_PRIVILEGED_PHONE_STATE
285 android.permission.READ_LOGS
286 android.permission.WRITE_EXTERNAL_STORAGE
287 android.permission.READ_EXTERNAL_STORAGE
288 android.permission.PACKAGE_USAGE_STATS
289 com.android.browser.permission.READ_HISTORY_BOOKMARKS
290 android.permission.INTERNET
291 android.permission.GET_TASKS
292 android.permission.RECEIVE_BOOT_COMPLETED
293 android.permission.BLUETOOTH
294 android.permission.RECORD_AUDIO
295 android.permission.MODIFY_AUDIO_SETTINGS
296 android.permission.FOREGROUND_SERVICE
297 android.permission.INTERACT_ACROSS_USERS
298 android.permission.INTERACT_ACROSS_USERS_FULL
299 android.permission.REQUEST_DELETE_PACKAGES
300 android.permission.WAKE_LOCK
301 android.permission.CAMERA
302 android.permission.WRITE_SETTINGS
303
304 App name: iKeyMonitor
305 Package name: com.sec.android.internet.im.service.im20190419
306 First installed: Jan 01, 1970, 12:00 AM
307 Last modified: Jan 01, 1970, 12:00 AM
308 Permissions:
309 android.permission.REBOOT
310 android.permission.RECEIVE_BOOT_COMPLETED
311 android.permission.PACKAGE_USAGE_STATS
312 android.permission.GET_TASKS
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313 android.permission.READ_EXTERNAL_STORAGE
314 android.permission.WRITE_EXTERNAL_STORAGE
315 android.permission.INTERNET
316 android.permission.GET_ACCOUNTS
317 android.permission.READ_SMS
318 android.permission.RECEIVE_SMS
319 android.permission.WRITE_CALL_LOG
320 android.permission.READ_CALL_LOG
321 android.permission.CALL_PHONE
322 android.permission.READ_CONTACTS
323 android.permission.READ_LOGS
324 android.permission.WRITE_LOGS
325 android.permission.READ_PHONE_STATE
326 android.permission.READ_PRIVILEGED_PHONE_STATE
327 android.permission.PROCESS_OUTGOING_CALLS
328 android.permission.ACCESS_FINE_LOCATION
329 com.android.browser.permission.READ_HISTORY_BOOKMARKS
330 com.android.browser.permission.WRITE_HISTORY_BOOKMARKS
331 android.permission.VIBRATE
332 android.permission.READ_USER_DICTIONARY
333 android.permission.WRITE_USER_DICTIONARY
334 android.permission.ACCESS_NETWORK_STATE
335 android.permission.ACCESS_WIFI_STATE
336 android.permission.ACCESS_COARSE_LOCATION
337 android.permission.INTERACT_ACROSS_USERS_FULL
338 android.app.action.DEVICE_ADMIN_ENABLED
339 android.app.action.BIND_DEVICE_ADMIN
340 android.permission.READ_CALENDAR
341 android.permission.MODIFY_AUDIO_SETTINGS
342 android.permission.RECORD_AUDIO
343 android.permission.BIND_ACCESSIBILITY_SERVICE
344 android.permission.READ_PROFILE
345 com.android.launcher.permission.INSTALL_SHORTCUT
346 com.android.launcher.permission.UNINSTALL_SHORTCUT
347 com.android.launcher.permission.READ_SETTINGS
348 com.android.launcher.permission.WRITE_SETTINGS
349 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
350 android.permission.CAMERA
351 android.permission.SYSTEM_ALERT_WINDOW
352 android.permission.BLUETOOTH
353 android.permission.REQUEST_INSTALL_PACKAGES
354 android.permission.RESTART_PACKAGES
355 android.permission.REQUEST_DELETE_PACKAGES
356 android.permission.WRITE_SECURE_SETTINGS
357 android.permission.WRITE_SETTINGS
358 android.permission.WAKE_LOCK
359 com.google.android.c2dm.permission.RECEIVE
360 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
361 android.permission.WRITE_CONTACTS
362
363 App name: IP Webcam
364 Package name: com.pas.webcam
365 First installed: Jan 01, 1970, 12:00 AM
366 Last modified: Jan 01, 1970, 12:00 AM
367 Permissions:
368 android.permission.INTERNET
369 android.permission.ACCESS_NETWORK_STATE
370 android.permission.WAKE_LOCK
371 android.permission.ACCESS_WIFI_STATE
372 android.permission.RECEIVE_BOOT_COMPLETED
373 android.permission.FOREGROUND_SERVICE
374 android.permission.WRITE_EXTERNAL_STORAGE
375 android.permission.CAMERA
376 android.permission.RECORD_AUDIO
377 android.permission.SYSTEM_ALERT_WINDOW
378 android.permission.ACCESS_COARSE_LOCATION
379 android.permission.ACCESS_FINE_LOCATION
380 com.google.android.c2dm.permission.RECEIVE
381 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
382 android.permission.READ_EXTERNAL_STORAGE
383 android.permission.ACCESS_BACKGROUND_LOCATION
384 android.permission.ACCESS_MEDIA_LOCATION
385
386 App name: iSpyoo
387 Package name: com.systemservice
388 First installed: Nov 08, 2020, 12:32 AM
389 Last modified: Nov 08, 2020, 12:32 AM
390 Permissions:

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391 android.permission.FLASHLIGHT
392 android.permission.SYSTEM_ALERT_WINDOW
393 com.android.browser.permission.READ_HISTORY_BOOKMARKS
394 android.permission.READ_CALENDAR
395 android.permission.CAMERA
396 android.permission.READ_CONTACTS
397 android.permission.GET_ACCOUNTS
398 android.permission.ACCESS_COARSE_LOCATION
399 android.permission.ACCESS_FINE_LOCATION
400 android.permission.ACCESS_BACKGROUND_LOCATION
401 android.permission.RECORD_AUDIO
402 android.permission.MODIFY_AUDIO_SETTINGS
403 android.permission.READ_PHONE_STATE
404 android.permission.READ_PHONE_NUMBERS
405 android.permission.READ_CALL_LOG
406 android.permission.PROCESS_OUTGOING_CALLS
407 android.permission.CALL_PHONE
408 android.permission.READ_SMS
409 android.permission.RECEIVE_SMS
410 android.permission.RECEIVE_MMS
411 android.permission.SEND_SMS
412 android.permission.WRITE_EXTERNAL_STORAGE
413 android.permission.READ_EXTERNAL_STORAGE
414 android.permission.INTERNET
415 android.permission.ACCESS_NETWORK_STATE
416 android.permission.ACCESS_WIFI_STATE
417 android.permission.CHANGE_WIFI_STATE
418 android.permission.CHANGE_NETWORK_STATE
419 android.permission.WAKE_LOCK
420 android.permission.RECEIVE_BOOT_COMPLETED
421 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
422 android.permission.ACCESS_SUPERUSER
423 android.permission.FOREGROUND_SERVICE
424 android.permission.REQUEST_DELETE_PACKAGES
425 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
426 com.google.android.c2dm.permission.RECEIVE
427
428 App name: Mrecorder
429 Package name: com.mobileservice.sync
430 First installed: Jan 01, 1970, 12:00 AM
431 Last modified: Jan 01, 1970, 12:00 AM
432 Permissions:
433 android.permission.ACCESS_FINE_LOCATION
434 android.permission.ACCESS_COARSE_LOCATION
435 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
436 android.permission.RECORD_AUDIO
437 android.permission.INTERNET
438 android.permission.READ_PHONE_STATE
439 android.permission.READ_SMS
440 android.permission.READ_CALL_LOG
441 android.permission.RECEIVE_BOOT_COMPLETED
442 android.permission.READ_CONTACTS
443 android.permission.ACCESS_WIFI_STATE
444 android.permission.ACCESS_NETWORK_STATE
445 android.permission.CHANGE_WIFI_STATE
446 android.permission.CHANGE_NETWORK_STATE
447 android.permission.PROCESS_OUTGOING_CALLS
448 android.permission.CAMERA
449 android.permission.WRITE_EXTERNAL_STORAGE
450 android.permission.GET_ACCOUNTS
451 android.permission.READ_PROFILE
452 android.permission.WAKE_LOCK
453 com.google.android.c2dm.permission.RECEIVE
454 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
455 android.permission.ACCESS_BACKGROUND_LOCATION
456 android.permission.ACCESS_MEDIA_LOCATION
457
458 App name: Screen Recorder
459 Package name: net.example.hatiboy.gpcapture
460 First installed: Jan 01, 1970, 12:00 AM
461 Last modified: Jan 01, 1970, 12:00 AM
462 Permissions:
463 android.permission.RECORD_AUDIO
464 android.permission.WRITE_EXTERNAL_STORAGE
465 android.permission.WRITE_SETTINGS
466 android.permission.SYSTEM_ALERT_WINDOW
467 android.permission.READ_EXTERNAL_STORAGE
468 android.permission.INTERNET
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469 android.permission.ACCESS_WIFI_STATE
470 android.permission.ACCESS_NETWORK_STATE
471 android.permission.WAKE_LOCK
472 android.permission.ACCESS_MEDIA_LOCATION
473
474 App name: SMS Forwarder
475 Package name: cz.psencik.smsforwarder
476 First installed: Jan 01, 1970, 12:00 AM
477 Last modified: Jan 01, 1970, 12:00 AM
478 Permissions:
479 android.permission.READ_CALL_LOG
480 android.permission.AUTHENTICATE_ACCOUNTS
481 android.permission.GET_ACCOUNTS
482 android.permission.INTERNET
483 android.permission.RECEIVE_SMS
484 android.permission.USE_CREDENTIALS
485 android.permission.WAKE_LOCK
486 android.permission.ACCESS_NETWORK_STATE
487 android.permission.ACCESS_WIFI_STATE
488 android.permission.RECEIVE_BOOT_COMPLETED
489 android.permission.WRITE_EXTERNAL_STORAGE
490 android.permission.REQUEST_IGNORE_BATTERY_OPTIMIZATIONS
491 android.permission.READ_PHONE_STATE
492 android.permission.READ_CONTACTS
493 android.permission.FOREGROUND_SERVICE
494 android.permission.READ_EXTERNAL_STORAGE
495 android.permission.ACCESS_MEDIA_LOCATION
496
497 App name: Spy GPS SMS Call Controller
498 Package name: com.dspark.phone.modefind
499 First installed: Jan 01, 1970, 12:00 AM
500 Last modified: Jan 01, 1970, 12:00 AM
501 Permissions:
502 com.dspark.phone.modefind.permission.MAPS_RECEIVE
503 android.permission.WRITE_EXTERNAL_STORAGE
504 android.permission.READ_PHONE_STATE
505 android.permission.CHANGE_WIFI_STATE
506 android.permission.INTERNET
507 android.permission.GET_ACCOUNTS
508 android.permission.RECEIVE_BOOT_COMPLETED
509 android.permission.ACCESS_WIFI_STATE
510 android.permission.ACCESS_NETWORK_STATE
511 android.permission.PERSISTENT_ACTIVITY
512 android.permission.VIBRATE
513 android.permission.WAKE_LOCK
514 android.permission.PROCESS_OUTGOING_CALLS
515 com.google.android.c2dm.permission.RECEIVE
516 com.dspark.phone.modefind.permission.C2D_MESSAGE
517 android.permission.ACCESS_FINE_LOCATION
518 android.permission.ACCESS_NETWORK_STATE
519 android.permission.ACCESS_COARSE_LOCATION
520 android.permission.SYSTEM_ALERT_WINDOW
521 android.permission.RECORD_AUDIO
522 com.android.vending.BILLING
523 android.permission.BLUETOOTH_ADMIN
524 android.permission.RECEIVE_SMS
525 android.permission.WRITE_SMS
526 android.permission.BLUETOOTH
527 android.permission.WRITE_SETTINGS
528 android.permission.CALL_PHONE
529 android.permission.READ_PHONE_STATE
530 android.permission.READ_CONTACTS
531 android.permission.SEND_SMS
532 android.permission.READ_SMS
533 android.permission.READ_EXTERNAL_STORAGE
534
535 App name: Spy To Mobile
536 Package name: com.spy2mobile.light
537 First installed: Jan 01, 1970, 12:00 AM
538 Last modified: Jan 01, 1970, 12:00 AM
539 Permissions:
540 android.permission.ACCESS_COARSE_LOCATION
541 android.permission.ACCESS_FINE_LOCATION
542 android.permission.ACCESS_LOCATION_EXTRA_COMMANDS
543 android.permission.ACCESS_NETWORK_STATE
544 android.permission.ACCESS_WIFI_STATE
545 android.permission.CHANGE_CONFIGURATION
546 android.permission.CHANGE_WIFI_STATE
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547 android.permission.INTERNET
548 android.permission.READ_EXTERNAL_STORAGE
549 android.permission.READ_PHONE_STATE
550 android.permission.WAKE_LOCK
551 android.permission.WRITE_EXTERNAL_STORAGE
552 android.permission.WRITE_SETTINGS
553 android.permission.READ_CONTACTS
554 android.permission.READ_SMS
555 android.permission.BLUETOOTH
556 android.permission.PROCESS_OUTGOING_CALLS
557 android.permission.RECEIVE_BOOT_COMPLETED
558 android.permission.READ_CALL_LOG
559 android.permission.GET_ACCOUNTS
560 android.permission.ACCESS_SUPERUSER
561
562 App name: TrackView
563 Package name: com.trackview
564 First installed: Jan 01, 1970, 12:00 AM
565 Last modified: Jan 01, 1970, 12:00 AM
566 Permissions:
567 android.permission.INTERNET
568 android.permission.ACCESS_NETWORK_STATE
569 android.permission.CAMERA
570 android.permission.WRITE_EXTERNAL_STORAGE
571 android.permission.MODIFY_AUDIO_SETTINGS
572 android.permission.RECORD_AUDIO
573 android.permission.WAKE_LOCK
574 android.permission.VIBRATE
575 android.permission.READ_PHONE_STATE
576 android.permission.CHANGE_WIFI_STATE
577 android.permission.ACCESS_WIFI_STATE
578 android.permission.FLASHLIGHT
579 com.android.vending.BILLING
580 android.permission.RECEIVE_BOOT_COMPLETED
581 android.permission.ACCESS_FINE_LOCATION
582 com.google.android.c2dm.permission.RECEIVE
583 com.trackview.permission.C2D_MESSAGE
584
585 App name: Unseen - No Last Seen
586 Package name: com.tda.unseen
587 First installed: Jan 01, 1970, 12:00 AM
588 Last modified: Jan 01, 1970, 12:00 AM
589 Permissions:
590 android.permission.VIBRATE
591 android.permission.WRITE_EXTERNAL_STORAGE
592 android.permission.SYSTEM_ALERT_WINDOW
593 android.permission.INTERNET
594 android.permission.ACCESS_NETWORK_STATE
595 com.android.vending.BILLING
596 android.permission.WAKE_LOCK
597 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
598 com.google.android.c2dm.permission.RECEIVE
599 android.permission.READ_EXTERNAL_STORAGE
600
601 App name: Amazon
602 Package name: com.amazon.mShop.android.shopping
603 First installed: Jan 01, 1970, 12:00 AM
604 Last modified: Jan 01, 1970, 12:00 AM
605 Permissions:
606 com.amazon.mShop.android.shopping.permission.C2D_MESSAGE
607 com.android.launcher.permission.INSTALL_SHORTCUT
608 com.android.launcher.permission.READ_SETTINGS
609 amazon.permission.COLLECT_METRICS
610 android.permission.READ_CONTACTS
611 android.permission.WRITE_EXTERNAL_STORAGE
612 android.permission.READ_PHONE_STATE
613 android.permission.READ_EXTERNAL_STORAGE
614 android.permission.INTERNET
615 android.permission.ACCESS_NETWORK_STATE
616 android.permission.ACCESS_WIFI_STATE
617 android.permission.VIBRATE
618 android.permission.ACCESS_FINE_LOCATION
619 android.permission.WAKE_LOCK
620 com.google.android.c2dm.permission.RECEIVE
621 android.permission.FOREGROUND_SERVICE
622 com.amazon.dcp.metrics.permission.METRICS_PERMISSION
623 com.amazon.dcp.config.permission.DYN_CONFIG_VALUES_UPDATED
624 android.permission.GET_ACCOUNTS

