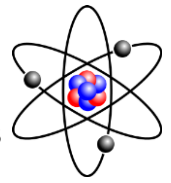


Name: _____



Per: _____



Bouwsma Rm323

Directions: Click on an app in the bank to see an example of the type of app you need to find in Google Play or the Apple App Store. Shop for the best app you can find, but your app **must be free**. You must be prepared to **defend** why your app is the best of its type for your usage, and better than other apps you and your friends looked at. Fill out the **Fun Apps Feedback Sheet** and take it home, then demonstrate the app to your parents, and have them sign the sheet. Click [here](#) to go to the Fun App Feedback Sheet. **The text and pictures that follow are from the developers themselves.**

Adv Info Tech
9007610: 1.08,
3.08, 3.09, 6.01,
6.04, 6.08, 7.02,
7.03, 8.01, 8.02,
8.03, 8.04, 9.01,
9.02

- | | | |
|-----------------------------------|---|------------------------------------|
| 1. Flashlight | 11. Altimeter | 21. QR Code Reader |
| 2. Compass | 12. Level | 22. Music |
| 3. Hearing aid | 13. Walkie Talkie | 23. Remote Control |
| 4. Voice recorder | 14. Wifi | 24. Pedometer |
| 5. Navigation | 15. Sleep Analyzer | 25. Clock |
| 6. Tracker | 16. Weather | 26. Chronometer |
| 7. Group Chat | 17. Gauss Meter | 27. Timer |
| 8. Calculator | 18. Light Meter | 28. Python |
| 9. Decimeter | 19. Function Generator | 29. Camera |
| 10. Heart Rate | 20. Roadside Assistance | |

1. Flashlight app.

a. Example Icon Torch:

Simple on/off button with no adds and no settings. Just tap it on and off.

The most simple LED flashlight!

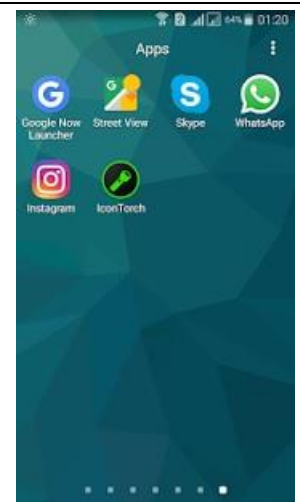
Features:

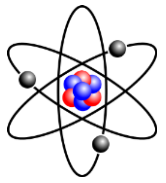
- There is no interface;
- No advertising;
- No settings;
- Is not a widget;
- Free;
- Not a great size;
- Bright.

Description:

This flashlight from the interface only has an icon. Place the label flashlight in a convenient place for you. It can be a desktop, quick launch bar, the bottom navigation bar, or in the notification bar (with the help of third-party software), and more ... To activate the flashlight, press the shortcut. To turn off - press again.

In no flashlight settings. In order to have these settings, my app "Flashlight on the power button" <https://play.google.com/store/apps/details?id=ru.irk.ang.balsan.powertorch> free. In which it will be possible to adjust the vibration on / off and auto shut off. And also other interesting features.



**WARNING!**

This NOT WIDGET , the icon will not change its state (color, shape, etc.), Depending on whether the LED is lit or not.

2. Compass app.**a. Example Compass Steel by Simply Werx:****FEATURES:**

- Ad-free digital compass app.
- Choose from multiple color themes.
- Choose between 2 heading modes - True heading (based on True north) and Magnetic heading (based on Magnetic north).
- Sun direction indicator.
- Moon direction indicator.
- Set and save a target direction.
- Tilt-compensated and self-calibrates as you use.
- High contrast design improves readability.

PERMISSIONS:

- Requires access to location coordinates to calculate True heading.

**3. Hearing Aid****a. Example: Super Ear by Liberation Medical**

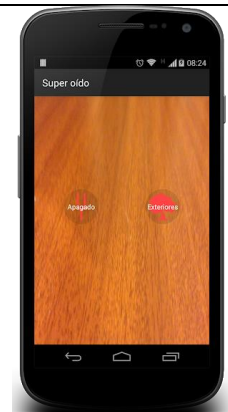
Super Ear allows you to better hear the meeting or if you have hearing troubles and do not have your hearing support to hand. Just plug in your headsets and start listening better.

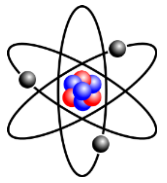
Can you hear a lot more with this simple app!.

NOTE: HEADPHONES REQUIRED

Includes:

- + Simple user interface.
- + User notifications.
- + Indoors amplifier.
- + Automatically shuts down when removes the headphones.
- + Works in background.

**4. Voice Recorder****a. Example Voice recorder by Quality Apps**

**Voice recorder****Voice recorder - Audio recorder**

Best recorder for sound recording with high quality
Voice recorder application is totally free. It is simple and easy to use. You can reliably record your meetings, personal notes, speeches, lectures, songs. There is no time limits. This application can record most of your sound and voice. You can record a business meeting, a lecture, an interview. This app is a best choice. Other names which you can call it: voice recorder, audio recorder, sound recorder.

**Features:**

1. record voice with high quality
2. simple user interface, easy to use.
3. Supported operations in this Version
 - Recording with high quality.
 - Format file: mp3, ogg
 - Play, pause, stop audio file.
 - Send/Share your recording.
 - Delete your recording right from the app.
 - Save the recording file.
 - live audio spectrum analyzer
 - mp3 encoding with adjustable sample rate (8-44 kHz)
 - recording in background (even when display is off)
 - microphone gain calibration tool
 - save/pause/resume/cancel recording process control
 - easy to use recordings list
 - send/share a recording via email, sms, mms, facebook, whatsapp, dropbox, etc.
 - not support call recorder

5. Navigation**a. Example: GPS Navigation and Off Line Maps by Sygic****GPS Navigation & Maps Sygic** is the world's most installed offline GPS

navigation app with real-time traffic and free 3D offline maps. Sygic sat nav offers the most accurate real-time traffic information, police radar/speed camera warnings, head-up display, real view navigation and more smart features.

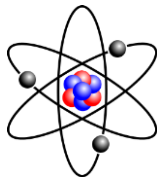
Whether you are traveling, commuting to work, or driving professionally GPS Navigation & Maps Sygic is your one map for everything.

