Research 1ghz mediatek quad-core cpu with 1gb of

Art & Culture, Music

Research into current technologies: A BRIEF DESCRIPTION OF THE DEVICES AND THEIR MAIN PURPOSE. Motorola Moto E3: The Motorola Moto E3 is a budget smartphone that was released in September 2016. The phone currently retails at an average price of £85 online making it affordable to purchase for those who are looking to purchase a smartphone with features that majority of smartphones have available on the market. In terms of specifications of the Motorola Moto E3, it has a 5-inch IPS LCD screen with a resolution of 720×1280.

The operating system that the phone runs at is Android 6. 0 and has a 1Ghz MediaTek quad-core CPU with 1GB of RAM. It has 8GB of built-in storage with expandable storage of up-to 32GB (micro SD) and has a battery life of 2800mAh; general usage of the phone will allow it to last for the whole day. Additionally, the phone has a built-in GPS, accelerometer and vibration motors for notification purposes. LG G WATCH: The LG G Watch is a smart watch developed by the company LG and is one of the first smartwatches to run on Google's new Android Wear operating system.

The LG G watch was the company's third attempt of creating a watch with a functionality similar to a smartphone's. It is a small timepiece intended to be carried or worn by a person; it can be used to keep time, appointments etc. The LG G Watch does not have any external buttons at all, except for a reset button on the back.

To turn it on or off, you use the touch-screen menu or plug it in to charge, and tap or move the watch to trigger the display to turn on. The G watch has a strong voice recognition, is water and dust-resistant, and the included

magnetic charger is easy to use. The watch serves many purposes such as timekeeping and scheduling, manage your calendar and create appointments without using your smartphone. With the G-watch it helps puts notifications on your wrist watch so you cannot miss them, like using it to set quick reminders, responding to messages etc. In terms of specifications of the LG G Watch, it has a 1.

65″ IPS LCD touchscreen display with a 9. 95mm thick body. The thickness of the watch gives an added bonus of IP67 water and dust resistance meaning it can survive raining conditions if the watch was to be used outside. The watch also has 1. 2GHz Snapdragon 400 CPU with 4GB of storage and 512 memory RAM; it can perform tasks such as launching apps seamlessly. The LG G Watch also has a built-in 9-axis movement sensor which includes compass, gyroscope, accelerometer and altimeter which can be used for purposes such as tracking activities for fitness reasons or finding what direction the watch is being faced towards to.

The LG G Watch does not have built-in GPS, however it can be utilized by connecting to a smartphone with GPS functionality via Bluetooth 4. 0 as the watch has built-in Bluetooth. https://www. cnet.

com/uk/products/lg-g-watch/review/https://www. cnet. com/uk/products/lg-g-watch/review/2/ TECHNICAL SPECIFICATION OF THE DEVICES: THE PHONE (Motorola Moto E3): Operating SystemAndroidTM 6. 0, MarshmallowSystem Architecture/ProcessorMT6735p quad-core 1. 0GHz processor 64-bit, Mali T720 GPU (MP1 550MHz)Memory (RAM)1GBStorage (ROM)8GB internal, up to

32GB microSD Card supportDimensionsHeight: 143. 8 mmWidth: 71. 6

mmDepth: 8. 5 mmWeight140.

6 gDisplay5. 0″ 720p HD (1280×720)294 ppiBatteryAll-day battery (2800

mAh)2Water ProtectionWater repellent nano-coating1Networks4G LTE (Cat

4)UMTS / HSPA+GSM / EDGEBands (by model)GSM/GPRS/EDGE (850, 900,

1800, 1900 MHz)UMTS/HSPA+ (850, 900, 1900, 2100 MHz)LTE TDD Band

38/40/41, FDD Band 1/3/5/7/8/20SIM CardMicro-SIM, nano-SIM with an

adaptor (sold separately)Rear Camera8 MPLED flashBurst

modeHDRPanoramaTap (anywhere) to captureTap to focus720p HD

videoFront Camera5 MPBeautification modeConnectivityMicro USB, 3. 5mm

headset jackBluetooth® TechnologyBluetooth version 4.

