**Project Idea**

**Overview**

My project idea consists of a mirroring application, where the user chooses what device he would like to mirror and be able to control that device on any other device that the user may have. This could be a personal computer being accessed and used with a mobile phone or vice versa. Users of this mirroring application will be able to have full control over other devices remotely from any location only if both devices are kept online and connected to the internet. This mirroring application will be a programmed software that will be available across all core operating systems.

**Motivation**

[**https://www.statista.com/statistics/1202887/australia-average-number-of-internet-connected-devices-per-household/**](https://www.statista.com/statistics/1202887/australia-average-number-of-internet-connected-devices-per-household/)

on average, there are 25 connected devices in a home in Australia according to many statistics. Imagine if a person had access to all 25 devices with just 1 device using them to their full potential all from one device remotely. Not only will these make his devices easily accessible, but will make managing, working or entertainment way simpler. A user may require a top spec personal computer for his intense gaming session he is in dire need of, but he is currently 1000km away from it having a holiday, they could simply boot up his secondhand laptop that he brought with him to watch Netflix on and boot up the mirroring software to play his favorite games as if he was on it.

**Description**

The software will be free to download for everybody, however profit will be made through advertising. This can be waived by purchasing the “premium” version of the software which eliminates all advertisements. User data will also be taken and stored and possibly sold to other companies if it is profitable. The software will include a account setup where users can log in with their emails or create a new account. Through their account they can track the devices they have recently mirrored to. They can also see which devices have this software logged in to so it can be easier for connections to be made. The software will automatically detect what device the user wants to remotely control and will have a passcode and or a security protocol to protect the users devices, however this is up to the user. The security protocol will need to be passed in all sensitive processes such as bank transfers or account log ins, for example a user logging in to his PayPal account remotely, this will trigger the software to either ask for a passcode or a 2 factor authentication from the user depending on the user choice of security protocol. The application will act as a main hub for all user devices, almost like a home screen for all his devices. The user can check the battery levels and Wi-Fi connection speeds on all devices to make sure they keep a remote connection. This software can also allow users to open cameras on laptops or webcams on their own devices as well, this can prove further useful as they can use this software as a surveillance system for their devices or the device location. Furthermore, this mirroring application can also allow the user to give permission or access to device technicians or troubleshooters to remotely access your devices and diagnose it remotely to see what the issue is before they quote you a price for a fix. The software performance will depend on the users internet speed and hardware he is using, if the users internet speeds are slow, he will have a hard time connecting and accessing devices, however in this day and age most home and public internet speeds are very good and will be excellent with this software. This mirroring application can also help users track their devices or even protect it from theft. Any unauthorized access on the device such as the users laptop has been opened and he has not authorized someone to open it, the software will alert the user of the activity immediately and the user can implement automatic procedures for when this kind of problem happens. Users of this application can also implement automatic connectivity of known devices or can choose to connect manually. The best feature of this software is its simplicity and effectiveness, this application will be programmed and designed to be easily understandable, simple buttons and simple tools for experienced and non-experienced users. This software will also include a “advanced” setting where experienced users can play around with different options and change the software options to their liking.

**Tools and Technologies**

the software will be programmed in C++, similar to TeamViewer remote software. The reason for this being a fast responsive code in terms of execution and compilation as well is its easy use. The average internet speed is needed for connectivity nothing too fast is needed. It will also be created using SDK (software development kit) as well as a text editor, compilers, linkers and debuggers. All of these will help draft, create and fix and mistakes in the code if needed and help anyone who is looking at the software source code understand the code and be able to give feedback. This software can be downloaded on any device with a operating system this includes phones and big computers, even smart tv’s can be connected

**Outcome**

If the project is successful, a new innovative way of managing devices will be spread across the globe. One device can now act as 20 other devices with a simple software download. People including big companies and business around the world will now be able to manage multiple electronic devices on a single device of their choice with ease. It would be widely popular, and all kinds of people would see this software as a need whether you’re a student/teacher or professional or even just a ordinary person who enjoys the features of this software. Management of multiple devices has never been easier and that’s with the added security and monitoring.