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INSIDE:

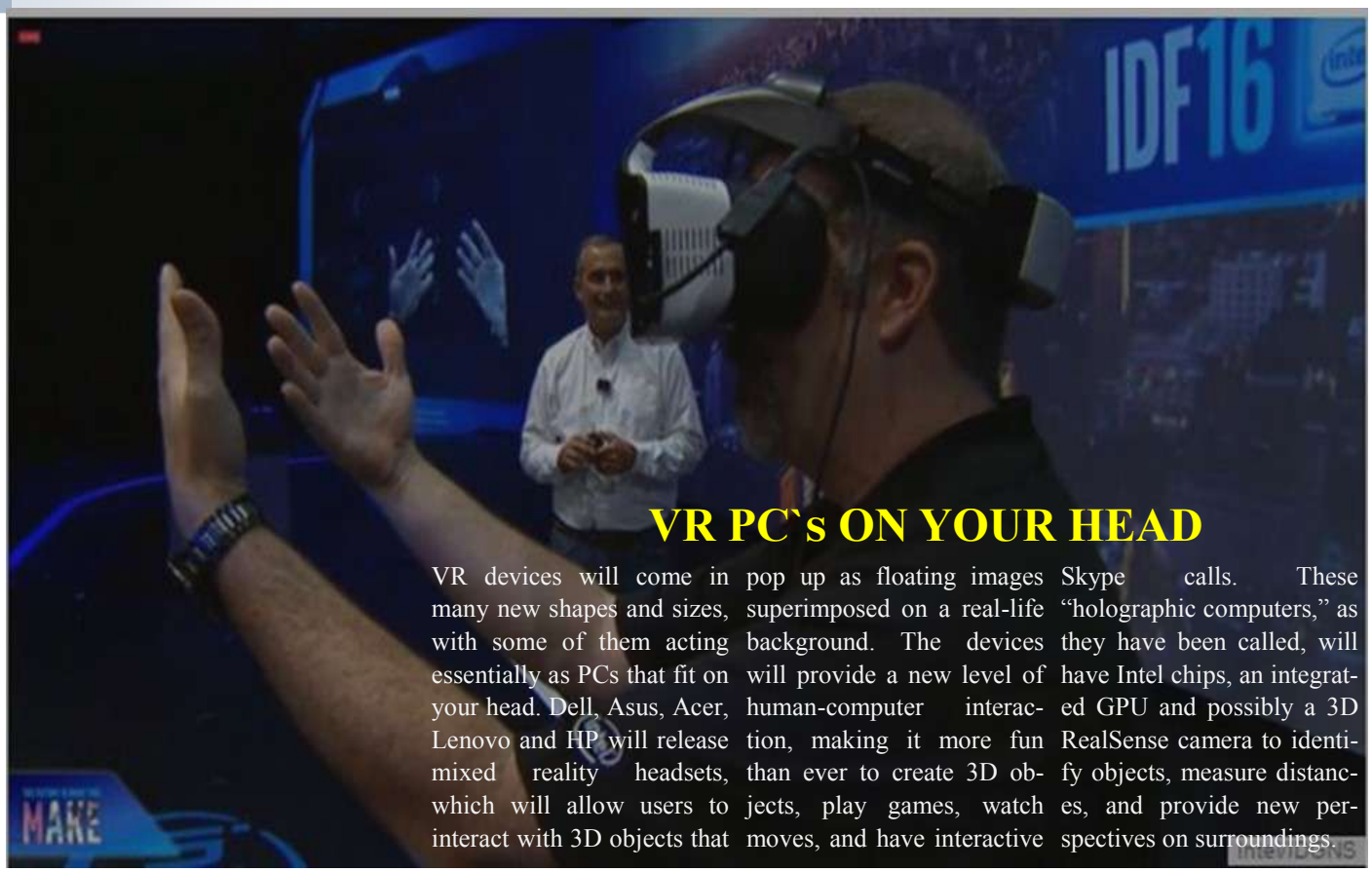
PETYA CYBER ATTACK

The Petya cyber attack that swept globally, and has infected enterprise networks across Europe is much worse than initially thought. Security researchers have now come to the conclusion the Petya attack is not a ransomware. If one thought that was good news, it is not. Petya is being termed as a wiper by researchers, with the aim being mass destruction of data. The idea was never to collect money from victims or enterprises.