625 android.permission.USE_CREDENTIALS
626 android.permission.MANAGE_ACCOUNTS
627 android.permission.AUTHENTICATE_ACCOUNTS
628 com.amazon.identity.auth.device.perm.AUTH_SDK
629 com.amazon.identity.permission.GENERIC_IPC
630 com.amazon.dcp.sso.permission.USE_DEVICE_CREDENTIALS
631 com.amazon.dcp.sso.permission.account.changed
632 com.amazon.dcp.sso.permission.MANAGE_COR_PFM
633 com.amazon.dcp.sso.permission.CUSTOMER_ATTRIBUTE_SERVICE
634 com.amazon.identity.permission.CAN_CALL_MAP_INFORMATION_PROVIDER
635 com.amazon.dcp.sso.permission.AmazonAccountPropertyService.property.changed
636 com.amazon.identity.permission.CALL_AMAZON_DEVICE_INFORMATION_PROVIDER
637 com.amazon.appmanager.preload.permission.READ_PRELOAD_DEVICE_INFO_PROVIDER
638 android.permission.CHANGE_WIFI_STATE
639 com.sec.android.provider.badge.permission.READ
640 com.sec.android.provider.badge.permission.WRITE
641 com.htc.launcher.permission.READ_SETTINGS
642 com.htc.launcher.permission.UPDATE_SHORTCUT
643 com.amazon.whas.API_COMMUNICATION
644 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
645 android.permission.RECORD_AUDIO
646 android.permission.USE_FINGERPRINT
647 android.permission.CAMERA
648 android.permission.BLUETOOTH
649 android.permission.BLUETOOTH_ADMIN
650 android.permission.ACCESS_COARSE_LOCATION
651 android.permission.MODIFY_AUDIO_SETTINGS
652 com.google.android.gms.permission.ACTIVITY_RECOGNITION
653 android.permission.ACTIVITY_RECOGNITION
654 android.permission.FLASHLIGHT
655 android.permission.ACCESS_BACKGROUND_LOCATION
656 com.amazon.whisperjoin.deviceprovisioningservice.WhiteListPolicyUpdate.Permission
657 com.amazon.whisperjoin.deviceprovisioningservice.ArcusUpdate.Permission
658 com.amazon.whisperjoin.deviceprovisioningservice.FFSServiceAction.permission
659
660 App name: Among Us
661 Package name: com.innersloth.spacemafia
662 First installed: Jan 01, 1970, 12:00 AM
663 Last modified: Jan 01, 1970, 12:00 AM
664 Permissions:
665 android.permission.CHANGE_WIFI_MULTICAST_STATE
666 android.permission.INTERNET
667 android.permission.ACCESS_NETWORK_STATE
668 android.permission.WAKE_LOCK
669 com.android.vending.BILLING
670
671 App name: Cash App
672 Package name: com.squareup.cash
673 First installed: Jan 01, 1970, 12:00 AM
674 Last modified: Jan 01, 1970, 12:00 AM
675 Permissions:
676 android.permission.ACCESS_COARSE_LOCATION
677 android.permission.ACCESS_FINE_LOCATION
678 android.permission.ACCESS_NETWORK_STATE
679 android.permission.ACCESS_WIFI_STATE
680 android.permission.BLUETOOTH
681 android.permission.BLUETOOTH_ADMIN
682 android.permission.CAMERA
683 android.permission.INTERNET
684 android.permission.READ_CONTACTS
685 android.permission.READ_EXTERNAL_STORAGE
686 android.permission.READ_PHONE_STATE
687 android.permission.READ_PROFILE
688 android.permission.RECEIVE_BOOT_COMPLETED
689 android.permission.USE_FINGERPRINT
690 android.permission.VIBRATE
691 android.permission.GET_ACCOUNTS
692 android.permission.USE_BIOMETRIC
693 com.google.android.providers.gsf.permission.READ_GSERVICES
694 android.permission.WAKE_LOCK
695 com.google.android.c2dm.permission.RECEIVE
696 android.permission.NFC
697 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
698 android.permission.WRITE_EXTERNAL_STORAGE
699
700 App name: Facebook
701 Package name: com.facebook.katana
702 First installed: Jan 01, 1970, 12:00 AM

703 Last modified: Jan 01, 1970, 12:00 AM
704 Permissions:
705 com.android.vending.BILLING
706 android.permission.BLUETOOTH
707 android.permission.BLUETOOTH_ADMIN
708 android.permission.WRITE_SETTINGS
709 android.permission.CALL_PHONE
710 android.permission.ACCESS_COARSE_LOCATION
711 android.permission.WAKE_LOCK
712 android.permission.VIBRATE
713 android.permission.READ_CONTACTS
714 android.permission.WRITE_CONTACTS
715 android.permission.GET_ACCOUNTS
716 android.permission.MANAGE_ACCOUNTS
717 android.permission.AUTHENTICATE_ACCOUNTS
718 android.permission.READ_SYNC_SETTINGS
719 android.permission.WRITE_SYNC_SETTINGS
720 android.permission.ACCESS_FINE_LOCATION
721 android.permission.ACCESS_NETWORK_STATE
722 android.permission.BROADCAST_STICKY
723 com.facebook.katana.provider.ACCESS
724 com.facebook.orca.provider.ACCESS
725 com.facebook.mlite.provider.ACCESS
726 com.facebook.pages.app.provider.ACCESS
727 com.facebook.appmanager.UNPROTECTED_API_ACCESS
728 android.permission.DOWNLOAD_WITHOUT_NOTIFICATION
729 android.permission.NFC
730 android.permission.CAMERA
731 android.permission.RECORD_AUDIO
732 android.permission.WRITE_EXTERNAL_STORAGE
733 com.facebook.permission.prod.FB_APP_COMMUNICATION
734 android.permission.READ_PHONE_STATE
735 android.permission.READ_CALENDAR
736 android.permission.WRITE_CALENDAR
737 android.permission.MODIFY_AUDIO_SETTINGS
738 android.permission.READ_PROFILE
739 android.permission.CHANGE_NETWORK_STATE
740 android.permission.CHANGE_WIFI_STATE
741 android.permission.SYSTEM_ALERT_WINDOW
742 com.google.android.providers.gsf.permission.READ_GSERVICES
743 android.permission.RECEIVE_BOOT_COMPLETED
744 android.permission.GET_TASKS
745 android.permission.USE_BIOMETRIC
746 android.permission.USE_FINGERPRINT
747 android.permission.FOREGROUND_SERVICE
748 android.permission.INTERNET
749 com.google.android.c2dm.permission.RECEIVE
750 android.permission.READ_EXTERNAL_STORAGE
751 android.permission.REQUEST_INSTALL_PACKAGES
752 android.permission.ACCESS_BACKGROUND_LOCATION
753 com.facebook.katana.permission.CROSS_PROCESS_BROADCAST_MANAGER
754 android.permission.BATTERY_STATS
755 android.permission.ACCESS_WIFI_STATE
756 com.android.launcher.permission.INSTALL_SHORTCUT
757 com.facebook.receiver.permission.ACCESS
758 com.sec.android.provider.badge.permission.READ
759 com.sec.android.provider.badge.permission.WRITE
760 com.htc.launcher.permission.READ_SETTINGS
761 com.htc.launcher.permission.UPDATE_SHORTCUT
762 com.sonyericsson.home.permission.BROADCAST_BADGE
763 com.facebook.katana.permission.RECEIVE_ADM_MESSAGE
764 com.amazon.device.messaging.permission.RECEIVE
765 com.nokia.pushnotifications.permission.RECEIVE
766 com.facebook.katana.permission.CREATE_SHORTCUT
767
768 App name: Gmail
769 Package name: com.google.android.gm
770 First installed: Jan 01, 1970, 12:00 AM
771 Last modified: Jan 01, 1970, 12:00 AM
772 Permissions:
773 android.permission.AUTHENTICATE_ACCOUNTS
774 android.permission.ACCESS_NETWORK_STATE
775 android.permission.GET_ACCOUNTS
776 android.permission.MANAGE_ACCOUNTS
777 android.permission.INTERNET
778 android.permission.READ_CONTACTS
779 android.permission.WRITE_CONTACTS
780 android.permission.READ_CALENDAR