NAVIGATE ANYWHERE, EVEN WITHOUT AN INTERNET CONNECTION



Name: _____

Per: _____



- **Offline maps of all countries in the world**, from TomTom and other providers
- **Free map updates** multiple times per year
- **Voice-guided GPS navigation** with precise directions and spoken street names
- **Millions of interesting Places (POI)**
- **Pedestrian GPS navigation** with walking directions and tourist attractions (POI)

ESCAPE THE TRAFFIC

- Avoid traffic jams with the most accurate **real-time traffic information** with data collected from more than 500 million users worldwide*

STAY SAFE

- **Advanced safety features** make driving in unfamiliar territories easier
- **Speed limit warnings** show you the current speed limit and the upcoming speed limit changes
- **Dynamic Lane Assistant** guides you into the correct lane
- **Head-up Display (HUD)** projects navigation onto the windshield of your car, making driving at night safer**
- **Dashcam** records the road ahead and automatically saves video in case of an accident**
- **Real View Navigation** is an augmented reality feature for even better and safer driving experience**
- **Real-time route sharing** lets you share your estimated time of arrival & current position on a map*

SAVE MONEY ALONG YOUR ROUTE

- **Park easily** with parking place suggestions and live info about prices and availability*
- Set your fuel type and **fill up for the best price** with live information about fuel prices*
- Avoid speeding tickets with **Speed camera warnings***
- **Save money on roaming charges** with offline maps

You can test drive all features available in the most popular World + Traffic license for the first 7 days after installation. After 7 days you can continue using the basic features or upgrade to the Lifetime Premium license.

Should you have any questions, please visit sygic.com/support. We are here for you 7 days a week.

If you like our app, please leave a review or spread the word at sygic.com/love. Thank you for your support.

*Please note that this feature requires an internet connection.

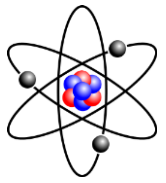
**This is an add-on feature, you can check out our latest offers at <https://eshop.sygic.com/en/>

Note: Sharing videos from Dashcam is forbidden by law in these countries: Austria, Belgium, Luxembourg, Switzerland, Slovakia, Spain.

Name: _____

Per: ____

Bouwsma Rm323



Advanced Information Technology

6. Tracker

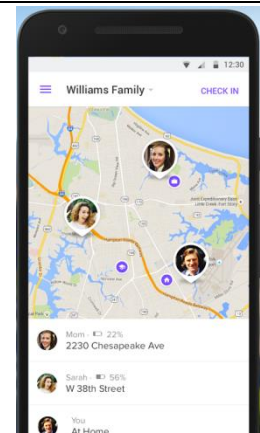
a. Example: Family locator by Life360

Give your Family Peace of Mind

Life360 runs on your mobile device to allow you to view your family members on a map, communicate with them, and receive alerts when your loved ones arrive at home, school or work.

Answer an age-old question: Where are you?

Our research shows that 6 to 8 text messages a day are dedicated to this question. Why not just open the Life360 map and answer it for yourself?



Check in for quick updates

You made it to the soccer game, the poker tournament, or Aunt Millie's house. Avoid the "Did you arrive okay?" phone call. Check in instead. (Have an emergency? There's a button for that, too.)

It's the 21st century: automate

Life360 Places lets you save your favorite locations so that friends and family will get automatic alerts when you come and go. Sure, it's a lazy way to check in, but it's effective!

Group your connections

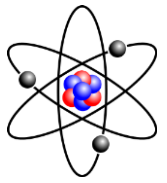
Keep family & friends separate with Circles. We default to the Family Circle, but you'll want to create more for the other people in your life. Aunts & Uncles, perhaps? Babysitters? Dog walkers? Marathon pace team? There are many scenarios where location sharing comes in handy.

Keep everything in its place

Messaging, location sharing, and check-ins are all Circle specific, so no one will see anything they don't need to.

You're the boss

When you create a Circle, you get to decide who is invited and who isn't. We know how important privacy is.



You're in control

Location sharing is up to you. Not everyone needs to know where you are at all times. Location sharing is specific to each Circle, and you can turn it off and on whenever you want. But we always let the Circle know - just so others can make sure you're still safe.

Easily chat with family members

Locations are standard, but what about locations AND messages? You can talk to family members while knowing where they are.

More customization than ever before

As Life360 has evolved, we've done everything we can to put you in the driver's seat. You control the invites, you control when you share your location, you control who goes in what Circle and you decide which Places you're going to save.

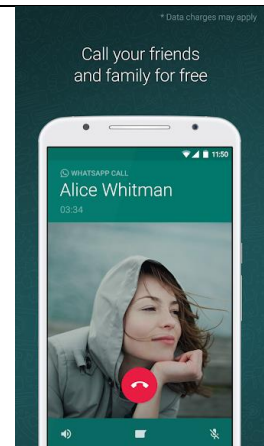
7. Group chat

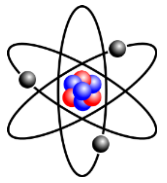
a. Example: Whatsapp by WhatsApp inc.

WhatsApp Messenger is a FREE messaging app available for Android and other smartphones. WhatsApp uses your phone's Internet connection (4G/3G/2G/EDGE or Wi-Fi, as available) to let you message and call friends and family. Switch from SMS to WhatsApp to send and receive messages, calls, photos, videos, documents, and Voice Messages.

WHY USE WHATSAPP:

- **NO FEES:** WhatsApp uses your phone's Internet connection (4G/3G/2G/EDGE or Wi-Fi, as available) to let you message and call friends and family, so you don't have to pay for every message or call.* There are no subscription fees to use WhatsApp.
- **MULTIMEDIA:** Send and receive photos, videos, documents, and Voice Messages.
- **FREE CALLS:** Call your friends and family for free with WhatsApp Calling, even if they're in another country.* WhatsApp calls use your phone's Internet connection rather than your cellular plan's voice minutes. (Note: Data charges may apply. Contact your provider for details. Also, you can't access 911 and other emergency service numbers through WhatsApp).