The researcher's conclusion is that this attack is deliberately overwriting the data on the disk, and this is not read or saved anywhere else. The main difference between the 2016 and 2017 Petya is that the earlier version modified the disk in a way that it was possible to get the data back. In the new version, the damage is irreversible.

Several big companies were hit by the Petya attack, including Russian oil company Rosneft, shipping firm A.P. Moller-Maersk, and pharmaceutical giant Merck. The virus also hit Ukraine's Chernobyl power plant, site of the world's worst nuclear accident, forcing it into manual operation. Petya has spread more slowly than WannaCry, which struck more than 150 countries, but it does not include a "kill switch" that undid WannaCry. Experts are still searching for a way to stop Petya.

Kaspersky has also concluded this attack was wiper pretending to be a ransomware. The firm also analysed the installation id that is flashed on a victim's screen, which they say is just generating random data. It cannot contain information to get the decryption key, says the firm. The conclusion is the attacker can't actually decrypt the disk. Just like Suiche, Kaspersky also believes like the idea was destruction, not financial gain.



VR PC`s ON YOUR HEAD

VR devices will come in many new shapes and sizes, with some of them acting essentially as PCs that fit on your head. Dell, Asus, Acer, Lenovo and HP will release mixed reality headsets, which will allow users to interact with 3D objects that pop up as floating images superimposed on a real-life background. The devices will provide a new level of human-computer interaction, making it more fun than ever to create 3D objects, play games, watch moves, and have interactive Skype calls. These "holographic computers," as they have been called, will have Intel chips, an integrated GPU and possibly a 3D RealSense camera to identify objects, measure distances, and provide new perspectives on surroundings.

ARM-BASED LAPTOPS WITH WINDOWS, AGAIN

The first attempt at ARM PCs, which ran on Windows RT, was an unmitigated disaster, and it left many users skeptical of the idea. But Microsoft hasn't given up, especially as 5G starts to become a reality and cellular connectivity in PCs becomes essential. Microsoft announced that next year PCs will be available with Qualcomm's ARM-based Snapdragon 835, which is primarily for smartphones. Super-thin laptops will get integrated modems and a long battery life with the chip. The ARM-based PCs will run Win32 applications that run on regular x86 PCs via emulation.

For now, no PC maker has announced ARM-based Windows PCs—manufacturers may be cautious in light of the Windows RT fiasco. There are also many challenges. Snapdragon isn't as fast as high-end x86 Intel or AMD chips, and won't support 64-bit applications initially. Also, emulation may limit the ability to exploit hardware acceleration.

BEAUTIFUL SCREENS, 4K AND HDR

Laptops like the XPS 13 and Lenovo's Yoga 910 have beautiful edge-to-edge screens, a feature that may be included in more laptops next year. Also, 4K screens and HDR (high-dynamic range) technology will make games and movies look stunning. HDR results in more vivid images, and TVs, cameras and monitors supporting the technology are already available. Netflix is also doubling down on HDR. An HDR standards battle is brewing with DolbyVision and HBR3, but GPU makers are supporting both standards. AMD expects Dolby Vision to ultimately win.

CISCO UNVEILS NETWORK OF THE FUTURE THAT CAN LEARN, ADAPT AND EVOLVE

Recently Cisco unveiled intent-based networking solutions that represent one of the most significant breakthroughs in enterprise networking. The introduction is the culmination of Cisco's vision to create an intuitive system that anticipates actions, stops security threats in their tracks, and continues to evolve and learn. It will help businesses to unlock new opportunities and solve previously unsolvable challenges in an era of increasing connectivity and distributed technology.

This new network is the result of years of research and development by Cisco to reinvent networking for an age where network engineers managing hundreds of devices today will be expected to manage 1 million by 2020.