781 android.permission.WRITE_CALENDAR
782 android.permission.READ_SYNC_SETTINGS
783 android.permission.READ_SYNC_STATS
784 android.permission.RECEIVE_BOOT_COMPLETED
785 android.permission.SUBSCRIBED_FEEDS_READ
786 android.permission.SUBSCRIBED_FEEDS_WRITE
787 android.permission.USE_CREDENTIALS
788 android.permission.VIBRATE
789 android.permission.WAKE_LOCK
790 android.permission.WRITE_SYNC_SETTINGS
791 android.permission.WRITE_EXTERNAL_STORAGE
792 com.google.android.gm.permission.READ_GMAIL
793 com.google.android.gm.permission.WRITE_GMAIL
794 com.google.android.googleapps.permission.GOOGLE_AUTH
795 com.google.android.googleapps.permission.GOOGLE_AUTH.mail
796 com.google.android.providers.gsf.permission.READ_GSERVICES
797 com.google.android.gm.permission.AUTO_SEND
798 com.google.android.voicesearch.AUDIO_FILE_ACCESS
799 android.permission.DOWNLOAD_WITHOUT_NOTIFICATION
800 android.permission.NFC
801 com.google.android.gm.email.permission.READ_ATTACHMENT
802 com.google.android.email.permission.READ_ATTACHMENT
803 com.google.android.gm.email.permission.ACCESS_PROVIDER
804 com.google.android.email.permission.ACCESS_PROVIDER
805 android.permission.READ_PROFILE
806 android.permission.READ_EXTERNAL_STORAGE
807
808 App name: Google Maps
809 Package name: com.google.android.apps.maps
810 First installed: Jan 01, 1970, 12:00 AM
811 Last modified: Jan 01, 1970, 12:00 AM
812 Permissions:
813 android.permission.INTERNET
814 com.google.android.providers.gsf.permission.READ_GSERVICES
815 android.permission.WRITE_EXTERNAL_STORAGE
816 android.permission.ACCESS_COARSE_LOCATION
817 android.permission.ACCESS_FINE_LOCATION
818 com.google.android.gms.permission.ACTIVITY_RECOGNITION
819 android.permission.GET_ACCOUNTS
820 android.permission.MANAGE_ACCOUNTS
821 android.permission.USE_CREDENTIALS
822 android.permission.DISABLE_KEYGUARD
823 android.permission.ACCESS_WIFI_STATE
824 android.permission.ACCESS_NETWORK_STATE
825 android.permission.CHANGE_WIFI_STATE
826 com.google.android.c2dm.permission.RECEIVE
827 com.google.android.apps.maps.permission.C2D_MESSAGE
828 android.permission.VIBRATE
829 android.permission.NFC
830 android.permission.READ_CONTACTS
831 com.google.android.apps.maps.permission.PREFETCH
832 android.permission.WAKE_LOCK
833 android.permission.READ_PHONE_STATE
834 android.permission.RECEIVE_BOOT_COMPLETED
835 android.permission.BLUETOOTH
836 android.permission.BLUETOOTH_ADMIN
837 android.permission.CALL_PHONE
838 android.permission.BROADCAST_STICKY
839 android.permission.READ_EXTERNAL_STORAGE
840
841 App name: Instagram
842 Package name: com.instagram.android
843 First installed: Jan 01, 1970, 12:00 AM
844 Last modified: Jan 01, 1970, 12:00 AM
845 Permissions:
846 android.permission.INTERNET
847 android.permission.ACCESS_NETWORK_STATE
848 android.permission.WAKE_LOCK
849 android.permission.GET_ACCOUNTS
850 android.permission.USE_CREDENTIALS
851 android.permission.RECEIVE_BOOT_COMPLETED
852 android.permission.VIBRATE
853 android.permission.FOREGROUND_SERVICE
854 android.permission.USE_FULL_SCREEN_INTENT
855 com.google.android.c2dm.permission.RECEIVE
856 android.permission.CAMERA
857 android.permission.READ_CONTACTS
858 android.permission.READ_PROFILE

859 android.permission.ACCESS_FINE_LOCATION
860 android.permission.RECORD_AUDIO
861 android.permission.MODIFY_AUDIO_SETTINGS
862 android.permission.WRITE_EXTERNAL_STORAGE
863 android.permission.ACCESS_MEDIA_LOCATION
864 android.permission.READ_PHONE_STATE
865 com.android.launcher.permission.INSTALL_SHORTCUT
866 com.android.launcher.permission.UNINSTALL_SHORTCUT
867 com.instagram.direct.permission.PROTECTED_DEEPLINKING
868 com.instagram.direct.permission.DIRECT_APP_THREAD_STORE_SERVICE
869 com.htc.launcher.permission.READ_SETTINGS
870 com.htc.launcher.permission.UPDATE_SHORTCUT
871 com.huawei.android.launcher.permission.CHANGE_BADGE
872 com.sonyericsson.home.permission.BROADCAST_BADGE
873 android.permission.USE_BIOMETRIC
874 android.permission.USE_FINGERPRINT
875 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
876 .permission.RECEIVE_ADM_MESSAGE
877 com.amazon.device.messaging.permission.RECEIVE
878
879 App name: Lyft
880 Package name: me.lyft.android
881 First installed: Jan 01, 1970, 12:00 AM
882 Last modified: Jan 01, 1970, 12:00 AM
883 Permissions:
884 android.permission.ACCESS_COARSE_LOCATION
885 android.permission.ACCESS_FINE_LOCATION
886 android.permission.ACCESS_NETWORK_STATE
887 android.permission.CALL_PHONE
888 android.permission.CAMERA
889 android.permission.INTERNET
890 android.permission.READ_CONTACTS
891 android.permission.READ_EXTERNAL_STORAGE
892 android.permission.READ_PHONE_STATE
893 android.permission.VIBRATE
894 android.permission.WRITE_EXTERNAL_STORAGE
895 android.permission.READ_CALENDAR
896 android.permission.BLUETOOTH
897 android.permission.BLUETOOTH_ADMIN
898 com.google.android.providers.gsf.permission.READ_GSERVICES
899 android.permission.SYSTEM_ALERT_WINDOW
900 com.google.android.c2dm.permission.RECEIVE
901 android.permission.GET_ACCOUNTS
902 android.permission.WAKE_LOCK
903 android.permission.ACCESS_WIFI_STATE
904 android.permission.CHANGE_WIFI_STATE
905 android.permission.CHANGE_WIFI_MULTICAST_STATE
906 me.lyft.android.permission.C2D_MESSAGE
907 android.permission.USE_BIOMETRIC
908 android.permission.USE_FINGERPRINT
909 android.permission.RECEIVE_BOOT_COMPLETED
910 android.permission.FOREGROUND_SERVICE
911
912 App name: Facebook Messenger
913 Package name: com.facebook.orca
914 First installed: Jan 01, 1970, 12:00 AM
915 Last modified: Jan 01, 1970, 12:00 AM
916 Permissions:
917 com.android.vending.BILLING
918 com.facebook.katana.provider.ACCESS
919 android.permission.INTERNET
920 android.permission.GET_ACCOUNTS
921 android.permission.ACCESS_NETWORK_STATE
922 android.permission.WAKE_LOCK
923 android.permission.VIBRATE
924 android.permission.READ_CONTACTS
925 android.permission.READ_PROFILE
926 android.permission.WRITE_EXTERNAL_STORAGE
927 android.permission.READ_PHONE_STATE
928 android.permission.ACCESS_WIFI_STATE
929 android.permission.RECEIVE_BOOT_COMPLETED
930 android.permission.READ_SYNC_SETTINGS
931 android.permission.RECEIVE_SMS
932 android.permission.RECEIVE_MMS
933 android.permission.READ_SMS
934 android.permission.WRITE_SMS
935 android.permission.SEND_SMS
936 android.permission.CHANGE_NETWORK_STATE