- **GROUP CHAT:** Enjoy group chats with your contacts so you can easily stay in touch with your friends or family.
- **WHATSAPP WEB:** You can also send and receive WhatsApp messages right from your computer's browser.
- **NO INTERNATIONAL CHARGES:** There's no extra charge to send WhatsApp messages internationally. Chat with your friends around the world and avoid international SMS charges.*
- **SAY NO TO USERNAMES AND PINS:** Why bother having to remember yet another username or PIN? WhatsApp works with your phone number, just like SMS, and integrates seamlessly with your phone's existing address book.
- **ALWAYS LOGGED IN:** With WhatsApp, you're always logged in so you don't miss messages. No more confusion about whether you're logged in or logged out.
- **QUICKLY CONNECT WITH YOUR CONTACTS:** Your address book is used to quickly and easily connect you with your contacts who have WhatsApp so there's no need to add hard-to-remember usernames.
- **OFFLINE MESSAGES:** Even if you miss your notifications or turn off your phone, WhatsApp will save your recent messages until the next time you use the app.
- **AND MUCH MORE:** Share your location, exchange contacts, set custom wallpapers and notification sounds, email chat history, broadcast messages to multiple contacts at once, and more!

*Data charges may apply. Contact your provider for details.

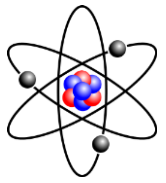
8. Calculator

a. Example: Calculator by Alex Oliinyk

Mathematical calculator with percentages, memory, history, large digits and innovation continuous lighting buttons for avoid mistakes.



9. Decimeter

**Advanced Information Technology****a. Example: Sound meter by Abc Apps**

Sound level meter(or SPL) app is shows a decibel values by measure the environmental noise, displays measured dB values in various forms. You can experience tidy graphic design with high frame by this smart sound meter app.

Features:

- Indicates decibel by gauge
- Display the current noise reference
- Display min/avg/max decibel values
- Display decibel by graph
- Can calibrate the decibel for each devices

****Notes**

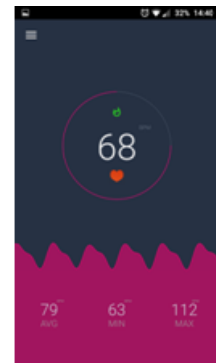
Microphones in most android devices are aligned to human voice. The maximum values are limited by the device. Very loud sounds(over ~90 dB) may not be recognized in most device. So please use it as just an auxiliary tools. If you need more accurate dB values, we recommend a actual sound level meter for that.

*This app allows banner and Interstitial ads.

10.Heart Rate Measurement**a. Example Heart Rate Monitor by REPS**

Heart rate or heartbeat is an important measure in health and fitness. Using Accurate Heart Rate Monitor app, you can now measure and monitor your heart rate!

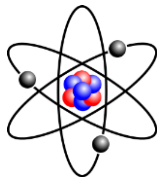
- ★ Incredibly accurate in measuring your heartbeat
- ★ Free with unlimited recording
- ★ Easy to use with intuitive design
- ★ Identifies heart rate training zones (Rest, Fat burn, Cardio, and Peak)
- ★ Google Fit support
- ★ Estimates calorie burnt per hour
- ★ No additional hardware required

**How to use the heart rate monitor free app to measure your heartbeat?**

To use this heartbeat counter, just put your finger on the phone's camera and stay still, the heart rate is shown after few seconds. Covering a part of flash may help heartbeat counter to become even more accurate.

What is a normal heart rate or heartbeat?

According to Mayo Clinic, a normal resting heart beat rate for adults ranges from 60 to



100 beats per minute (BPM). However, keep in mind that many factors can influence the heart rate, including Activity level, Fitness level, Body size, Emotion, etc. Generally, a lower heartbeat at rest implies more efficient heart function and better cardiovascular fitness.

Consult your doctor if your resting heartbeat is consistently above 100 beats per minute or if you're not a trained athlete and your resting heartbeat is below 60 beats a minute

What are heart rate training zones?

Heart rate training zones are calculated using maximum heart Rate (MaxHR). Within each training zone, subtle physiological effects take place to enhance your fitness. We have a similar definition to those used in Fitbit trackers:

- REST ZONE (up to 50% HRmax): This considers as resting zone.
- FAT BURN ZONE (50 to 70% of maximum): Recovery and warming up exercises should be completed in this zone. It's called the fat burn zone because a higher percentage of calories are burnt from fat.
- CARDIO ZONE (70% to 85% of HRmax): Most of the main exercise should be completed in this zone.
- PEAK ZONE (greater than 85% of HRmax): This zone is ideal for short intense sessions (high-intensity interval training HIIT) to improve performance and speed.

This heart rate monitor app calculates and automatically saves your heart rate training zones.

NOTES

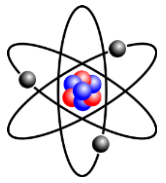
- Heart rate monitor app should not be used as a medical device.
- In some devices, heart rate monitor may make the LED flash very hot.

11. Altimeter

a. Example: Altimeter Ler

Name: _____

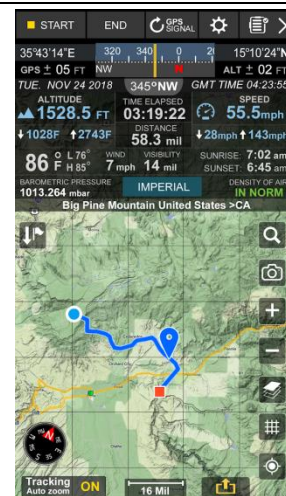
Per: _____



Advanced Information Technology

Bouwsma Rm323

Modern Altimeter GPS+ app is for folks who care for hiking and biking in mountainous terrain. GPS is getting very accurate in terms of distance indication. The choice between unit system is perhaps an important thing, just for your convenience the app is being equipped with both of them (Imperial and Metric). Surprisingly strong barometer measures the weight of the air pressure above a given point and determines elevation of two points. This app has a creative and user-friendly style design, simple and comprehensive functionalities. Features included



- Imperial and Metric unit settings.
- GPS accuracy indicator.
- GPS distance accuracy indicator.
- Density of air , indicator.

Search any place and drop search pin with place info.

Built in library

Map integration

- GOOGLE maps
- Satellite maps mode.
- Hybrid maps mode.
- Standard maps mode.
- Terrain maps mode.
- Tracking location changes trajectory.