With the vast majority of the world's internet traffic running on Cisco networks, the company has used its unique position to capture and analyze this immensely valuable data by providing IT with insights to spot anomalies and anticipate issues in real time, without compromising privacy. By automating the edge of the network and embedding machine learning and analytics at a foundational level, Cisco is making the unmanageable manageable and allowing IT to focus on strategic business needs.

ATTACKERS TRY TO SNEAK A ZTORG TROJAN ONTO GOOGLE PLAY

Kaspersky Lab experts have discovered Ztorg apps on the Google Play Store that appear to show cybercriminals trying different ways to get their malware past security – in this case by installing their malicious code in stages and wrapping a Trojan SMS around an encrypted rooting Trojan. The attackers used the Trojan SMS to make money from victims through Premium-rate SMS while they waited to execute the rooting Trojan. The apps were downloaded more than 50,000 times since mid-May, 2017, but have now been removed from Google Play.

The determination of cybercriminals to infect Android devices with Ztorg malware through the Google Play Store shows no signs of slowing down, with attackers constantly adapting their tools and techniques to avoid discovery. In May 2017, Kaspersky Lab researchers discovered what appeared to be a standalone Ztorg variant, a Trojan SMS. On closer inspection, it turned out to contain an encrypted Ztorg rooting Trojan. The Ztorg SMS was found in two apps, a browser and a "noise detection" application.

The Ztorg SMS functionality allows the app to send premium rate SMS, delete incoming SMS and switch off sound.

GOOD NEWS! FACEBOOK TO ORDER FOOD FOR YOU

If you get hungry while killing that 'Like' button, and want to chill some more in the digital world instead of going out and getting food, then worry no more.

Facebook has come up with an 'Order Food' service under its main navigation menu. However, these services are only released for a select users in the United States.

The online food delivery industry is already pretty competitive in India. Facebook's Order Food service will either have to fend off the competition or facilitate the use of other food-ordering applications. Applications like FoodPanda, Fassos, Swiggy, Zomato and many more are already contending for the top position of a growing and vibrant sector in India.

Owing to its deal with existing food delivery services, it seems that Mark Zuckerberg's company plans to act as an aggregator instead of competitor to the existing players in the market. Since the service is at its nascent stage, we cannot assure if Facebook will roll out the feature across its global market.

ARTIFICIAL INTELLIGENCE FOR BETTER UNDERSTANDING OF MEDICAL IMAGES

BY: VIMAL DEV

A computer's ability to predict a patient's lifespan simply by looking at images of their organs is a step closer to becoming a reality, thanks to new research led by the University of Adelaide.

The research, now published in the Nature journal Scientific Reports, has implications for the early diagnosis of serious illness, and medical intervention.

Researchers from the University's School of Public Health and School of Computer Science, along with Australian and international collaborators, used artificial intelligence to analyse the medical imaging of 48 patients' chests. This computer-based analysis was able to predict which patients would die within five years, with 69% accuracy -- comparable to 'manual' predictions by clinicians.

This is the first study of its kind using medical images and artificial intelligence.

Predicting the future of a patient is useful because it may enable doctors to tailor treatments to the individual," says lead author Dr Luke Oakden-Rayner, a radiologist and PhD student with the University of Adelaide's School of Public Health.

The accurate assessment of biological age and the prediction of a patient's longevity has so far been limited by doctors' inability to look inside the body and measure the health of each organ.

This research has investigated the use of 'deep learning', a technique where computer systems can learn how to understand and analyse images.

Although for this study only a small sample of patients was used, our research suggests that the computer has learnt to recognise the complex imaging appearances of diseases, something that requires extensive training for human experts," Dr Oakden-Rayner says.

While the researchers could not identify exactly what the computer system was seeing in the images to make its predictions, the most confident predictions were made for patients with severe chronic diseases such as emphysema and congestive heart failure.

Instead of focusing on diagnosing diseases, the automated systems can predict medical outcomes in a way that doctors are not trained to do, by incorporating large volumes of data and detecting subtle patterns," Dr Oakden-Rayner says.