937 android.permission.RECORD_AUDIO
938 android.permission.SYSTEM_ALERT_WINDOW
939 android.permission.CALL_PHONE
940 android.permission.MODIFY_AUDIO_SETTINGS
941 android.permission.DOWNLOAD_WITHOUT_NOTIFICATION
942 android.permission.AUTHENTICATE_ACCOUNTS
943 android.permission.MANAGE_ACCOUNTS
944 android.permission.WRITE_CONTACTS
945 android.permission.WRITE_SYNC_SETTINGS
946 android.permission.BLUETOOTH
947 android.permission.NFC
948 com.facebook.orca.provider.ACCESS
949 com.facebook.permission.prod.FB_APP_COMMUNICATION
950 com.facebook.mlite.provider.ACCESS
951 android.permission.CAMERA
952 android.permission.ACCESS_FINE_LOCATION
953 android.permission.ACCESS_COARSE_LOCATION
954 com.google.android.providers.gsf.permission.READ_GSERVICES
955 com.huawei.android.launcher.permission.CHANGE_BADGE
956 android.permission.USE_FULL_SCREEN_INTENT
957 android.permission.READ_CALENDAR
958 android.permission.FOREGROUND_SERVICE
959 android.permission.USE_BIOMETRIC
960 android.permission.USE_FINGERPRINT
961 com.google.android.c2dm.permission.RECEIVE
962 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
963 android.permission.READ_EXTERNAL_STORAGE
964 com.facebook.orca.permission.CROSS_PROCESS_BROADCAST_MANAGER
965 com.android.launcher.permission.INSTALL_SHORTCUT
966 com.facebook.receiver.permission.ACCESS
967 com.sec.android.provider.badge.permission.READ
968 com.sec.android.provider.badge.permission.WRITE
969 com.htc.launcher.permission.READ_SETTINGS
970 com.htc.launcher.permission.UPDATE_SHORTCUT
971 com.sonyericsson.home.permission.BROADCAST_BADGE
972 android.permission.BLUETOOTH_ADMIN
973 android.permission.CHANGE_WIFI_STATE
974 com.facebook.orca.permission.RECEIVE_ADM_MESSAGE
975 com.amazon.device.messaging.permission.RECEIVE
976 com.nokia.pushnotifications.permission.RECEIVE
977 com.facebook.orca.permission.CREATE_SHORTCUT
978 android.permission.MANAGE_OWN_CALLS
979
980 App name: Netflix
981 Package name: com.netflix.mediaclient
982 First installed: Jan 01, 1970, 12:00 AM
983 Last modified: Jan 01, 1970, 12:00 AM
984 Permissions:
985 com.android.vending.BILLING
986 com.netflix.mediaclient.permission.C2D_MESSAGE
987 com.netflix.partner.activation.permission.CHANNEL_ID
988 android.permission.ACCESS_NETWORK_STATE
989 android.permission.ACCESS_WIFI_STATE
990 android.permission.BLUETOOTH
991 android.permission.CHANGE_WIFI_MULTICAST_STATE
992 android.permission.INTERNET
993 android.permission.READ_PHONE_STATE
994 android.permission.WAKE_LOCK
995 android.permission.RECORD_AUDIO
996 android.permission.MODIFY_AUDIO_SETTINGS
997 android.permission.WRITE_EXTERNAL_STORAGE
998 com.google.android.gms.permission.ACTIVITY_RECOGNITION
999 com.amazon.permission.SET_FLAG_NOSOFTKEYS
1000 com.google.android.c2dm.permission.RECEIVE
1001 android.permission.READ_EXTERNAL_STORAGE
1002 android.permission.ACCESS_MEDIA_LOCATION
1003 android.permission.ACTIVITY_RECOGNITION
1004
1005 App name: Pokemon Go
1006 Package name: com.nianticlabs.pokemongo
1007 First installed: Jan 01, 1970, 12:00 AM
1008 Last modified: Jan 01, 1970, 12:00 AM
1009 Permissions:
1010 com.android.vending.BILLING
1011 android.permission.VIBRATE
1012 android.permission.BLUETOOTH
1013 android.permission.BLUETOOTH_ADMIN
1014 android.permission.ACCESS_FINE_LOCATION

1015 android.permission.FOREGROUND_SERVICE
1016 android.permission.WRITE_EXTERNAL_STORAGE
1017 android.permission.INTERNET
1018 android.permission.GET_ACCOUNTS
1019 android.permission.USE_CREDENTIALS
1020 android.permission.ACCESS_NETWORK_STATE
1021 android.permission.WAKE_LOCK
1022 android.permission.ACCESS_WIFI_STATE
1023 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
1024 android.permission.CAMERA
1025 android.permission.READ_EXTERNAL_STORAGE
1026 android.permission.ACCESS_COARSE_LOCATION
1027 com.google.android.gms.permission.ACTIVITY_RECOGNITION
1028 android.permission.RECEIVE_BOOT_COMPLETED
1029 com.nianticlabs.pokemongo.bgcore.util.contentProviderPermission
1030 com.google.android.c2dm.permission.RECEIVE
1031 android.permission.ACCESS_BACKGROUND_LOCATION
1032 android.permission.ACCESS_MEDIA_LOCATION
1033 android.permission.ACTIVITY_RECOGNITION
1034
1035 App name: Seamless
1036 Package name: com.seamlessweb.android.view
1037 First installed: Jan 01, 1970, 12:00 AM
1038 Last modified: Jan 01, 1970, 12:00 AM
1039 Permissions:
1040 android.permission.INTERNET
1041 android.permission.ACCESS_COARSE_LOCATION
1042 android.permission.ACCESS_FINE_LOCATION
1043 android.permission.ACCESS_NETWORK_STATE
1044 android.permission.CAMERA
1045 android.permission.VIBRATE
1046 android.permission.READ_PHONE_STATE
1047 android.permission.READ_EXTERNAL_STORAGE
1048 android.permission.NFC
1049 android.permission.WAKE_LOCK
1050 android.permission.ACCESS_WIFI_STATE
1051 android.permission.CHANGE_WIFI_STATE
1052 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
1053 android.permission.RECEIVE_BOOT_COMPLETED
1054 android.permission.FOREGROUND_SERVICE
1055 com.google.android.c2dm.permission.RECEIVE
1056
1057 App name: Snapchat
1058 Package name: com.snapchat.android
1059 First installed: Jan 01, 1970, 12:00 AM
1060 Last modified: Jan 01, 1970, 12:00 AM
1061 Permissions:
1062 android.permission.WAKE_LOCK
1063 android.permission.CAMERA
1064 android.permission.RECORD_AUDIO
1065 android.permission.WRITE_EXTERNAL_STORAGE
1066 android.permission.FLASHLIGHT
1067 android.permission.READ_PHONE_STATE
1068 android.permission.READ_CONTACTS
1069 com.snapchat.android.permission.UPDATE_STICKER_INDEX
1070 android.permission.ACCESS_FINE_LOCATION
1071 android.permission.FOREGROUND_SERVICE
1072 android.permission.BLUETOOTH
1073 android.permission.MODIFY_AUDIO_SETTINGS
1074 android.permission.ACCESS_NETWORK_STATE
1075 android.permission.GET_ACCOUNTS
1076 android.permission.READ_PROFILE
1077 android.permission.VIBRATE
1078 android.permission.BLUETOOTH_ADMIN
1079 android.permission.READ_EXTERNAL_STORAGE
1080 android.permission.USE_FULL_SCREEN_INTENT
1081 android.permission.CHANGE_WIFI_STATE
1082 android.permission.ACCESS_WIFI_STATE
1083 android.permission.INTERNET
1084 android.permission.CHANGE_NETWORK_STATE
1085 android.permission.RECEIVE_BOOT_COMPLETED
1086 com.google.android.c2dm.permission.RECEIVE
1087 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
1088 com.snapchat.android.permission.C2D_MESSAGE
1089 com.sec.android.provider.badge.permission.READ
1090 com.sec.android.provider.badge.permission.WRITE
1091 com.htc.launcher.permission.READ_SETTINGS
1092 com.htc.launcher.permission.UPDATE_SHORTCUT

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1093 com.sonyericsson.home.permission.BROADCAST_BADGE
1094 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
1095 com.anddoes.launcher.permission.UPDATE_COUNT
1096 com.majeur.launcher.permission.UPDATE_BADGE
1097 com.huawei.android.launcher.permission.CHANGE_BADGE
1098 com.huawei.android.launcher.permission.READ_SETTINGS
1099 com.huawei.android.launcher.permission.WRITE_SETTINGS
1100 android.permission.READ_APP_BADGE
1101 com.oppo.launcher.permission.READ_SETTINGS
1102 com.oppo.launcher.permission.WRITE_SETTINGS
1103 me.everything.badger.permission.BADGE_COUNT_READ
1104 me.everything.badger.permission.BADGE_COUNT_WRITE
1105
1106 App name: Spotify
1107 Package name: com.spotify.music
1108 First installed: Jan 01, 1970, 12:00 AM
1109 Last modified: Jan 01, 1970, 12:00 AM
1110 Permissions:
1111 android.permission.INTERNET
1112 android.permission.ACCESS_NETWORK_STATE
1113 android.permission.RECEIVE_BOOT_COMPLETED
1114 android.permission.CHANGE_WIFI_MULTICAST_STATE
1115 android.permission.WAKE_LOCK
1116 android.permission.FOREGROUND_SERVICE
1117 com.android.providers.tv.permission.READ_EPG_DATA
1118 com.android.providers.tv.permission.WRITE_EPG_DATA
1119 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
1120 com.google.android.c2dm.permission.RECEIVE
1121
1122 App name: TikTok
1123 Package name: com.zhiliaooapp.musically
1124 First installed: Jan 01, 1970, 12:00 AM
1125 Last modified: Jan 01, 1970, 12:00 AM
1126 Permissions:
1127 android.permission.INTERNET
1128 android.permission.ACCESS_NETWORK_STATE
1129 android.permission.READ_EXTERNAL_STORAGE
1130 android.permission.WRITE_EXTERNAL_STORAGE
1131 android.permission.ACCESS_WIFI_STATE
1132 android.permission.CAMERA
1133 android.permission.RECORD_AUDIO
1134 android.permission.FLASHLIGHT
1135 android.permission.WAKE_LOCK
1136 android.permission.GET_TASKS
1137 android.permission.READ_CONTACTS
1138 android.permission.RECEIVE_BOOT_COMPLETED
1139 android.permission.VIBRATE
1140 com.meizu.c2dm.permission.RECEIVE
1141 com.zhiliaooapp.musically.permission.READ_ACCOUNT
1142 com.zhiliaooapp.musically.permission.WRITE_ACCOUNT
1143 com.android.launcher.permission.INSTALL_SHORTCUT
1144 com.android.launcher.permission.UNINSTALL_SHORTCUT
1145 com.android.launcher.permission.READ_SETTINGS
1146 android.permission.AUTHENTICATE_ACCOUNTS
1147 com.htc.launcher.permission.READ_SETTINGS
1148 com.lge.launcher.permission.READ_SETTINGS
1149 com.lge.launcher.permission.WRITE_SETTINGS
1150 com.huawei.launcher3.permission.READ_SETTINGS
1151 com.huawei.launcher3.permission.WRITE_SETTINGS
1152 com.huawei.launcher2.permission.READ_SETTINGS
1153 com.huawei.launcher2.permission.WRITE_SETTINGS
1154 com.ebproductions.android.launcher.permission.READ_SETTINGS
1155 com.ebproductions.android.launcher.permission.WRITE_SETTINGS
1156 com.oppo.launcher.permission.READ_SETTINGS
1157 com.oppo.launcher.permission.WRITE_SETTINGS
1158 com.huawei.android.launcher.permission.READ_SETTINGS
1159 com.huawei.android.launcher.permission.WRITE_SETTINGS
1160 dianxin.permission.ACCESS_LAUNCHER_DATA
1161 com.miui.mihome2.permission.READ_SETTINGS
1162 com.miui.mihome2.permission.WRITE_SETTINGS
1163 android.permission.FOREGROUND_SERVICE
1164 com.zhiliaooapp.musically.permission.wallpaperplugin
1165 com.zhiliaooapp.musically.permission.MIPUSH_RECEIVE
1166 com.zhiliaooapp.musically.push.permission.MESSAGE
1167 com.meizu.flyme.push.permission.RECEIVE
1168 android.permission.WRITE_SYNC_SETTINGS
1169 com.sec.android.provider.badge.permission.READ
1170 com.sec.android.provider.badge.permission.WRITE
```