Compass

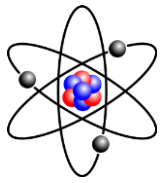
- Compass with camera
- Take a pictures with coordinates
- Shows device real-time orientation to magnetic fields.
- Ability to switch between true and magnetic North.
- Location coordinates (longitude, latitude).
- Course

Track information

- Time elapsed.
- Distance.
- Average speed.
- Max speed.
- Altitude.

Tracking

- Speed tracking in mph or km/h based on MPH or KM/H mode.
- Distance tracking in miles or kilometers based on MPH or KM/H mode.
- Time tracking.
- Longitude, latitude coordinates.



- Save locations drop a pin

Weather

-- Temperature information.

-- Wind

-- Visibility

-- Sunrise, Sunset

-- High/Low Temperature.

-- Ability to switch between Celsius and Fahrenheit.

12.Level

a. Example: Bubble Level Pro by SpiritLevel/Clinometer

The description of Bubble Level Pro

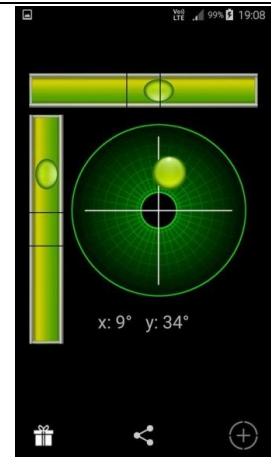
A bubble level Pro, spirit level or simply a spirit is an instrument designed to indicate whether a surface is horizontal (level).

Bubble Level app is handy, accurate, simple to use and incredibly useful tool for your Android device.

It has all features but can not be calibrated. This professional tool called Clinometer is the most precise (all you can get with some calculations) slope measurement tool for the Android.

1. Object alignment
2. Angle measurement
3. Surface flatness

Get Bubble Level NOW with simple, high resolution graphics and ENJOY!



13.Walkie Talkie

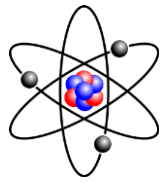
a. Example: Walkietooth by Massimo Milazzo

Walkietooth allows to establish a full duplex communication channel between two Android devices, letting them to communicate for all the time needed, better than having two walkie talkies.

You may use it as baby monitor, or to communicate easily on motorcycle, during sport or in all the activities in which direct communication is not easy.



14.Wifi

**Advanced Information Technology****a. Example: Wifi Analyser by Abdeirahman M. Sid**

Introducing a new way to analyze and optimize your WiFi, Turn you android device into WiFi Analyzer!
WiFi Analyzer Recommends the best channel and place for your network.
WiFi Analyzer gives you the most useful optimization information to help decrease interference and increase connection speed and stability.

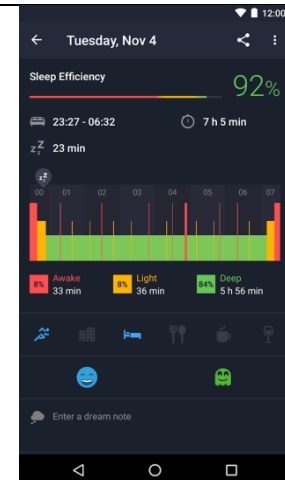
Features:

- WiFi Optimizer for Interference Issues
- Channel Analyzer for Nearby APs
- Real-time data and distance calculations.
- History of signal strength
- Supports 2.4GHz/5GHz
- View Hidden WiFis
- Copy MAC address
- Channel Optimizer + Much More!

**15.Sleep Analyser****a. Example: Runtastic Sleep Better by Runtastic**

Track your sleep cycle, monitor dreams, improve bedtime habits, sleep patterns & wake up better with the free Sleep Better sleep tracker app with smart alarm clock from Runtastic! Sleep Better sleep cycle app offers you a simple and engaging way to get better sleep using a sleep tracker, sleep timer and sleep clock.

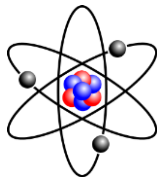
Time to take your sleep seriously! Instead of fiddling with other sleep apps before bedtime, get to bed early with Sleep Better. Whether you struggle to fall asleep, want to learn how your daytime activities influence your sleep, or simply want some new & refreshing smart alarm clock sounds – this is your ideal free sleep app!



Track moon phases, keep a sleep diary and more using this preferred sleep monitor on your Android device! Better sleep is in your future.

APP FEATURES & BENEFITS

- * Sleep monitor: This sleep tracker monitors your sleep cycle, duration (both light and deep sleep) and efficiency with the simple tap of a button and placing your device by your sleep pillow.
- * Works in airplane mode: Simply set your device on your bed (next to your sleep pillow). Your sleep app will do the work!
- * Sleep timer: Track your light sleep & deep sleep phases & time spent awake in bed with this sleep cycle app.
- * Track caffeine & alcohol consumption, exercise info, and stress level to determine the



effects of these variables on your sleep quality.

- * Monitor moon phases and find out if it impacts your sleep cycle, internal alarm clock, deep sleep, sleep duration or snooze and sleep patterns.

- * Keep a dream & sleep diary to track your dreams (good, bad or neutral) with the Runtastic sleep monitor.

- * Note your mood when you wake up directly in your sleep diary.

- * Sleep track with your tablet: This sleep app and smart alarm clock works on tablets, too! Same as your smartphone, place it right next to your sleep pillow.

- * Share sleep tracking sessions via Google+, Facebook, Twitter, WhatsApp & email directly from your sleep monitor app.

FEATURES & BENEFITS OF FULL VERSION

- * Use the Smart Alarm Clock to wake up at the ideal time within your personalized Wake-Up Window. The sleep clock wakes you up feeling refreshed!

- * Enjoy a variety of smart alarm sounds & snooze functionality.

- * View sleep history including daily stats and overviews for longer time periods (i.e. a selected week or month) in your sleep cycle app.

- * Filter history taking daily variables into account to determine when you're sleeping best.

- * Some functions & benefits are limited in the free version of Sleep Better sleep app. To access all benefits, users are encouraged to take advantage of the Sleep Better in-app purchase.

Download today and start tracking your sleep duration, sleep patterns and make use of the sleep clock in your sleep diary tonight! If you'd like even more information about why sleep is such an important component of your overall health, wellness and fitness efforts, please visit the Runtastic Blog today. We're pleased to share a sleep series with interested users & readers to help YOU truly make the most of your shut eye. Sleep-related insights and further information on 24-hour tracking with Runtastic are also covered on our Fitness Channel on YouTube and throughout our social media channels.

