

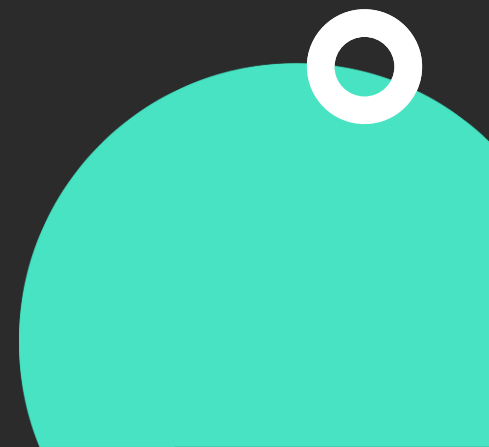


Controlling Data Consumption in Android Apps by Managing Network Usage



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Overview

- How to check a device's connection
- How to implement user-settings that allow the user to manage your app's data consumption
- How to respond to network changes and user's network settings
- How to perform network operations while respecting the device network connection and the user's network settings



Importance of Managing Network Usage

- It will **improve overall user-experience**
 - Users are less likely to disable your app's access to data
 - By giving the Users a fine grained control of your app's data-usage, the Users will have a personalized and seamless experience of your app
- **Cost optimization**
 - Managing network usage will avoid unexpected data costs on the user's side
- **Network efficiency**
 - Your app won't strain network resources and network performance will improve