```
1171 com.htc.launcher.permission.UPDATE_SHORTCUT
1172 com.sonyericsson.home.permission.BROADCAST_BADGE
1173 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
1174 com.majeur.launcher.permission.UPDATE_BADGE
1175 android.permission.MODIFY_AUDIO_SETTINGS
1176 com.android.vending.BILLING
1177 com.zhiliaapp.musically.miniapp.PROCESS_COMMUNICATION
1178 android.permission.REORDER_TASKS
1179 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
1180 com.google.android.c2dm.permission.RECEIVE
1181 com.zhiliaapp.musically.permission.RECEIVE_ADM_MESSAGE
1182 com.amazon.device.messaging.permission.RECEIVE
1183 com.huawei.android.launcher.permission.CHANGE_BADGE
1184 android.permission.READ_APP_BADGE
1185 me.everything.badger.permission.BADGE_COUNT_READ
1186 me.everything.badger.permission.BADGE_COUNT_WRITE
1187 android.permission.UPDATE_APP_BADGE
1188 com.vivo.notification.permission.BADGE_ICON
1189
1190 App name: Twitter
1191 Package name: com.twitter.android
1192 First installed: Jan 01, 1970, 12:00 AM
1193 Last modified: Jan 01, 1970, 12:00 AM
1194 Permissions:
1195 com.twitter.android.permission.RESTRICTED
1196 android.permission.MODIFY_AUDIO_SETTINGS
1197 android.permission.INTERNET
1198 android.permission.VIBRATE
1199 android.permission.READ_PROFILE
1200 android.permission.READ_CONTACTS
1201 android.permission.WAKE_LOCK
1202 android.permission.WRITE_EXTERNAL_STORAGE
1203 com.twitter.android.permission.READ_DATA
1204 com.google.android.providers.gsf.permission.READ_GSERVICES
1205 com.android.launcher.permission.INSTALL_SHORTCUT
1206 android.permission.READ_PHONE_STATE
1207 android.permission.CAMERA
1208 android.permission.RECORD_AUDIO
1209 android.permission.GET_ACCOUNTS
1210 android.permission.ACCESS_NETWORK_STATE
1211 android.permission.SYSTEM_ALERT_WINDOW
1212 android.permission.ACCESS_FINE_LOCATION
1213 android.permission.ACCESS_COARSE_LOCATION
1214 android.permission.AUTHENTICATE_ACCOUNTS
1215 android.permission.MANAGE_ACCOUNTS
1216 android.permission.USE_CREDENTIALS
1217 android.permission.READ_SYNC_SETTINGS
1218 android.permission.WRITE_SYNC_SETTINGS
1219 com.huawei.android.launcher.permission.READ_SETTINGS
1220 com.huawei.android.launcher.permission.WRITE_SETTINGS
1221 com.huawei.android.launcher.permission.CHANGE_BADGE
1222 com.sonyericsson.home.permission.BROADCAST_BADGE
1223 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
1224 com.sec.android.provider.badge.permission.READ
1225 com.sec.android.provider.badge.permission.WRITE
1226 com.oppo.launcher.permission.READ_SETTINGS
1227 com.oppo.launcher.permission.WRITE_SETTINGS
1228 com.htc.launcher.permission.READ_SETTINGS
1229 com.htc.launcher.permission.UPDATE_SHORTCUT
1230 com.anddoes.launcher.permission.UPDATE_COUNT
1231 android.permission.ACCESS_WIFI_STATE
1232 com.google.android.c2dm.permission.RECEIVE
1233 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
1234 android.permission.FOREGROUND_SERVICE
1235 android.permission.RECEIVE_BOOT_COMPLETED
1236
1237 App name: Uber
1238 Package name: com.ubercab
1239 First installed: Jan 01, 1970, 12:00 AM
1240 Last modified: Jan 01, 1970, 12:00 AM
1241 Permissions:
1242 com.google.android.c2dm.permission.RECEIVE
1243 com.google.android.providers.gsf.permission.READ_GSERVICES
1244 com.ubercab.permission.C2D_MESSAGE
1245 android.permission.USE_BIOMETRIC
1246 android.permission.USE_FINGERPRINT
1247 android.permission.WAKE_LOCK
1248 android.permission.ACCESS_NETWORK_STATE
```

```
1249 android.permission.RECEIVE_BOOT_COMPLETED
1250 android.permission.FOREGROUND_SERVICE
1251 android.permission.INTERNET
1252 android.permission.READ_PHONE_STATE
1253 android.permission.SYSTEM_ALERT_WINDOW
1254 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
1255 android.permission.CAMERA
1256 android.permission.WRITE_EXTERNAL_STORAGE
1257 android.permission.READ_EXTERNAL_STORAGE
1258 android.permission.MODIFY_AUDIO_SETTINGS
1259 android.permission.ACCESS_WIFI_STATE
1260 android.permission.BLUETOOTH
1261 android.permission.BLUETOOTH_ADMIN
1262 android.permission.ACCESS_FINE_LOCATION
1263 android.permission.VIBRATE
1264 android.permission.READ_SMS
1265 android.permission.RECEIVE_SMS
1266 android.permission.ACCESS_COARSE_LOCATION
1267 android.permission.CALL_PHONE
1268 android.permission.MANAGE_ACCOUNTS
1269 android.permission.READ_CONTACTS
1270 android.permission.SEND_SMS
1271 android.permission.USE_CREDENTIALS
1272 android.permission.RECORD_AUDIO
1273 android.permission.GET_ACCOUNTS
1274 android.permission.CHANGE_NETWORK_STATE
1275
1276 App name: Weather Channel
1277 Package name: com.weather.Weather
1278 First installed: Jan 01, 1970, 12:00 AM
1279 Last modified: Jan 01, 1970, 12:00 AM
1280 Permissions:
1281 com.weather.Weather.permission.RECEIVE_ADM_MESSAGE
1282 android.permission.INTERNET
1283 android.permission.ACCESS_COARSE_LOCATION
1284 android.permission.ACCESS_FINE_LOCATION
1285 android.permission.ACCESS_NETWORK_STATE
1286 android.permission.ACCESS_WIFI_STATE
1287 android.permission.RECEIVE_BOOT_COMPLETED
1288 android.permission.VIBRATE
1289 com.google.android.c2dm.permission.RECEIVE
1290 android.permission.USE_CREDENTIALS
1291 android.permission.WAKE_LOCK
1292 com.google.android.providers.gsf.permission.READ_GSERVICES
1293 com.amazon.device.messaging.permission.RECEIVE
1294 com.android.vending.BILLING
1295 com.google.android.finsky.permission.BIND_GET_INSTALL_REFERRER_SERVICE
1296
1297 App name: WhatsApp
1298 Package name: com.whatsapp
1299 First installed: Jan 01, 1970, 12:00 AM
1300 Last modified: Jan 01, 1970, 12:00 AM
1301 Permissions:
1302 android.permission.READ_PHONE_STATE
1303 android.permission.RECEIVE_SMS
1304 android.permission.VIBRATE
1305 android.permission.USE_FINGERPRINT
1306 android.permission.CAMERA
1307 android.permission.USE_BIOMETRIC
1308 android.permission.ACCESS_COARSE_LOCATION
1309 android.permission.ACCESS_FINE_LOCATION
1310 android.permission.ACCESS_NETWORK_STATE
1311 android.permission.ACCESS_WIFI_STATE
1312 android.permission.AUTHENTICATE_ACCOUNTS
1313 android.permission.BLUETOOTH
1314 android.permission.BROADCAST_STICKY
1315 android.permission.CHANGE_NETWORK_STATE
1316 android.permission.CHANGE_WIFI_STATE
1317 android.permission.GET_ACCOUNTS
1318 android.permission.GET_TASKS
1319 android.permission.INSTALL_SHORTCUT
1320 android.permission.INTERNET
1321 android.permission.MANAGE_ACCOUNTS
1322 android.permission.MANAGE_OWN_CALLS
1323 android.permission.MODIFY_AUDIO_SETTINGS
1324 android.permission.NFC
1325 android.permission.READ_CONTACTS
1326 android.permission.READ_PROFILE
```

```
1327 android.permission.READ_SYNC_SETTINGS
1328 android.permission.READ_SYNC_STATS
1329 android.permission.RECEIVE_BOOT_COMPLETED
1330 android.permission.RECORD_AUDIO
1331 android.permission.SEND_SMS
1332 android.permission.USE_CREDENTIALS
1333 android.permission.WAKE_LOCK
1334 android.permission.WRITE_CONTACTS
1335 android.permission.WRITE_EXTERNAL_STORAGE
1336 android.permission.WRITE_SYNC_SETTINGS
1337 android.permission.REQUEST_INSTALL_PACKAGES
1338 android.permission.FOREGROUND_SERVICE
1339 android.permission.USE_FULL_SCREEN_INTENT
1340 com.android.launcher.permission.INSTALL_SHORTCUT
1341 com.android.launcher.permission.UNINSTALL_SHORTCUT
1342 com.google.android.c2dm.permission.RECEIVE
1343 com.google.android.providers.gsf.permission.READ_GSERVICES
1344 com.sec.android.provider.badge.permission.READ
1345 com.sec.android.provider.badge.permission.WRITE
1346 com.htc.launcher.permission.READ_SETTINGS
1347 com.htc.launcher.permission.UPDATE_SHORTCUT
1348 com.sonyericsson.home.permission.BROADCAST_BADGE
1349 com.sonymobile.home.permission.PROVIDER_INSERT_BADGE
1350 com.huawei.android.launcher.permission.READ_SETTINGS
1351 com.huawei.android.launcher.permission.WRITE_SETTINGS
1352 com.huawei.android.launcher.permission.CHANGE_BADGE
1353 com.whatsapp.permission.BROADCAST
1354 com.whatsapp.permission.MAPS_RECEIVE
1355 com.whatsapp.permission.REGISTRATION
1356 com.whatsapp.sticker.READ
1357 android.permission.READ_EXTERNAL_STORAGE
1358
1359 App name: YouTube
1360 Package name: com.google.android.youtube
1361 First installed: Jan 01, 1970, 12:00 AM
1362 Last modified: Jan 01, 1970, 12:00 AM
1363 Permissions:
1364 android.permission.INTERNET
1365 android.permission.ACCESS_NETWORK_STATE
1366 android.permission.ACCESS_WIFI_STATE
1367 android.permission.WRITE_EXTERNAL_STORAGE
1368 android.permission.RECEIVE_BOOT_COMPLETED
1369 android.permission.MANAGE_DOCUMENTS
1370 android.permission.GET_ACCOUNTS
1371 android.permission.MANAGE_ACCOUNTS
1372 android.permission.USE_CREDENTIALS
1373 com.google.android.providers.gsf.permission.READ_GSERVICES
1374 com.google.android.c2dm.permission.RECEIVE
1375 android.permission.WAKE_LOCK
1376 android.permission.NFC
1377 android.permission.CAMERA
1378 android.permission.VIBRATE
1379 com.google.android.gms.permission.AD_ID_NOTIFICATION
1380 com.google.android.youtube.permission.C2D_MESSAGE
1381 android.permission.GET_PACKAGE_SIZE
1382 android.permission.FOREGROUND_SERVICE
1383 android.permission.USE_FINGERPRINT
1384
1385
```

