

Menoufia University

Faculty of Electronic Engineering

Computer Science and Engineering department



Pentor

Personal network inspector

Graduation Project proposal

Presented to

Dr. Sonia Hashish



Project Information

Subject	Details
Project Name	Pentor (Personal Network Inspector)
Developer	Fluteeks team (Flutter Geeks)
Description	Pentor is a network monitoring cross platform app to be developed to help personal network owners get more information about their networks and prevent unwanted and unauthorized accesses to the network
Supported Platforms	Android, Windows, Linux and IOS.
Programming language	Dart (Flutter framework)
Development Environment	Vs code, Android Studio and Visual Studio.
Crowd Target	The Public (people with minimum knowledge of computer networks)
Similar products/projects	<p>There are several solutions available on the web, here are a few samples</p> <ul style="list-style-type: none"> - PingTools Network Utilities - Network Monitor Mini - Network Connections - 3G Watchdog - Data Usage - Fing - Network Tools - Who Uses My WiFi Pro
Justification of the proposal	<p>The need for network inspection apps is increasing as the huge spread of Wi-Fi hacking tools which made it easier for intruders who have limited knowledge of computer networking to have access to personal networking and even blackmail network owner using data and information shared in the network.</p> <p>What network monitoring apps lack:</p> <ul style="list-style-type: none"> - Easy to use and understand app (as most apps usually directed to experts). - Support of multiple languages (Most apps only support English). - App that does not require root privileges. - All in one app (provides most needed features in one application). - Open-source app (trusted as source code is readable to all, usable by other developers in the community). - Free app available to everybody with no annoying ads.
Contributions, Innovation and Originality Aspects	<p>There are open-source computer network inspection plugins available on GitHub and Flutter package manager (Pub Dev) which Pentor will make use of them like</p> <ul style="list-style-type: none"> - network_info_plus - lan_scanner
Targeted Output	<p><i>The end-product will be android software, possible also having IOS, Windows and Linux Software as Flutter is Originally a Cross platform framework.</i></p> <p><i>The success of the project will be measured by whether the following abilities are fulfilled:</i></p> <ul style="list-style-type: none"> - <i>All Primary Technical Features are Implemented and fully functional.</i> - <i>Support of Both Arabic and English Languages.</i> - <i>Store user data to Firebase Cloud.</i>

Software Features

❖ Technical Features

Priority	Feature	Flutter plugin
Primary	Basic Info (Host Ip, Gateway, MAC, etc.)	network_info_plus
	Internet Speed Test	internet_speed_test
	Ping Test	dart_ping
	DNS Test	dns_client
	Connected Devices Info	lan_scanner
	Apps Data usage	data_usage
	Network Logger	network_logger
Secondary	Periodic scan network and notify user in case of intruders	flutter_local_notifications & lan_scanner
	Change WIFI Password	NULL
	Block Intruders using MAC filter	
	Setup Router DNS	
	Limit Router Speed	

❖ Non-Technical Features

- Multilanguage support (English and Arabic)
- Login and store data.
- Easy To use and understand.
- Does not require Root privileges.
- Free and Available for everyone without annoying ads.
- Open source.

Proposer Information

Fluteeks Team consists of:

1

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