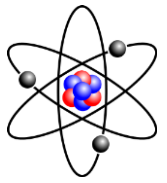
Runtastic is all about health & fitness apps! Check out more of our apps, in addition to this sleep timer app, to help you reach your fitness goals at <http://play.google.com/store/search?q=pub:Runtastic>

16. Weather App

- a. Example: MyRadar by NOAA

Name: _____

Per: ____



Advanced Information Technology

Bouwsma Rm323

MyRadar is a fast, straight-to-the-point application that displays animated weather radar around your current location, allowing you to quickly see what weather is coming your way. Just start the app, and your location pops up with animated weather radar!

The map has the standard pinch/zoom capability which allows you to smoothly zoom and pan around the United States and see what the weather is like anywhere.

In addition to the basic radar, MyRadar features a number of data layers/overlays that allow you to see additional information on top of the map, and to see how it relates to the weather around you. An animated Winds layer displays a mesmerizing view of the surface-level winds, the Clouds layer allows you to see global cloud patterns, the Earthquakes layer allows you to see earthquake events around the world, and there's even an aviation layer that displays AIRMETs and SIGMETs, turbulence, TFRs, flight plan paths and flight tracks, and more.

The latest addition to the data layers is the Wildfires layer, which displays hot-spots around the United States from sources including the USGS, Inciweb, and others.

MyRadar also provides advance rain notifications, notifying you of impending precipitation in your area up to an hour before it happens! This new feature uses a patent-pending algorithm that leads the industry with incredible accuracy.

In addition to the free features of the app, a number of additional upgrades are available, including hurricane tracking - great for the start of hurricane season - as well as a professional radar pack, which allows viewing greater detail and control of radar from individual stations, including the wind velocity product from each station. For pilots, there's also our aviation charts, both FAA Sectionals and IFR Enroute charts!

Download MyRadar today and try it out! Thanks for making MyRadar so successful, with over 45 million downloads!

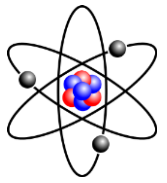


17.Gauss Meter

- a. Example: Gauss Meter by keuwlsoft

Name: _____

Per: ____



Advanced Information Technology

Bouwsma Rm323

This app uses the magnetic field sensor on your device to measure magnetic flux density (B) in Gauss or Tesla. FOR INDICATION ONLY. Results depend on your device and its hardware. Your device must have a Magnetic Field Sensor for this app to function. Features include:



- Analogue dial to show current reading.
- Averaging.
- Maximum and minimum values.
- Gauss or Tesla units.
- 4 time constant options. 3 Refresh speeds.
- Graph – Shows the time dependence of the magnetic field.
- Compass
- Ferrous metal detector – sound frequency will change with gauss level.
- Autoscale or manual (pinch & pan) Y-Axis.
- Calibrate option – If you have a calibrated gauss meter or known magnetic source, you can use this option to calibrate the meter. (However app is still for Indication Only).

18.Light meter

a. Example: AspectraMini by Jandroteck

Aspectra mini is the base application in Aspectra system.

The Android device, with additional low cost spectrometer, can be used to observe the spectrum of light. Spectrum is shown as intensity plot. Every plot can be saved for the future analyze with another applications: Aspectra viewer (explorer for spectra) Aspectra analyzer (editor for spectra).



- Possible applications:
- teaching spectroscopy
 - chemical analyze
 - distance measurement
 - control of LED light source color
 - astral spectroscopy

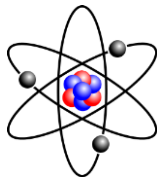
To see the spectrometer construction's details, visit my web page: www.jandrotek.de
The detail and some help can be find at <https://www.jandrotek.de/support/aspectra-technical-concept/>

19.Function Generator

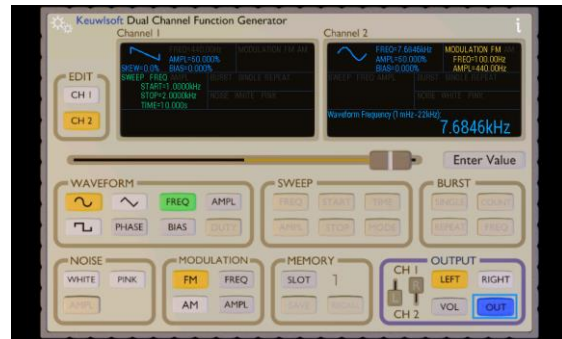
a. Example: Function Generator by keuwlsoft

Name: _____

Per: ____



Dual channel function / waveform / signal generator for the speaker / headphone audio output.



No Ads, No Permissions, No In App Purchasing, No Limited Features. Full Version.

Output is 16 bit for each left and right channels and at 44.1kHz.

Output will depend on your device hardware. Some device hardware may filter out the DC bias and low frequency signals. At high frequencies, the waveforms will be distorted due to limited number of samples for each waveform (for example at 4.41kHz, a sine waveform will be approximated by only 10 points). Therefore this is for fun/educational use, for critical applications use a real calibrated function generator.

Left and Right audio channels can be assigned to either channel 1 or channel 2.

Sine, Square & Triangular waveforms.

Frequency range from 1 mHz up to 22 kHz.

Amplitude as percentage 0-100%.

Set duty for square waveforms or skew triangular waveforms to get saw waveforms.

Offset the phase of waveforms.

Sweep frequency or amplitude (Single, Repeat & Bounce modes).

Amplitude Modulation (AM).

Frequency Modulation (FM).

Burst mode for a specific number of waveforms (1-10000).

White noise & pink noise Generator. Pink (1/f) noise falls off at ~3dB per octave between 43 Hz and 44 kHz.

Memory slots to save & recall channel configuration.

Select values with spring slider or number pad.

[More detailed explanation available on website](#)

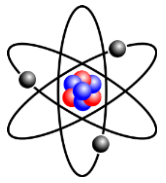


20. Roadside Assistance

- a. Example: Honk by Honk Technologies

Name: _____

Per: ____



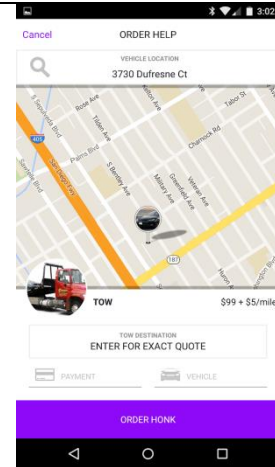
Advanced Information Technology

Bouwsma Rm323

Flat tire, out of gas, dead battery, locked keys in car or stuck in a ditch? HONK simplifies roadside assistance and towing, no membership required. Pay only when you order service, and get help from a nationwide network of more than 45,000 trucks for fast, professional service 24 hours a day.