```
1 Dangerous
2 android.app.action.DEVICE_ADMIN_ENABLED
3 android.permission.ACCESS_BACKGROUND_LOCATION
4 android.permission.ACCESS_COARSE_LOCATION
5 android.permission.ACCESS_FINE_LOCATION
6 android.permission.ACCESS_MEDIA_LOCATION
7 android.permission.ACCESS_SUPERUSER
8 android.permission.ACTIVITY_RECOGNITION
9 android.permission.ADD_VOICEMAIL
10 android.permission.ANSWER_PHONE_CALLS
11 android.permission.BODY_SENSORS
12 android.permission.CALL_LOG
13 android.permission.CALL_PHONE
14 android.permission.CAMERA
15 android.permission.GET_ACCOUNTS
16 android.permission.PROCESS_OUTGOING_CALLS
17 android.permission.READ_CALENDAR
18 android.permission.READ_CALL_LOG
19 android.permission.READ_CONTACTS
20 android.permission.READ_EXTERNAL_STORAGE
21 android.permission.READ_PHONE_NUMBERS
22 android.permission.READ_PHONE_STATE
23 android.permission.READ_SMS
24 android.permission.RECEIVE_MMS
25 android.permission.READ_EXTERNAL_STORAGE
26 android.permission.RECEIVE_SMS
27 android.permission.RECEIVE_WAP_PUSH
28 android.permission.RECORD_AUDIO
29 android.permission.SEND_SMS
30 android.permission.USE_SIP
31 android.permission.WRITE_CALENDAR
32 android.permission.WRITE_CALL_LOG
33 android.permission.WRITE_CONTACTS
34 android.permission.WRITE_EXTERNAL_STORAGE
35
36 Signature
37 android.permission.BATTERY_STATS
38 android.permission.BIND_ACCESSIBILITY_SERVICE
39 android.app.action.BIND_DEVICE_ADMIN
40 android.permission.BIND_NOTIFICATION_LISTENER_SERVICE
41 android.permission.CAPTURE_AUDIO_OUTPUT
42 android.permission.CHANGE_CONFIGURATION
43 android.permission.INTERACT_ACROSS_USERS
44 android.permission.INTERACT_ACROSS_USERS_FULL
45 android.permission.MANAGE_DEVICE_ADMINS
46 android.permission.MANAGE_DOCUMENTS
47 android.permission.MANAGE_USERS
48 android.permission.MODIFY_PHONE_STATE
49 android.permission.OVERRIDE_WIFI_CONFIG
50 android.permission.PACKAGE_USAGE_STATS
51 android.permission.READ_LOGS
52 android.permission.READ_PRIVILEGED_PHONE_STATE
53 android.permission.REBOOT
54 android.permission.REQUEST_INSTALL_PACKAGES
55 android.permission.STATUS_BAR
56 android.permission.SYSTEM_ALERT_WINDOW
57 android.permission.TETHER_PRIVILEGED
58 android.permission.UPDATE_APP_OPS_STATS
59 android.permission.WRITE_SECURE_SETTINGS
60 android.permission.WRITE_SETTINGS
61 com.android.launcher.permission.WRITE_SETTINGS
62
63 Removed
64 android.permission.AUTHENTICATE_ACCOUNTS
65 android.permission.FLASHLIGHT
66 android.permission.MANAGE_ACCOUNTS
67 android.permission.READ_HISTORY_BOOKMARKS
68 android.permission.READ_PROFILE
69 android.permission.READ_USER_DICTIONARY
70 android.permission.SUBSCRIBED_FEEDS_READ
71 android.permission.SUBSCRIBED_FEEDS_WRITE
72 android.permission.USE_CREDENTIALS
73 android.permission.WRITE_SMS
74 android.permission.WRITE_USER_DICTIONARY
75 com.android.browser.permission.READ_HISTORY_BOOKMARKS
76 com.android.browser.permission.WRITE_HISTORY_BOOKMARKS
```

```

1 Very Dangerous
2 dangerous android.permission.WRITE_EXTERNAL_STORAGE 0.85
3 dangerous android.permission.ACCESS_FINE_LOCATION 0.75
4 dangerous android.permission.READ_EXTERNAL_STORAGE 0.75
5 dangerous android.permission.ACCESS_COARSE_LOCATION 0.7
6 dangerous android.permission.READ_CONTACTS 0.7
7 dangerous android.permission.READ_PHONE_STATE 0.7
8
9 Moderately Dangerous
10 dangerous android.permission.RECORD_AUDIO 0.55
11 dangerous android.permission.CAMERA 0.5
12 dangerous android.permission.READ_SMS 0.5
13 dangerous android.permission.RECEIVE_SMS 0.5
14 dangerous android.permission.GET_ACCOUNTS 0.45
15 dangerous android.permission.CALL_PHONE 0.35
16 dangerous android.permission.ACCESS_BACKGROUND_LOCATION 0.3
17
18 Less Dangerous
19 dangerous android.permission.ACCESS_MEDIA_LOCATION 0.25
20 dangerous android.permission.READ_CALENDAR 0.25
21 dangerous android.permission.SEND_SMS 0.25
22 dangerous android.permission.RECEIVE_MMS 0.1
23 dangerous android.permission.WRITE_CONTACTS 0.05
24
25 Only Spyware Dangerous
26 dangerous android.permission.READ_CALL_LOG 0.5
27 dangerous android.permission.PROCESS_OUTGOING_CALLS 0.45
28 dangerous android.permission.ACCESS_SUPERUSER 0.15
29 dangerous android.permission.READ_PHONE_NUMBERS 0.1
30 dangerous android.permission.WRITE_CALL_LOG 0.1
31 dangerous android.app.action.DEVICE_ADMIN_ENABLED 0.05
32
33 Only Popular Dangerous
34 dangerous android.permission.ACTIVITY_RECOGNITION 0.15
35 dangerous android.permission.WRITE_CALENDAR 0.1
36
37 Shared Signature
38 signature android.permission.SYSTEM_ALERT_WINDOW 0.45 0.25
39 signature android.permission.WRITE_SETTINGS 0.3 0.05
40 signature android.permission.REQUEST_INSTALL_PACKAGES 0.1 0.1
41
42 Only Spyware Signature
43 signature android.permission.PACKAGE_USAGE_STATS 0.2
44 signature android.permission.READ_PRIVILEGED_PHONE_STATE 0.15
45 signature android.permission.INTERACT_ACROSS_USERS 0.1
46 signature android.permission.INTERACT_ACROSS_USERS_FULL 0.1
47 signature android.permission.READ_LOGS 0.1
48 signature android.permission.WRITE_SECURE_SETTINGS 0.1
49 signature android.app.action.BIND_DEVICE_ADMIN 0.05
50 signature android.permission.BIND_ACCESSIBILITY_SERVICE 0.05
51 signature android.permission.BIND_NOTIFICATION_LISTENER_SERVICE 0.05
52 signature android.permission.CAPTURE_AUDIO_OUTPUT 0.05
53 signature android.permission.CHANGE_CONFIGURATION 0.05
54 signature android.permission.MANAGE_DEVICE_ADMINS 0.05
55 signature android.permission.MANAGE_USERS 0.05
56 signature android.permission.MODIFY_PHONE_STATE 0.05
57 signature android.permission.OVERRIDE_WIFI_CONFIG 0.05
58 signature android.permission.REBOOT 0.05
59 signature android.permission.STATUS_BAR 0.05
60 signature android.permission.TETHER_PRIVILEGED 0.05
61 signature android.permission.UPDATE_APP_OPS_STATS 0.05
62 signature com.android.launcher.permission.WRITE_SETTINGS 0.05
63
64 Only Popular Signature
65 signature android.permission.BATTERY_STATS 0.05
66 signature android.permission.MANAGE_DOCUMENTS 0.05
67
68 Removed
69 removed android.permission.USE_CREDENTIALS 0.15 0.5
70 removed android.permission.READ_PROFILE 0.15 0.4
71 removed android.permission.FLASHLIGHT 0.1 0.15
72 removed android.permission.WRITE_SMS 0.1 0.05
73 removed android.permission.MANAGE_ACCOUNTS 0.05 0.45
74 removed android.permission.AUTHENTICATE_ACCOUNTS 0.05 0.35
75 removed com.android.browser.permission.READ_HISTORY_BOOKMARKS 0.25
76 removed com.android.browser.permission.WRITE_HISTORY_BOOKMARKS 0.1
77 removed android.permission.READ_HISTORY_BOOKMARKS 0.05
78 removed android.permission.READ_USER_DICTIONARY 0.05

```