This research opens new avenues for the application of artificial intelligence technology in medical image analysis, and could offer new hope for the early detection of serious illness, requiring specific medical interventions."

The researchers hope to apply the same techniques to predict other important medical conditions, such as the onset of heart attacks.

WHAT IS ML?

BY SATWINDER SINGH

Machine Learning is a sub field of Artificial Intelligence. As its name suggest ML deals with the idea of construction and study of system that can learn from the data fed to the system. Machine learning focuses on the development of computer programs that can change when exposed to new data.

The process of machine learning is similar to that of data mining. Both systems search through data to look for patterns. However, instead of extracting data for human comprehension -- as is the case in data mining applications -- machine learning uses that data to detect patterns in data and adjust program actions accordingly. Machine learning algorithms are often categorized as being supervised or unsupervised. Supervised algorithms can apply what has been learned in the past to new data. Unsupervised algorithms can draw inferences from datasets.

CURRENT TRENDS IN ML

At Google I/O 2017, Google made one of the biggest announcement during the keynote session. Sunder Pichai, CEO of Google present the product called as Google Lens for the very first time that amounts to an entirely new way of searching the internet through your camera.

Google Lens is a smart phone application that let you search the things in real time through your camera view- finder. And based on the information collected by computer vision algorithm, it tells what the objects look like. For instance, if i am pointing the lens at Jalapenos then it will not only recognizes the Jalapenos but also tells Nutrition facts, Nearby stores where one can buy Jalapenos and so on. Moreover, it will extend the features of Google Assistant providing more realistic results. Release dates of Google lens is not announced yet. Most probably it will be launched in last quarter of 2017.

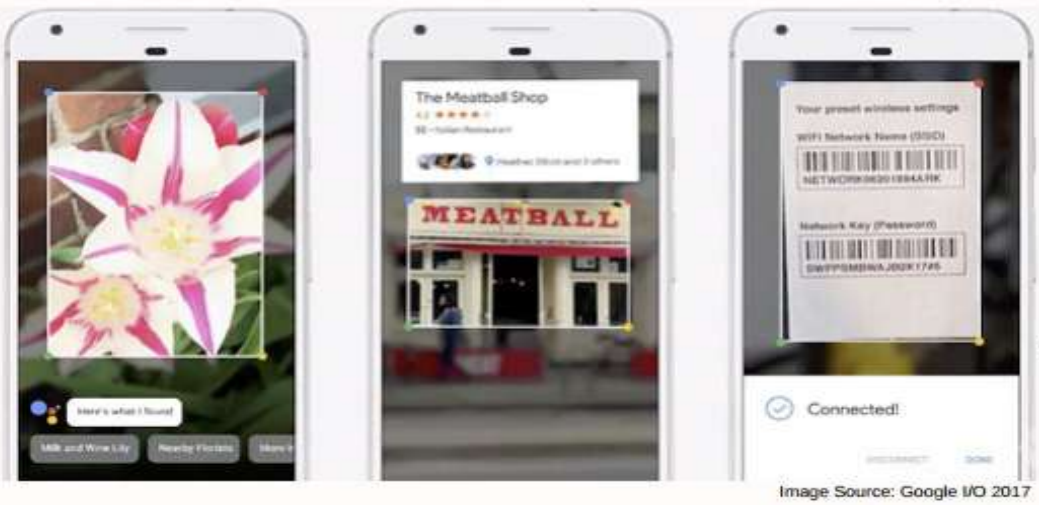


Image Source: Google I/O 2017

DUAL CAMERA IN SMART PHONES: EVERYTHING WE NEED KNOW

BY: NAVDEEP SINGH

How much better can smartphone cameras get? They're already really good — enough to replace point-and-shoots for most purposes. But manufacturers may have hit a ceiling when it comes to quality because of the traditional smartphone limitations: they have to keep thickness and weight down. The answer could be multiple cameras in one device