Select your service and the HONK app will:

- Pinpoint your exact location (or you can type in an address)
- Display the price, including tax and tip, before you place your order
- Locate and dispatch the trusted local provider with the best estimate time of arrival
- Provide the name and phone number of the dispatched provider
- Keep you informed with status updates and a live map of the tow truck en route
- Complete payment securely in-app without the hassle of cash



Breaking down is hard, getting help should be easy. Choose HONK, and get back on the road.

21. QR Reader

a. Example: QR Code Reader by Sustainable App Developer

No Ads! 100% Free! Save money!

QR Code Reader is the fastest free QR scanner & Bar code scanner on Google Play. QR Code scanner is an essential app for every Android device. QR codes and Bar codes are everywhere!

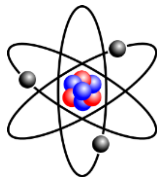
Scan all types of Barcodes and QR codes with simply opening the app and pointing it in the direction of QRcode or Barcode you wish to scan. QR Code Reader will automatically recognize any Barcode or QR code.

QR Code Reader offers:

- QR scanner
- Barcode scanner
- Instant scanning and decoding
- Simple to use
- Professional design
- Flashlight for low-light environments
- Scan history
- Works offline, no internet connection required

QR Code scanner can scan all 1D and 2D barcodes / QR code types including UPC, EAN8, EAN13, QRCode, Data Matrix, Quick Code, ISBN, EQS, CODE39, Code128 and recognize text, URL, contact, calendar, email, location, Wi-Fi and many other QR formats.





Scan coupons to save money! Download QRCode Reader now!

22. Music

a. Example: Pandora

Pandora gives you a personalized music experience that continually evolves with your tastes. Create stations from your favorite songs, artists or genres. Or search browse to find recommended stations for your mood or activity.

Looking for more?

Pandora Premium™

Enjoy personalized on-demand music for \$9.99/month

- Search and play your favorite songs, albums and playlists on-demand
- Create playlists, not worklists - on your own or powered by Pandora

- Download the music you want for offline listening
- Unlimited skips and replays
- Higher quality audio
- Listen with no ads

Pandora Plus™

Personalized radio with no ads for \$4.99/month

- Unlimited personalized stations
- Up to four stations for offline listening
- Unlimited skips and replays
- Higher quality audio
- Listen with no ads

Pandora for Android Wear 2.0

Enjoy personalized music experience directly from your watch.

- Listen to your favorite stations without your phone (requires internet connection).
- Use the voice function to search for stations or create a new one.
- Pandora subscribers can skip, replay and listen offline to stations with no ads directly from the watch.

Terms and conditions:

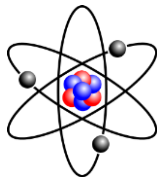
www.pandora.com/legal

www.pandora.com/legal/subscription

www.pandora.com/privacy

Note: Pandora is currently only available for US listeners on mobile devices. Some





advertising exclusions apply. Skips, replays and offline features may be limited by certain licensing restrictions. Pandora may use large amounts of data, and carrier data charges may apply. For best results, we recommend you connect your device to trusted Wi-Fi networks when available.

23. Remote Device Access

a. Example: TeamViewer

Use this app to remotely control other devices
Want to remote into this device? > Download the QuickSupport app

Remote into another computer, smartphone or tablet, while you are on the road!

TeamViewer provides easy, fast and secure remote access and is already used on more than 1 billion devices worldwide.

Use cases:

- Control computers (Windows, Mac OS, Linux) remotely as if you were sitting right in front of them
- Provide spontaneous support or administer unattended computers (e.g. servers)
- Remotely control other mobile devices (Android, Windows 10 Mobile)

Key Features:

- Screen sharing and complete remote control of other devices
- Intuitive touch and control gestures
- File transfer in both directions
- Computers & Contacts management
- Chat
- Sound and HD video transmission in real-time
- Highest security standards: 256 Bit AES Session Encoding, 2048 Bit RSA Key Exchange
- Plus so much more ...

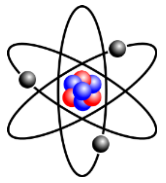
Quick guide:

1. Install this app
2. On the device you want to connect to, download TeamViewer QuickSupport
3. Enter the ID from the QuickSupport app into the ID field and connect



24. Pedometer

a. Example: Footsteps Free by Palm Shadow Apps LLC



This free version can count up to 3000 steps a day.

FEATURES

- Records steps, duration, distance, calories burned, pace and speed
- Works in background
- Displays counts for walking and running as well as total counts
- Groups activity in workouts and by days
- Two display modes - Workout and Today
- Nine color schemes to choose from including high contrast B&W
- Timer pauses automatically when no activity is detected
- Pacer helps you maintain the desired speed and intensity. It also gives you information about calories burned per hour as you maintain this speed
- Distance alert
- Advanced algorithm calculating calories burned
- Configurable step length for walking and running separately (check our website for step length calculators)
- Configurable units of measurement both English and Metric
- History & Graphs modules
- Allows to share your workout sessions by email, SMS, Facebook & Twitter



WORKOUTS

The pedometer can group your activity into workouts. You decide when to start, pause, reset and save your workout.

Normally Footsteps will stop detecting steps when you pause or finish the workout, you can change this in Settings and let Footsteps capture the steps even if the workout is paused/not started.

You will see your activity in Today view, but the steps won't be added to the active workout.

You can also turn off workouts completely and let Footsteps capture your steps whenever the app is running (Settings -> Use Workouts switch to OFF).

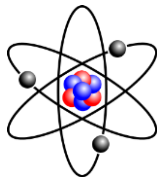
HISTORY

History module lets you browse your activity. You can see your workouts or all activity in or outside workouts grouped by days, weeks and months.

Tap on the groups until you see a single workout or day worth of activities and you will see them broken down to a list of samples of activities.