```
79 removed android.permission.WRITE_USER_DICTIONARY    0.05
80 removed android.permission.SUBSCRIBED_FEEDS_READ    0.05
81 removed android.permission.SUBSCRIBED_FEEDS_WRITE    0.05
```

1 android.permission.WRITE_EXTERNAL_STORAGE, Allows an application to write to external storage.
 2 android.permission.ACCESS_FINE_LOCATION, Allows an app to access precise location.
 3 android.permission.READ_EXTERNAL_STORAGE, Allows an application to read from external storage.
 4 android.permission.ACCESS_COARSE_LOCATION, Allows an app to access approximate location.
 5 android.permission.READ_CONTACTS, Allows an application to read the user's contacts data.
 6 android.permission.READ_PHONE_STATE, Allows read only access to phone state, including the current cellular network information, the status of any ongoing calls, and a list of any PhoneAccounts registered on the device.
 7 android.permission.RECORD_AUDIO, Allows an application to record audio.
 8 android.permission.CAMERA, Required to be able to access the camera device.
 9 android.permission.READ_SMS, Allows an application to read SMS messages.
 10 android.permission.RECEIVE_SMS, Allows an application to receive SMS messages.
 11 android.permission.GET_ACCOUNTS, Allows access to the list of accounts in the Accounts Service.
 12 android.permission.CALL_PHONE, Allows an application to initiate a phone call without going through the Dialer user interface for the user to confirm the call.
 13 android.permission.ACCESS_BACKGROUND_LOCATION, Allows an app to access location in the background.
 14 android.permission.ACCESS_MEDIA_LOCATION, Allows an application to access any geographic locations persisted in the user's shared collection.
 15 android.permission.READ_CALENDAR, Allows an application to read the user's calendar data.
 16 android.permission.SEND_SMS, Allows an application to send SMS messages.
 17 android.permission.RECEIVE_MMS, Allows an application to monitor incoming MMS messages.
 18 android.permission.WRITE_CONTACTS, Allows an application to write the user's contacts data.
 19 android.permission.READ_CALL_LOG, Allows an application to read the user's call log.
 20 android.permission.PROCESS_OUTGOING_CALLS, Allows an application to see the number being dialed during an outgoing call with the option to redirect the call to a different number or abort the call altogether.
 21 android.permission.ACCESS_SUPERUSER, Allows root access.
 22 android.permission.READ_PHONE_NUMBERS, Allows read access to the device's phone number(s).
 23 android.permission.WRITE_CALL_LOG, Allows an application to write (but not read) the user's call log data.
 24 android.app.action.DEVICE_ADMIN_ENABLED, This permission is required for functions that give the user rich control over devices, including remote wiping and device management.
 25 android.permission.ACTIVITY_RECOGNITION, Allows an application to recognize physical activity.
 26 android.permission.WRITE_CALENDAR, Allows an application to write the user's calendar data.
 27 android.permission.SYSTEM_ALERT_WINDOW, Allows an app to create windows shown on top of all other apps.
 28 android.permission.WRITE_SETTINGS, Allows an application to read or write the system settings.
 29 android.permission.REQUEST_INSTALL_PACKAGES, Allows an application to request installing packages.
 30 android.permission.PACKAGE_USAGE_STATS, Allows an application to collect component usage statistics
 31 android.permission.READ_PRIVILEGED_PHONE_STATE, Allows read access to privileged phone state.
 32 android.permission.INTERACT_ACROSS_USERS, Allows an application to call APIs that allow it to do interactions across the users on the device, using singleton services and user-targeted broadcasts. This permission is not available to third party applications.
 33 android.permission.INTERACT_ACROSS_USERS_FULL, Fuller form of INTERACT_ACROSS_USERS that removes restrictions on where broadcasts can be sent and allows other types of interactions.
 34 android.permission.READ_LOGS, Allows an application to read the low-level system log files.
 35 android.permission.WRITE_SECURE_SETTINGS, Allows an application to update application operation statistics. Not for use by third party apps.
 36 android.app.action.BIND_DEVICE_ADMIN, Must be required by device administration receiver, to ensure that only the system can interact with it.
 37 android.permission.BIND_ACCESSIBILITY_SERVICE, Must be required by an AccessibilityService, to ensure that only the system can bind to it.
 38 android.permission.BIND_NOTIFICATION_LISTENER_SERVICE, Must be required by an NotificationListenerService, to ensure that only the system can bind to it.
 39 android.permission.CAPTURE_AUDIO_OUTPUT, Allows an application to capture audio output.
 40 android.permission.CHANGE_CONFIGURATION, Allows an application to modify the current configuration, such as locale.
 41 android.permission.MANAGE_DEVICE_ADMINS, Required to add or remove another application as a device admin. Not for use by third-party applications.
 42 android.permission.MANAGE_USERS, Allows an application to call APIs that allow it to query and manage users on the device. This permission is not available to third party applications.
 43 android.permission.MODIFY_PHONE_STATE, Allows modification of the telephony state - power on, mmui, etc.
 44 android.permission.OVERRIDE_WIFI_CONFIG, Allows an application to modify any wifi configuration, even if created by another application. Once reconfigured the original creator cannot make any further modifications. Not for use by third-party applications.
 45 android.permission.REBOOT, Required to be able to reboot the device.
 46 android.permission.STATUS_BAR, Allows an application to open, close, or disable the status bar and its icons.
 47 android.permission.TETHER_PRIVILEGED, Allows applications to change tether state and run tether carrier provisioning. Not for use by third-party applications.
 48 android.permission.UPDATE_APP_OPS_STATS, Allows an application to update application operation statistics. Not for use by third party apps.
 49 com.android.launcher.permission.WRITE_SETTINGS, Allows the app to change settings and shortcuts in Home.
 50 android.permission.BATTERY_STATS, Allows an application to collect battery statistics.
 51 android.permission.MANAGE_DOCUMENTS, Allows an application to manage access to documents, usually as part of a document picker.
 52 android.permission.USE_CREDENTIALS, Deprecated in API level 23.
 53 android.permission.READ_PROFILE, Deprecated in API level 23.
 54 android.permission.FLASHLIGHT, Deprecated in API level 24.
 55 android.permission.WRITE_SMS, Deprecated in API level 23.
 56 android.permission.MANAGE_ACCOUNTS, Deprecated in API level 23.
 57 android.permission.AUTHENTICATE_ACCOUNTS, Deprecated in API level 23.
 58 com.android.browser.permission.READ_HISTORY_BOOKMARKS, Deprecated in API level 23.

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59 com.android.browser.permission.WRITE_HISTORY_BOOKMARKS,Deprecated in API level 23.  
60 android.permission.READ_HISTORY_BOOKMARKS,Deprecated in API level 23.  
61 android.permission.READ_USER_DICTIONARY,Deprecated in API level 23.  
62 android.permission.WRITE_USER_DICTIONARY,Deprecated in API level 23.  
63 android.permission.SUBSCRIBED_FEEDS_READ,Removed.  
64 android.permission.SUBSCRIBED_FEEDS_WRITE,Removed.
```

```
1 package apprisk;
2
3 import java.util.ArrayList;
4
5 public class App {
6     private final String appName;
7     private final String packageName;
8     private final String firstInstall;
9     private final String lastMod;
10    private final ArrayList<String> perms;
11
12    public App(String aN, String pN, String fI, String lM, ArrayList<String> p) {
13        this.appName = aN;
14        this.packageName = pN;
15        this.firstInstall = fI;
16        this.lastMod = lM;
17        this.perms = p;
18    }
19
20    public String getAppName() {
21        return appName;
22    }
23
24    public String getPackageName() {
25        return packageName;
26    }
27
28    public String getFirstInstall() {
29        return firstInstall;
30    }
31
32    public String getLastMod() {
33        return lastMod;
34    }
35
36    public ArrayList<String> getPerms() {
37        return perms;
38    }
39 }
40 }
```

```

1 package apprisk;
2
3 import java.io.BufferedReader;
4 import java.io.File;
5 import java.io.FileReader;
6 import java.io.IOException;
7 import java.util.*;
8
9 public class AppRisk {
10     File permWeightFile = new File("src/res/permissionWeights.txt");
11     File whitelistTxt = new File("src/res/whitelist.txt");
12     File permDescriptions = new File("src/res/permissionDescriptions.txt");
13     File appDataFile = new File("src/res/appdata.txt"); // Comment for testing
14 //    File appDataFile = new File("src/res/max_appdata.txt"); // Uncomment for testing
15 //    File appDataFile = new File("src/res/seed_appdata.txt"); // Uncomment for testing
16     Map<String, Permissions> permWeightMap = new HashMap<>();
17     ArrayList<App> appList = new ArrayList<>();
18     Map<String, String> whitelist = new HashMap<>();
19     Map<String, String> permDesc = new HashMap<>();
20     String[] listData;
21
22     public AppRisk() {
23         try {
24             getWeights(permWeightMap);
25             appList = readAppData();
26             whitelist = readWhitelist(whitelistTxt);
27             permDesc = readPermissionDescriptions(permDescriptions);
28         } catch (IOException e) {
29             e.printStackTrace();
30         }
31     }
32     // Reads permissions and usage rates from file and adds to map
33     private void getWeights(Map<String, Permissions> map) throws IOException {
34         BufferedReader br = new BufferedReader(new FileReader(permWeightFile));
35         String line;
36         String[] result;
37
38         // Very Dangerous
39         if ((br.readLine()).equals("Very Dangerous")) {
40             while (!(line = br.readLine()).equals("")) {
41                 result = line.split("\t");
42                 double weight = 3 + Double.parseDouble(result[2]);
43                 // Adds "permName: type, weight"
44                 map.put(result[1], new Permissions(result[0], weight));
45             }
46         }
47         // Moderately Dangerous
48         if ((br.readLine()).equals("Moderately Dangerous")) {
49             while (!(line = br.readLine()).equals("")) {
50                 result = line.split("\t");
51                 double weight = 2 + Double.parseDouble(result[2]);
52                 map.put(result[1], new Permissions(result[0], weight));
53             }
54         }
55         // Less Dangerous
56         if ((br.readLine()).equals("Less Dangerous")) {
57             while (!(line = br.readLine()).equals("")) {
58                 result = line.split("\t");
59                 double weight = 1 + Double.parseDouble(result[2]);
60                 map.put(result[1], new Permissions(result[0], weight));
61             }
62         }
63         // Only Spyware Dangerous
64         if ((br.readLine()).equals("Only Spyware Dangerous")) {
65             while (!(line = br.readLine()).equals("")) {
66                 result = line.split("\t");
67                 double weight = 1.5 + Double.parseDouble(result[2]);
68                 map.put(result[1], new Permissions(result[0], weight));
69             }
70         }
71         // Only Popular Dangerous
72         if ((br.readLine()).equals("Only Popular Dangerous")) {
73             while (!(line = br.readLine()).equals("")) {
74                 result = line.split("\t");
75                 double weight = 1;
76                 map.put(result[1], new Permissions(result[0], weight));
77             }
78         }
}

```

```

79     // Shared Signature
80     if ((br.readLine()).equals("Shared Signature")) {
81         while (!(line = br.readLine()).equals("")) {
82             result = line.split("\t");
83             double weight = 1 + Double.parseDouble(result[2]);
84             map.put(result[1], new Permissions(result[0], weight));
85         }
86     }
87     // Only Spyware Signature
88     if ((br.readLine()).equals("Only Spyware Signature")) {
89         while (!(line = br.readLine()).equals("")) {
90             result = line.split("\t");
91             double weight = 3 + Double.parseDouble(result[2]);
92             map.put(result[1], new Permissions(result[0], weight));
93         }
94     }
95     // Only Popular Signature
96     if ((br.readLine()).equals("Only Popular Signature")) {
97         while (!(line = br.readLine()).equals("")) {
98             result = line.split("\t");
99             double weight = 1;
100            map.put(result[1], new Permissions(result[0], weight));
101        }
102    }
103    // Removed
104    if ((br.readLine()).equals("Removed")) {
105        while ((line = br.readLine()) != null) {
106            result = line.split("\t");
107            double weight = 0.3;
108            map.put(result[1], new Permissions(result[0], weight));
109        }
110    }
111
112    br.close();
113}
114 // Reads app data from file, adds names for list selection panel, and adds apps to list
115 // File must have two blank lines at end to work
116 private ArrayList<App> readAppData() throws IOException {
117     BufferedReader br = new BufferedReader(new FileReader(appDataFile));
118     String line;
119     String appName = null;
120     String packageName = null;
121     String firstInstall = null;
122     String lastMod = null;
123     ArrayList<String> perms;
124     ArrayList<App> apps = new ArrayList<>();
125
126     while ((line = br.readLine()) != null) {
127         perms = new ArrayList<>();
128         if (line.contains("App name:")) {
129             appName = (line.split(": "))[1];
130         }
131         if (line.contains("Package name:")) {
132             packageName = (line.split(": "))[1];
133         }
134         if (line.contains("First installed:")) {
135             firstInstall = (line.split(": "))[1];
136         }
137         if (line.contains("Last modified:")) {
138             lastMod = (line.split(": "))[1];
139         }
140         if (line.contains("Permissions:")) {
141             while (!(line = br.readLine()).equals("")) {
142                 perms.add(line);
143             }
144         }
145         if (line.equals("")) {
146             apps.add(new App(appName, packageName, firstInstall, lastMod, perms));
147         }
148     }
149
150     br.close();
151
152     listData = new String[apps.size()];
153     for (int i = 0; i < apps.size(); i++) {
154         listData[i] = apps.get(i).getAppName() + " (" + apps.get(i).getPackageName() + ")";
155     }
156

```

```

157     return apps;
158 }
159 // Calculates risk of selected list item using weight map
160 public String[] calculateRisk(String selectedApp) {
161     String packageName = null;
162     String firstInstall = null;
163     String lastMod = null;
164     int weightPermCount = 0;
165     int totalPermCount;
166     double risk = 0;
167     double ratio = 0;
168     List<String> permsList = new ArrayList<>();
169
170     for (App a : appList) {
171         if (a getAppName().equals(selectedApp)) {
172             packageName = a.getPackageName();
173             firstInstall = a.getFirstInstall();
174             lastMod = a.getLastMod();
175             totalPermCount = a.getPerms().size();
176             for (String s : a.getPerms()) {
177                 if (permWeightMap.containsKey(s)) {
178                     risk += permWeightMap.get(s).getWeight();
179                     permsList.add(permWeightMap.get(s).getType() + " " + s);
180                     weightPermCount += 1;
181                 }
182             }
183             ratio = (double)weightPermCount / totalPermCount;
184         }
185     }
186     if (ratio >= 0.4 && ratio < 1) {
187         risk *= 1 + ratio;
188     }
189     Collections.sort(permsList);
190
191     return new String[]{String.format("%.2f", risk), packageName, firstInstall, lastMod,
192                         String.join("\n", permsList)};
193 }
194 // Reads whitelist from file and adds to map
195 Map<String, String> readWhitelist(File wlTxt) throws IOException {
196     BufferedReader br = new BufferedReader(new FileReader(wlTxt));
197     String line;
198     String[] result;
199     Map<String, String> map = new HashMap<>();
200
201     while ((line = br.readLine()) != null) {
202         result = line.split(",");
203         map.put(result[0], result[1]);
204     }
205     br.close();
206
207     return map;
208 }
209 // Reads permission descriptions from file and adds to map
210 Map<String, String> readPermissionDescriptions(File permDescTxt) throws IOException {
211     BufferedReader br = new BufferedReader(new FileReader(permDescTxt));
212     String line;
213     String[] result;
214     Map<String, String> map = new HashMap<>();
215
216     while ((line = br.readLine()) != null) {
217         result = line.split(",");
218         map.put(result[0], result[1]);
219     }
220     br.close();
221
222     return map;
223 }
224
225 public String[] getListData() {
226     return listData;
227 }
228
229 public Map<String, String> getWhiteList() {
230     return whitelist;
231 }
232
233 public Map<String, String> getPermissionDescriptions() {
234     return permDesc;