0 LEWi-Fi802. 11 b/g/n (2. 4 GHz), Wi-Fi hotspotSpeakers/MicrophonesFront-

ported loudspeaker2-MicsVideo Capture720p HDLocation ServicesA-

GPSSensorsAccelerometerAmbient LightProximityBase ColorBlack or White

https://www3.

lenovo.

com/gb/en/smartphones-and-watches/moto/smartphones/Moto-E3/p/PMIPMIF

11MW THE WATCH (LG G Watch): Processor/Clock Speed……..

. 1. 2 GHzCommunications/Wireless Interface………Bluetooth 4.

0Style/Product type………. SmartwatchHeaderBrand……..

….. LGProduct Line……LG G WatchModel………….

W100 CE Input DeviceType………..   touch sensitive screen (multi-touch)BatteryRun Time (Up To) ….

. 36 secMessaging & InternetSupported Mobile Messaging Services …… SMSFeatures/Sensors ……….. accelerometer, digital compass, gyro sensor, motion sensor, pedometerMiscellaneousSensors ………accelerometer, digital compass, gyro sensor, motion sensor, pedometerVibrating Alert……… YesDimensions & WeightWidth ……. 46.

5 mmDepth ……. 9. 95 mmHeight ……37. 9 mmWeight ……63 gFlash MemoryInstalled Size ……4 GBOS ProvidedType ……. Android Wear 1. 0Dimensions & Weight DetailsDetails ….. wrist strapDepth …….

22 mm https://www. cnet. com/uk/products/lg-g-watch/specs/IDENTIFICATIONS AND DESCRIPTION OF THE TECHNOLOGIES (BOTH HARDWARE AND SOFTWARE) THAT SUPPORT THE DEVICES: HARDWARE COMPONENT OF THE PHONESystem Chipset: A chipset is group of integrated circuits designed to perform or more dedicated functions. Often with a real time computing constraint, smartphones are now equipped with more advanced embedded chipsets that can do many different tasks depending on their programming. CPU: (Central Processing Unit):   The CPU is mostly known as the processor. The CPU processes instructions in order to carry out certain functions that makes the device operate properly.

They are often described as the brain of the computers, smartphones and tablets. Smartphone rely on the processors to carry out their tasks.

Processors are an incredibly important factor in selecting the type of computer devices, including smartphones. GPU: (Graphic Processing Unit): The GPU is a single chip processor designed to rapidly manipulate and alter the memory to accelerate the creation of the images in a frame buffer intended for output to a display. This includes such as 3D motion, the lightning effect and object transformations. RAM (Random Access Memory): The RAM is a type of smartphone memory that can be accessed randomly.

Any byte of memory can be accessed without touching the proceeding byte that allows information to be stored and accessed quickly from the random locations. RAM is the most common type of memory found in the smartphones, computer systems, tablets and other electronic devices. Internal Storage: A data storage space (flash memory) mostly used in smartphones, tablets and other electronics devices were operating systems apps, photos, music, video, files and other user data is stored. Card Slot: (Memory Card Slot): It is a special slot for inserting a memory card. Memory card allows you to expand the phone's build-in memory. It can be used to store data such as texts, picture, audio and video.

Sensors: They are electronic components that detect and responds to some type of input from a physical environment. The specific input could be light, heat, motion, moisture, pressure and location, the output is generally a signal that is converted to use in the smartphone. For example, a location sensor such as GPS receiver is able to detect the current location of your electronic devices. Bluetooth: Bluetooth is a wireless protocol for

exchanging data over short distances from fixed and mobile devices, creating personal area networks.

Most mobile devices are Class 2, which means they have a range of up to 10 m. USB (UNIVERSAL SERIAL BUS): USB is a standard for a wired connection between two electronic devices, including a mobile phone and a desktop computer. The connection is made by a cable that has a connector at either end. USB is used in data transferring applications. USB cables also carry an electric charge that can be used to charge mobile phones. LOUDSPEAKER: The loudspeaker is a small sound driver fitted within a mobile phone, or other communication device, which is used to produce sound. In mobile phones, a loudspeaker are used to produce sound alerts for events such as incoming calls, incoming messages and alarms. Loudspeakers is used to reproduce voice calls out loud, hence allowing users to deal with calls hands-free.