You can add, edit or delete any of the samples. You can delete any workout or a whole day from History. You can share the items in History by Email (with CSV attachment), SMS, Twitter or Facebook.

HELP



The pedometer has a built-in help system with FAQ section, also feel free to contact our support, we'll be glad to help you. (from within Footsteps tap Help, then Feedback and send us an email explaining the problem).

25. Clock

a. Example: Big Digital Clock by andreas 1724

Ad free

The digital clock shows the time using the whole screen width.

- You can adjust the colors.
- Showing the seconds is optional.
- Every screen orientation is handled.
- AM/PM-mode is read from the system settings.
- The clock can move around the screen to prevent burn-in.



Thanks to Margaritov for his colorpicker and Torinak for his 7segment font.

26. Chronometer

a. Example: Stopwatch and Timer by espengineer

A stopwatch, also known as chronometer or chronograph, is a watch with one or more hands that can be stopped or started at any instant, used for precise timing, as in races. A countdown timer allows backward timing from a preset time value to zero.

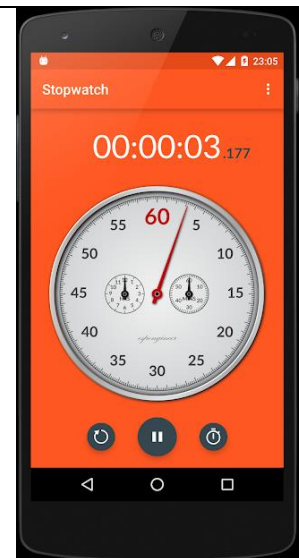
Chronometer is a reliable, easy to use time measuring app, ideal for various activities as running, workouts, cooking, games, or work. Its features include a stopwatch and a countdown timer. The app will continue the timing in background if minimized.

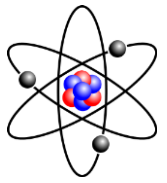
Stopwatch (chronometer, chronograph)

The stopwatch feature allows you to measure elapsed times. By using the corresponding buttons, the stopwatch can be started, paused, resumed, and reset. By pressing the "Lap" button you can record the current timing. In landscape mode, in addition to the elapsed time, you can see the number of laps, the last lap time and the current lap time.

Times

As you record laps with the stopwatch, the timings are added to a list in the "Times" view. The laps are ordered in descending order. For each lap in the list, you can see the





lap number, the elapsed time, and the lap time. The elapsed time is the time past from the beginning of the measurement up to the moment when the lap was added. The lap time is the time past since the previous lap was added. At the bottom of the screen, you can see the average of your lap times. The "Save" button placed on the action bar allows you to share your list of lap times by sending it to one of the appropriate apps installed in your device (Gmail, Dropbox, Drive, Facebook, etc.).

Countdown Timer

The countdown timer feature allows you to set a timer. By using the corresponding buttons, the countdown can be started, paused, resumed, and reset. When time is up, you receive a notification, according to your settings: a sound alarm, a vibration, and / or a message on the notification bar (if the app is running in background). The "Set Timer" button placed on the action bar allows you to rapidly set the timer. In landscape mode, in addition to the time display, you can see the date and time when the countdown will finish.

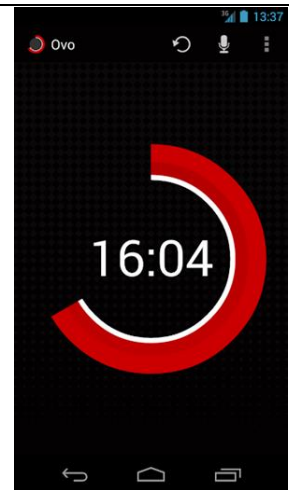
27. Timer

a. Example: Ovo by Ilumbo

Boil the perfect egg; brush your teeth for two minutes and not a second more; have an exact ten-minute run. Live your life with the precision of a samurai.

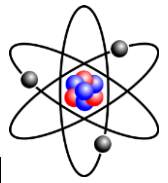
Only Android timer I find worth using. And I tried about 10. Really. Being able to set timers with one simple physical action is all I ever needed. No saved timers, no inputting numbers, no nonsense. But none of the others would give me that. And then this minimalist pearl happened upon me.

I love this app. A way to make it premium I would buy would be the ability to make timer be greater than 1 hour. I'm limited to 60 minutes with this current version. I will buy the new feature if you make it. Keep up the great work. I love the small end-final-time analog preview.



28. Python for Mobile Phone

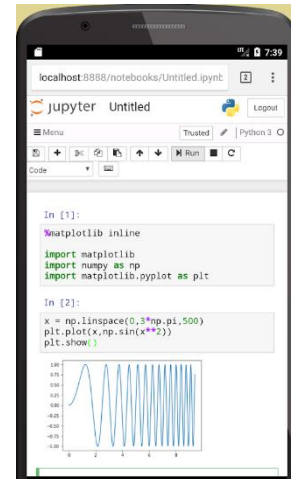
b. Example: Pydroid 3 by IIEC Education



Pydroid 3 is the most easy to use and powerful educational Python 3 IDE for Android.

Features:

- Offline Python 3.6 interpreter: no Internet is required to run Python programs.
- Pip package manager and a custom repository for prebuilt wheel packages for enhanced scientific libraries, such as numpy, scipy, matplotlib, scikit-learn and jupyter.
- Examples available out-of-the-box for quicker learning.
- Complete Tkinter support for GUI.
- Full-featured Terminal Emulator, with a readline support (available in pip).
- Built-in C, C++ and even Fortran compiler designed by n0n3m4, an author of C4droid, specially for Pydroid 3. It lets Pydroid 3 build any library from pip, even if it is using native code. You can also build & install dependencies from a command line.
- Cython support.
- PDB debugger with breakpoints and watches.
- Kivy graphical library with a shiny new SDL2 backend.
- PyQt5 support available in Quick Install repository along with matplotlib PyQt5 support with no extra code required.
- Matplotlib Kivy support available in Quick Install repository.
- pygame_sdl2 support (SDL2-based pygame implementation).



Editor features:

- Code prediction, auto indentation and real time code analysis just like in any real IDE. *
- Extended keyboard bar with all symbols you need to program in Python.
- Syntax highlighting & themes.
- Tabs.
- Enhanced code navigation with interactive assignment/definition gotos.
- One click share on Pastebin.