```

```
235     }
236
237     public Map<String, Permissions> getPermWeightMap() {
238         return permWeightMap;
239     }
240 }
241
```

```
1 package apprisk;
2
3 public class Permissions {
4     String type;
5     double weight;
6
7     public Permissions(String t, double w) {
8         this.weight = w;
9         this.type = t;
10    }
11
12    public double getWeight() {
13        return weight;
14    }
15
16    public String getType() {
17        return type;
18    }
19 }
20
21
```

```

1 package apprisk;
2
3 import java.awt.*;
4 import java.util.Map;
5
6 import javax.swing.*;
7 import javax.swing.event.*;
8
9 @SuppressWarnings("serial")
10 public class GraphicInterface extends JPanel {
11     JTextArea listOutput;
12     JTextArea assessmentOutput;
13     JTextArea descriptionOutput;
14     JList<String> list;
15     ListSelectionModel listSelectionModel;
16     AppRisk appRisk;
17     Map<String, Permissions> permWeightMap;
18     Map<String, String> permDescMap;
19
20     /**
21      * Create the panel.
22      */
23     public GraphicInterface() {
24         super(new BorderLayout());
25
26         appRisk = new AppRisk();
27         permWeightMap = appRisk.getPermWeightMap();
28         permDescMap = appRisk.getPermissionDescriptions();
29         list = new JList<>(appRisk.getListData());
30
31         listSelectionModel = list.getSelectionModel();
32         listSelectionModel.setSelectionMode(ListSelectionModel.SINGLE_SELECTION);
33         listSelectionModel.addListSelectionListener(new ListSelectionHandler());
34         JScrollPane listPane = new JScrollPane(list);
35
36         //Build output area.
37         listOutput = new JTextArea(1, 10);
38         listOutput.setEditable(false);
39         listOutput.setMargin(new Insets(2, 5, 2, 5));
40         JScrollPane listOutputPane = new JScrollPane(listOutput,
41                                         ScrollPaneConstants.VERTICAL_SCROLLBAR_ALWAYS,
42                                         ScrollPaneConstants.HORIZONTAL_SCROLLBAR_AS_NEEDED);
43
44         assessmentOutput = new JTextArea(1, 10);
45         assessmentOutput.setEditable(false);
46         assessmentOutput.setLineWrap(true);
47         assessmentOutput.setWrapStyleWord(true);
48         assessmentOutput.setMargin(new Insets(2, 5, 2, 5));
49         assessmentOutput.setText("Click on an item to view its details.");
50         JScrollPane assessmentPane = new JScrollPane(assessmentOutput,
51                                         ScrollPaneConstants.VERTICAL_SCROLLBAR_ALWAYS,
52                                         ScrollPaneConstants.HORIZONTAL_SCROLLBAR_AS_NEEDED);
53
54         descriptionOutput = new JTextArea(1, 10);
55         descriptionOutput.setEditable(false);
56         descriptionOutput.setLineWrap(true);
57         descriptionOutput.setWrapStyleWord(true);
58         descriptionOutput.setMargin(new Insets(2, 5, 2, 5));
59         JScrollPane descriptionPane = new JScrollPane(descriptionOutput,
60                                         ScrollPaneConstants.VERTICAL_SCROLLBAR_ALWAYS,
61                                         ScrollPaneConstants.HORIZONTAL_SCROLLBAR_AS_NEEDED);
62
63         //Do the layout.
64         JSplitPane splitPaneLeft = new JSplitPane(JSplitPane.VERTICAL_SPLIT);
65         add(splitPaneLeft, BorderLayout.WEST);
66
67         JPanel topLeft = new JPanel();
68         topLeft.setLayout(new BoxLayout(topLeft, BoxLayout.LINE_AXIS));
69         JPanel listContainer = new JPanel(new GridLayout(1, 1));
70         listContainer.setBorder(BorderFactory.createTitledBorder("Installed Applications"));
71         listContainer.add(listPane);
72
73         topLeft.setBorder(BorderFactory.createEmptyBorder(5, 5, 0, 5));
74         topLeft.add(listContainer);
75
76         topLeft.setMinimumSize(new Dimension(100, 100));
77         topLeft.setPreferredSize(new Dimension(100, 300));
78         splitPaneLeft.add(topLeft);

```

```

79         JPanel bottomLeft = new JPanel(new BorderLayout());
80         bottomLeft.add(listOutputPane, BorderLayout.CENTER);
81         bottomLeft.setMinimumSize(new Dimension(400, 100));
82         bottomLeft.setPreferredSize(new Dimension(450, 300));
83         splitPaneLeft.add(bottomLeft);
84
85         JSplitPane splitPaneRight = new JSplitPane(JSplitPane.VERTICAL_SPLIT);
86
87         JPanel topRight = new JPanel();
88         topRight.setLayout(new BoxLayout(topRight, BoxLayout.LINE_AXIS));
89         JPanel assessmentContainer = new JPanel(new GridLayout(1, 1));
90         assessmentContainer.setBorder(BorderFactory.createTitledBorder("Assessment"));
91         assessmentContainer.add(assessmentPane);
92
93         topRight.setBorder(BorderFactory.createEmptyBorder(5, 5, 0, 5));
94         topRight.add(assessmentContainer);
95
96         topRight.setMinimumSize(new Dimension(100, 100));
97         topRight.setPreferredSize(new Dimension(400, 300));
98         splitPaneRight.add(topRight);
99
100        add(splitPaneRight, BorderLayout.CENTER);
101
102        JPanel bottomRight = new JPanel();
103        bottomRight.setLayout(new BoxLayout(bottomRight, BoxLayout.LINE_AXIS));
104        JPanel descriptionContainer = new JPanel(new GridLayout(1, 1));
105        descriptionContainer.setBorder(BorderFactory.createTitledBorder("Permission Details"));
106        descriptionContainer.add(descriptionPane);
107
108        bottomRight.setBorder(BorderFactory.createEmptyBorder(5, 5, 0, 5));
109        bottomRight.add(descriptionContainer);
110        bottomRight.setMinimumSize(new Dimension(100, 100));
111        bottomRight.setPreferredSize(new Dimension(500, 500));
112        splitPaneRight.add(bottomRight);
113    }
114
115
116    /**
117     * Create the GUI and show it. For thread safety,
118     * this method should be invoked from the
119     * event-dispatching thread.
120     */
121    private static void createAndShowGUI() {
122        //Create and set up the window.
123        JFrame frame = new JFrame("Your Risk Assessment");
124        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
125
126        //Create and set up the content pane.
127        GraphicInterface gui = new GraphicInterface();
128        gui.setOpaque(true);
129        frame.setContentPane(gui);
130
131        //Display the window.
132        frame.pack();
133        frame.setLocationRelativeTo(null);
134        frame.setVisible(true);
135    }
136
137    public static void main(String[] args) {
138        //Schedule a job for the event-dispatching thread:
139        //creating and showing this application's GUI.
140        javax.swing.SwingUtilities.invokeLater(GraphicInterface::createAndShowGUI);
141    }
142
143    // Listen for change in list selection
144    class ListSelectionHandler implements ListSelectionListener {
145        public void valueChanged(ListSelectionEvent e) {
146            boolean isAdjusting = e.getValueIsAdjusting();
147            if (!isAdjusting) {
148                getPermissionDetails(getListOutput());
149            }
150        }
151
152        // Changes display in top right and bottom left panels according to list selection in first panel
153        String getListOutput() {
154            Map<String, String> whitelist = appRisk.getWhiteList();
155
156            String appName = (list.getSelectedValue().split(" \\\\"))[0];
157            String[] data = appRisk.calculateRisk(appName);

```

```

157     double riskValue = Double.parseDouble(data[0]);
158     String justPerms = data[4].replace("dangerous ", "").replace("removed ", "")
159         .replace("signature ", "");
160
161     listOutput.setText("Risk = " + data[0] + "\n\n"
162         + "First installed: " + data[2] + "\n"
163         + "Last modified: " + data[3] + "\n\n"
164         + "Permissions:\n");
165     if (justPerms.equals("")) {
166         listOutput.append("No suspicious permissions");
167     } else {
168         listOutput.append(justPerms);
169     }
170     listOutput.setCaretPosition(0);
171
172     if (whitelist.containsKey(appName) && whitelist.get(appName).equals(data[1])) {
173         assessmentOutput.setText("This app has been whitelisted.\n\nPopular, well-known apps still have the"
174             + " potential to be dangerous. For example, if an attacker knows your device PIN or"
175             + " account password, they can access your private data collected by the app.");
176     } else if (riskValue == 0.0) {
177         assessmentOutput.setText("This app is very unlikely to be spyware.\n\nThis app does not use any
permissions"
178             + " associated with spyware.\n\nBe mindful that a future update could introduce permissions"
179             + " that could be dangerous in the wrong hands.");
180     } else if (riskValue > 0 && riskValue < 20) {
181         assessmentOutput.setText("This app is unlikely to be spyware.\n\nHowever, the risk value could have
been"
182             + " skewed downward if the total number of permissions used by this app is small.");
183     } else if (riskValue >= 20 && riskValue < 50) {
184         assessmentOutput.setText("This app is slightly likely to be spyware.\n\nMany popular apps fall within"
185             + " this range, in part because they use location services. Check the name and installation"
186             + " date to see if you recognize installing this app yourself, and familiarize yourself with"
187             + " its capabilities through its permissions.");
188     } else if (riskValue >= 50 && riskValue < 70) {
189         assessmentOutput.setText("This app is likely to be spyware.\n\nThe more suspicious permissions an app"
190             + " uses, the more capabilities the app has to invade your privacy.");
191     } else {
192         assessmentOutput.setText("This app is very likely to be spyware.\n\nThe maximum risk value is 129.05."
193             + " The closer an app's risk value is to 129.05, the more likely it is to be spyware"
194             + " due to the number of dangerous and spyware-linked permissions it uses.");
195     }
196     return data[4];
197 }
198 // Changes display in bottom right panel according to list selection in first panel
199 void getPermissionDetails(String str) {
200     String[] result1 = str.split("\n");
201
202     descriptionOutput.setText("");
203
204     if (!(result1[0].equals("")))) {
205         for (String s : result1) {
206             String[] result2 = s.split(" ");
207             descriptionOutput.append(result2[1] + "\n" + result2[0].toUpperCase() + "\n"
208                 + permDescMap.get(result2[1]) + "\n\n");
209         }
210     }
211     descriptionOutput.setCaretPosition(0);
212 }
213 }
214

```