SOFTWARE COMPONENT OF THE Motorola Moto E3: Operating System: Every smartphone runs on a based software called operating system (OS). The operating system controls the basic operation of a computer (such as smartphones, PDAs, tablet computers and other handheld devices). The operating system allows the user to install and run third party applications (apps). Apps are used to add new functionality to the devices.

User Interface: The user interface of a device is the look and feel of the on-screen menu system, how it works, its colour scheme, how it responds to button presses etc. All of this things are part of the user interface. Web

Browser: It is a software that allows the user to access Internet sites. Most current smartphones are equipped with browsers capable of viewing common websites   Web browsers on budget cell phones may be capable of viewing only websites specially made for mobile devices. The most advanced devices currently have web browsers with full Flash support that allows them to play even embedded Flash video (such as videos from YouTube). Java: It is a platform for applications running on mobile phones. These, mainly small, applications (e. g.

games) can be downloaded from the Internet directly to the phone using its built-in web-browser or through an application store as most android phones have (Google Play). https://aboutphone. pk/product/motorola-moto-e-dual-sim/https://www. phonearena. com/phones/Motorola-Moto-Z2-Play_id10508Our Application and Why Amazon? Once you have carried out the research, you will need to describe a new software product that uses the data/information generated by those devices to improve a business in one of the following areas: competitiveness and efficiency, marketing, improving internal processes, creating value for their customers, business intelligence After considering our devices and what kind of information they could provide we found that it offered real time tracking with had an automatic clock that we could utilise in our app and also the fact that the watch offers a hand free and provides constant connection to the phone. We chose amazon because they dominate every market, as of 2015 there are 304million active users on Amazon (Mathes, 2017).

This figure shows just how popular Amazon really are and that they are top of the market. For this reason, we wanted to help and support Amazon we needed to make sure that we could better an area of that business that was lacking and we found it right away. Amazon Logistics! The delivery service that Amazon provide is just not good enough for a fortune 500 E-Commerce website (Fortune, 2017). So now we have established our area to improve just how could we take a smartphone and watch and use it to better Amazon. Amazon GoGo was our answer, this app was designed to work on both the phone and the watch as a supporting app for the delivery drivers, they can; Clock in and Out from the App, view all deliveries that have to be made that day with a brief description and finally a single delivery view to view just the deliveries you want to see.

This service is not only going to help the efficiency of the delivery drivers but mean they can handle more cargo and ultimately make more deliveries each and every day, the more deliveries made each day the more money Amazon will be making. Having the drivers able to access all the information on one simple to use application is the best way to maintain standards in Amazon. The application was made in python and will be installed on all delivery driver's mobile devices so they can have access to this support application.

It will use the time and data from the mobile device in order to set the time the driver started working and also when they finished working. Features such as the delivery database will be uploaded to the device every morning to allow for a fast and quick operation when using the application. how the business idea would be implemented in practice Our Amazon GoGo app will

be given to all Amazon's Logistics delivery teams. We will provide all drivers with a smartphone to hold the heart of the data and app and a smartwatch to have a hand free so they can leave their phone in the car when they are making a delivery. We had to code in python3, this Is the only technology we need. This is why it is so perfect it requires three things, a watch, a phone and a piece of software.

You can't argue that Amazon won't benefit from this as it is a very cheap solution to a problem that they have. Our phone will act of the heart of the application running all the software that is needed and bounce all the information back to the watch, which is why the phone is recommended to be kept stationary at all times and do everything else on the watch whilst you are out and about delivering your parcels. The watch will be the delivery drivers buddy they can get all the information on current deliveries and also clock in and out to stop any arguments from when the members of staff started working, the application cuts out that problem as it takes the time straight from the user when they log in first.