* Features marked by asterisk are available in Premium version only.

Quick manual.

Pydroid 3 requires at least 200MB free internal memory. 220MB+ is recommended. More if you are using heavy libraries such as scipy.

To run debug place breakpoint(s) clicking on the line number.

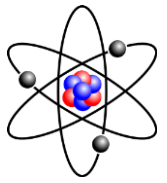
Kivy is detected with "import kivy", "from kivy" or "#Pydroid run kivy".

PyQt5 is detected with "import PyQt5", "from PyQt5" or "#Pydroid run qt".

The same for sdl2, tkinter and pygame.

There is a special mode "#Pydroid run terminal" to ensure your program runs in terminal mode (this is useful with matplotlib that automatically runs in GUI mode)

Take a part in development of Pydroid 3 by reporting bugs or providing feature requests to us. We appreciate that.



The list of libraries we are NOT planning to add yet:

- Tensorflow
- OpenCV

As Pydroid 3 main goal is to help user learn Python 3 programming language, our first priority is porting scientific libraries (so system-related libraries are ported only when they are used as dependencies of some other educational package).

Important notice:

Some users experienced major problems when installing libraries from QPython 3 QPypi internal repository, so consider it to be binary incompatible with Pydroid 3. If you need any libraries that cannot be built with Pydroid 3 - contact the devs directly: other binary repositories are likely to be incompatible as well.

Legal information.

Some binaries in Pydroid 3 APK are licensed under (L)GPL, email us for the source code. GPL pure Python libraries bundled with Pydroid 3 are considered to be coming in the source code form already.

Pydroid 3 doesn't bundle any GPL-licensed native modules to avoid automatic import of them. The famous example of such library is GNU readline, that can be installed using pip.

Android is a trademark of Google Inc.

29. Camera

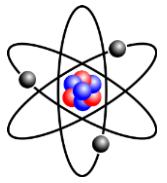
c. Example: Camera FV-5 by FGAE Photography

Camera FV-5 is a professional camera application for mobile devices, that puts DSLR-like manual controls in your fingertips. Tailored to enthusiast and professional photographers, with this camera application you can capture the best raw photographs so that you can post-process them later and get stunning results. The only limit is your imagination and creativity!

Major features:

- All photographic parameters are adjustable and always at hand: exposure compensation, ISO, light metering mode, focus mode, white balance and program mode.
- DSLR-like viewfinder display: see exposure time, aperture and stops display with EV and bracketing settings, in real-time!
- Full fledged exposure bracketing: from 3 to 7 frames, unlimited stops spacing, plus custom EV shifting.
- Built-in intervalometer: make stunning timelapses (even bracketed/HDR timelapses) and





time-controlled picture series.

- Program and Speed-priority modes.
- Long exposure support: take beautiful night photos and light trails with long exposure times up to 30 seconds**.
- JPEG, true 16-bit RAW in DNG format*, and lossless PNG photo capturing formats, perfect for post-processing.
- Manual shutter speed: from 1/80000 to 2", or the range available on your device*.
- All camera functions assignable to volume keys. You can adjust EV, ISO, color temperature and more using volume keys. Devices with hardware camera shutter key are also supported.
- EXIF and XMP sidecar metadata support.
- Autofocus, macro, touch-to-focus, true manual focus* and infinity focus modes. Autofocus lock feature (AF-L).
- Autoexposure (AE-L) and auto white balance (AWB-L) locks in Android 4.0+.
- In background photo and RAW developing and processing allows a smooth, uninterrupted camera operation.
- Digital zoom using multitouch pinch gesture. Also shows 35mm equivalent focal length!
- The most advanced electronic viewfinder: live RGB histogram, 10 composition grid overlays and 9 crop guides available.
- Powerful organization options: different storage locations and fully customizable file names (even with variables).
- The user interface is available in more than 30 languages.

This camera application completely avoids scene modes, instead you get full manual control over all photographic parameters, just like you do with a reflex camera, so you can ultimately control every aspect of the picture, and leave the post-processing to the computer. So after your DSLR, you will never miss a photo opportunity again, being able to capture it with the closer sensation to your DSLR as possible.

The Lite version is a fully functional version of Camera FV-5, with limited picture resolution support. Please buy Pro version to unlock all your device's resolutions and enable RAW capture (if it is supported on your device).

IMPORTANT: If you find a bug using the application, PLEASE, visit the web page <http://www.camerafv5.com/> or write to support@camerafv5.com with your phone model name and the description of the problem, before writing a negative comment. Customer satisfaction is our priority, and we will do our best to fix the issues as soon as possible!

Connect with Camera FV-5 and stay always up to the latest information about current and future development. Visit the official website <http://www.camerafv5.com>, be a fan of <http://www.facebook.com/CameraFV5>, subscribe to <http://www.twitter.com/CameraFV5> or watch tutorials at <http://www.youtube.com/user/camerafv5>.

* Requires Android 5.0+ and a fully compliant Camera2 implementation. Currently only LG Nexus 5 and Motorola Nexus 6.

** Requires Android 5.0+. Compatible as well on the Samsung Galaxy Camera (1 and 2), Galaxy S4 Zoom and HTC One (M8). On Android 4.4 or older, long exposures lowers picture resolution to 2 or 1 MP, depending models. The reason is explained here: <http://www.camerafv5.com/faq.php#long-exposure-resolution>

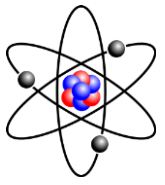
Name: _____

Southridge Computing

Advanced Information Technology

Per: _____

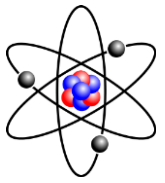
Bouwsma Rm323



Name: _____

Per: ____

Bouwsma Rm323



Advanced Information Technology

Class: Mobile Apps, Mr. Bouwsma

Submit by: Inspection & page

App Name _____

Demonstrate To Parent

Teacher

Dear parent,

Your son or daughter has learned and installed an app on their phone, and will receive extra credit for **explaining** and **demonstrating** it to you. Sign below if you are impressed.

Good job. Singed:
Comments:

This section is to be filled out by the student

1	App Name & Rating	A B C D F
2	Purpose	
3	Amazing Features	
4	How to use	
5	Notes Questions Observations	
6	Others not as good:	
7	Comments	