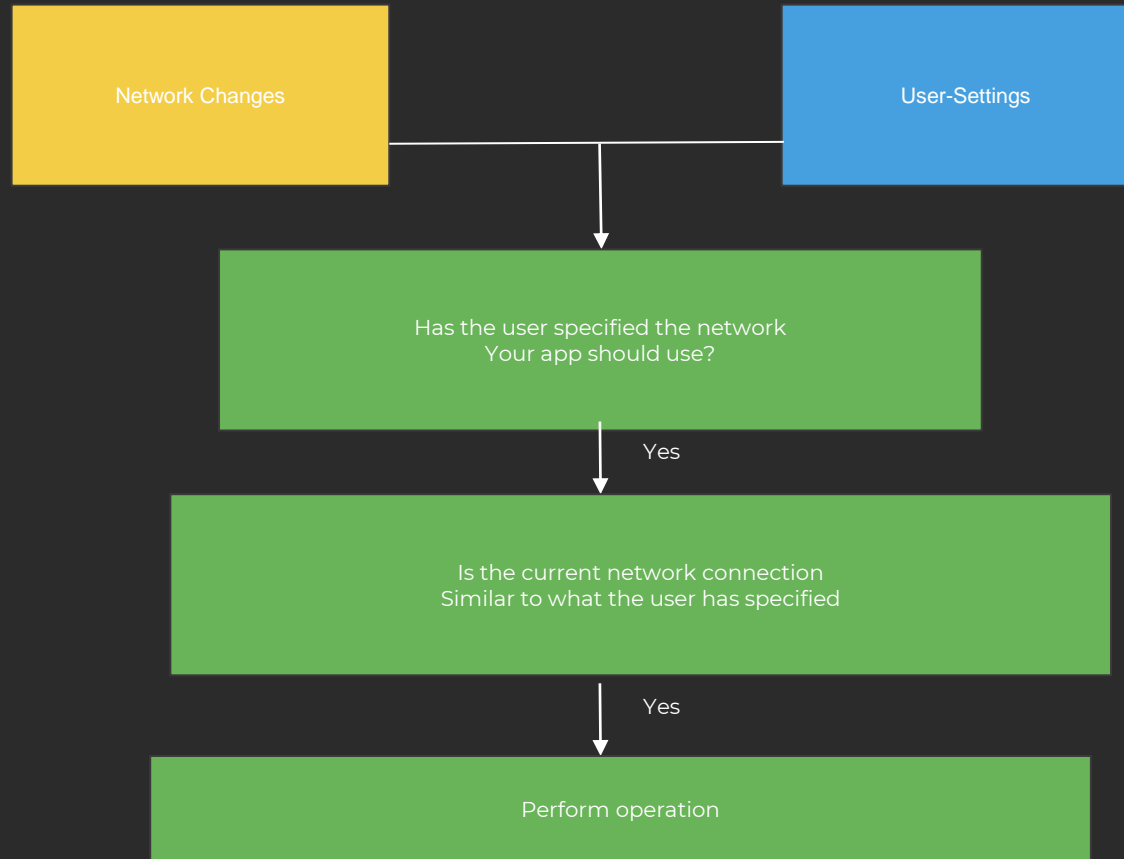


Aspects of Data Consumption Control

- There are three aspects of managing data usage
 - Providing the user with **settings** that allow them to control your app's data usage habits
 - Your app responding to **network changes**
 - Your app performing network operations based on the **current network connection** and the **user's current network setting**



Aspects of Data Consumption Control



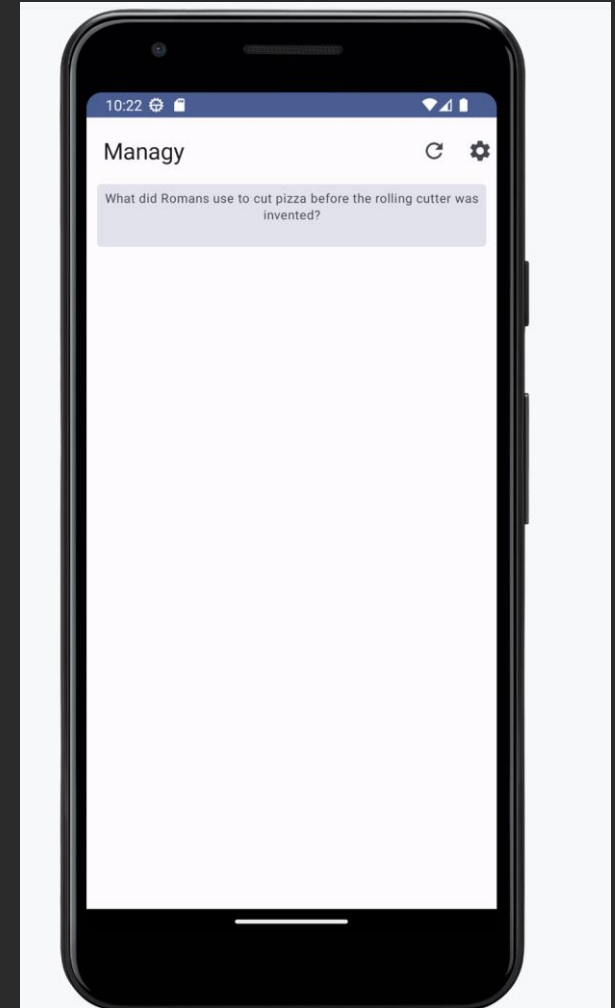
Aspects of Data Consumption Control

- Giving user's **explicit control** of your app's data consumption involves:
 - Enabling them to control how often your app carries out **data sync**
 - Enabling them to control when your app performs **uploads** and **downloads**
 - Enabling them to decide when your app can use data while they are **roaming**



Sample App

- Sample app Overview
 - It displays a joke
 - It has a settings screen that allows the user to specify which network to use when carrying out a network operation
 - The **goal** is to make the app respect the user's network settings and the current device connection



Project Repository

- Explore the Starter project
 - Clone the project repository
<https://github.com/droidcon-academy/android-cbc-manage-network-usage-study-materials.git>
 - Import the starter-project
 - Project Walk-through and explanation



Code Challenge

- Make the app be able to work with **VPN Connections**.
 - Currently, the app uses either **wifi** or **cellular network** to fetch joke, thus make it also be able to use a **VPN Connection**



Code Challenge Solution

[android-cbc-manage-network-usage-study-materials/code-challenge-solution at main · droidcon-academy/android-cbc-manage-network-usage-study-materials \(github.com\)](#)



Summary

- Learnt the importance of managing data usage in android applications
- Learnt the aspects of managing data consumption in android applications
- Learnt how to implement a Preference activity and how to detect network connection changes
- Learnt how to perform operations based on the network changes and the user's network preference



Thank you

- Thank you for taking this course
- Thank you for following until the end
- Please let me know if you have any feedback
- I hope to see you again