That way the customer that are receiving the parcels know that because the drivers are working to the best they possibly can because the app makes it more efficient you have more chance of receiving your parcel earlier on in the day or definitely receiving it on that day making them happier and more likely to return and purchase more items which is a perk for amazon. As mentioned the business idea is simplistic and beautiful taking phones that are generic in their make and creating useful for Amazon. This is why we chose amazon because they have the money to back us but they also need

quick solutions to problems they are having, this is quick, basic, easy and cheap! Financial Ratios: Image above represents Amazon's current assets and current liabilities. Current assets 2015 = 35, 705, Current assets 2016 = 45, 781Current liabilities 2015 = 33, 887, Current liabilities 2016 = 43, 816Inventories 2015 = 10, 243, Inventories 2016 = 11, 461Total assets 2015 = 64, 747, Total assets 2016 = 83, 402Image above represents Amazon's operating expenses (cost of sales is the main one to look at as this will be used to calculate the gross profit and gross profit margin). Cost of sales 2015 = 71, 651Cost of sales 2016 = 88, 265Total operating expenses 2015 = 104, 773 Total operating expenses 2016 = 131, 801Net sales is the same as sales revenue; 2015 – $107, 0062016 – $135, 987Long-term liabilities 2015 (Non-current liabilities) = 8, 227 + 9249 = 14, 476Long-term liabilities 2016 (Non-current liabilities)= 7, 694 + 12, 607 = 20, 301Formulas20152016 (Most recent financial report)Gross profitSales revenue – Cost of Sales107, 006 – 71, 651 = 35, 355 (Year 2015)135, 987 – 88, 265 = 47, 722 (Year 2016)35, 35547, 722Operating ProfitSales revenue – Operating expenses107, 006 – 104, 773 = 2, 233 (Year 2015)135, 987 – 131, 801 = 4, 186 (Year 2016)2, 2334, 186Gross Profit Margin(Gross Profit ? Sales Revenue) * 100(33, 355 / 107, 006) * 100 = 33. 040% (Year 2015)(47, 722 / 135, 987) * 100 = 35.

09%(Year 2016)33. 04%35. 09%Operating Profit Margin(Operating Profit ? Sales Revenue) * 100(2, 233 / 107, 006) * 100 = 2. 08% (Year 2015)(4, 186 / 135, 987) * 100 = 3.

07% (Year 2016)2. 08%3. 07%Current ratioCurrent Assets ? Current Liabilities35705 / 33887 = 1. 05 (Year 2015)45781 / 43816 = (Year 2016)1. 051. 04Acid test ratioCurrent assets – inventory ? current liabilities(35705 – 10243) / 33887 = 0. 75 (Year 2015)(45781 – 11461) / 43816 = 0.

78 (Year 2016)0. 750. 78Return on Capital employedOperating profit ? Capital Employed (*100)(Capital Employed = Total assets – Current liabilities)2, 233 / (64, 747 – 33, 887) * 100 = 7. 23% (Year 2015)4, 186 / (83, 402 – 43, 816) * 100 = 10. 57% (Year 2016)7.

23%10. 57%Gearing RatioNon-current liabilities ? Capital Employed(Capital Employed = Total assets – Current liabilities)14, 476 / (64, 747 – 33, 887) * 100 = % (Year 2015)20, 301 / (83, 402 – 43, 816) * 100 = 51. 28 % (Year 2016)46.

90%51. 28%Link to amazon annual report: http://phx. corporate-ir. net/phoenix.

zhtml? c= 97664&p= irol-reportsannualAnalysis of financial ratios: Amazon is in a good position to cover its short term liabilities with a current ratio of 1. 04 at the end of 2016 . This shows the ability to turn its products into cash. The higher the current ratio, the more capable a business is of paying its obligations as it has a larger proportion of asset value relative to the value of it liabilities. Although in the previous year Amazon's current ratio was 1.

05, the change is very small therefore there are no major issues concerning this. The acid test ratio which is also known as quick test ratio shows where a

business has enough short term assets to cover its immediate liabilities (inventories being excluded). Amazon had an acid test ratio of 0. 78 in 2016. As this value is below 1, it shows that Amazon may find it difficult to pay their current liabilities as they may find it difficult to convert their inventories into cash quickly. Return on capital employed (ROCE) measures a business's profitability and the efficiency with the capital employed.

In the year 2016 Amazon had a return on capital employed of 10. 57% which was better than the previous year. This show there is an improvement with the efficiency of capital employed. Gross profit margin tells investors the ratio of gross margin expressed as a percentage of sales. It shows how much profit a company makes after paying off its cost of goods sold. It is also used as a measure of efficiency of a company when using raw materials and labour during the production processWhen a company has a low gearing ratio it can be considered stable.

Amazon on the other has a gearing ratio of 51. 28% in 2016 and a gearing ratio of 46. 90% in 2015 it can therfore be considered as not stable. This means that it has debts that equal 51. 28% of its total equity . This is very dangerous because if Amazon has loans with variable interest rates and there is a sudden increase in the interest rates it will increase the cost of borrowing As Amazon has been criticized in the past for its unreliable and slow deliveries, by having them invest into the technologies and software we have designed could potentially lead to them decreasing their overall costs in the long-term. This will be due to Amazon's delivery drivers becoming more efficient with their delivery processes, thus should lead to fewer

customer complaints as deliveries will be logged and tracked to ensure they reach their destination on time etc. This is a costly investment for the business and will take some time to roll out into their logistic departments of the company therefore the change will not be immediate and will occur over a period of time.

This would be a costly investment for the company and may need to be financed through a loan; this would increase the company's non-current liabilities which in turn would cause its gearing ratio to increase and its return on capital employed (ROCE). A higher gearing ratio could represent a greater risk for the company because they are mainly financing its activities with loans. However since the company would be taking out a loan that is longer than a year, it may not be that risky as long-term loans are generally cheaper with lower interest rates being offered to big sized companies such as Amazon. Why we chose Amazon? Amazon are one of the largest e-commerce retail stores available within the technological era with live within. As said by one MKM Partner Amazon is effectively " eating the retail world".

Evidently from the chart it is noticeable that Amazon growth as it goes into 2017 has increased by 4%, compared to store based sales which has fluctuated up and down from 2013 to 2017, whereas Amazon has slowly increased within the 5 year display of their growth. This increase of popularity of e-commerce as seen from the chart, shows that more people have been using online shopping rather than the traditional store bought products. Maybe this is due to the reliability of e-commerces and improved technology and logistical methods. Amazon's recent increase in share prices

is " becoming large enough to make an impact" as quoted by MKM Partner Sanderson.

" This trend does not end well for traditional retailers and many will go the way of Borders and Circuit City, leaders in the first two large categories disrupted by Amazon. com." Circuit City the electronics retailer filed for bankruptcy protection in 2008, due to the rise of e-commerce leading to more customers purchasing the electronical goods from the likes of Amazon, causing local electronics retailers failing to compete with them. Source: MKM PartnersWe mainly chose the Amazon the e-commerce retailer to produce the " AmazonGoGo" Application for both smartphone and smartwatch, because the dominate the ecommerce market of electrical retailer, so they would be able to fund the project and it would be improve Amazon's logistics, which has many very bad reviews of customers complaining they never received the product they paid for or it being lost within the third party postal services they use, like the Royal Mail. " He has lied about handing items to us in person when he did not, he has lied about leaving them with us, when he has not, he has lied about leaving them in our preferred safe place, when he did not. Time after time after time we have complained to Amazon vociferously about this matter over at least 8 deliveries" as stated by one of the customers who frequently use Amazon and have had problems with logistics. With Amazon finding " AmazonGoGo", this would help their customers have a more secure and efficient service. https://www. cnbc. com/2017/07/07/amazon-is-eating-the-retail-world. htmlhttps://uk. trustpilot.

com/review/www. amazon. co. ukhttp://www. mkmpartners. com/research/

References: Amazon, (2016) Page 27, 36, 37, 39