Dual Camera Setup and Technology

Depending on the type of secondary camera used, a dual camera can help you get a sharper image with more details, enable an ultra-wide-angle mode or simply help you take photos with a shallow depth of field to make the subject stand out. At times, the dual camera setup can also help you add 1x or 2x optical zoom to the phone (we're seeing this on Apple's iPhone 7 Plus and Asus' Zenfone 3 Zoom). Dual cameras were first introduced in the HTC Evo 3D smartphone way back in 2011. At the time, the dual camera was used to capture 3D images to work with the 3D screen of the HTC. Post that, manufacturers kept experimenting with the tech, but it never really took off. That is, until 2014, when the HTC one M8 arrived with its Duo camera setup and the impressive depth of field effect. In 2016, dual cameras have evolved to deliver excellent results — effectively overcoming space limitations in modern phones. Depending on the type of secondary camera used, a dual camera can help you get a sharper image with more details, enable an ultra-wide-angle mode or simply help you take photos with a shallow depth of field to make the subject stand out. At times, the dual camera setup can also help you add 1x or 2x optical zoom to the phone (we're seeing this on Apple's iPhone 7 Plus and Asus' Zenfone 3 Zoom).

Does this mean dual camera phones will always take better photos that others?

Not necessarily. While the dual camera system does offer excellent results, several other factors such as sensor size, pixel size, aperture and even post processing plays a big role in the result.

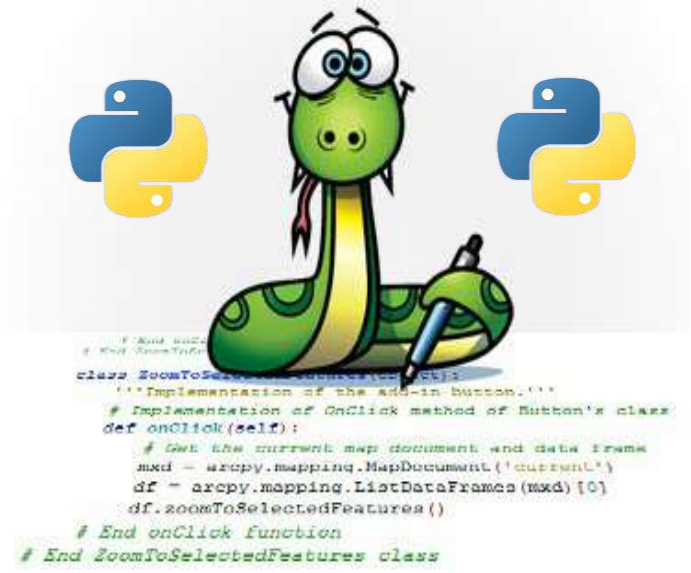
Smartphones like Samsung's Galaxy S7/S7 Edge, Google Pixel, OnePlus 3, LG G5, HTC 10 and few others will give you better results in low-light and better detail compared to many.

In 2015, Lenovo introduced a dual front camera in the Vibe S1 — it had a primary 8MP front camera and second 2MP front camera to capture better selfies. Vivo is the latest brand to launch a smartphone with dual front camera in the Vivo V5 plus. It has a 20MP + 8MP front camera and a dedicated Bokeh mode for the user to adjust the aperture as per preference for a better depth of field effect.

The first set of smartphones with dual cameras that arrived in India last year (Huawei P9, LG G5, iPhone 7 Plus) were premium offerings and thus priced above Rs 35,000. However, the tech has since appeared on entry-level smartphones like the Xolo Black. Towards the end of 2016, we saw the Honor 8 with dual cameras in a sub Rs 30,000 price. Now, in January 2017, dual cameras have made an appearance on budget smartphones like Coolpad Cool 1 and Honor 6x - both these phones deliver great photo result. Dual camera has been around from 2011 as mentioned earlier. While it may have taken its own sweet time to evolve, the technology seems to be ready for consumer use. With Apple joining the dual camera bandwagon and budget options coming-in from the Android quarters, we expect dual cameras to be one of the biggest smartphone trends in 2017.

WHY PYTHON IS IMPORTANT TO LEARN?

By: Ashima Mittal



Easy Syntax

Python's syntax is easy to learn, so both non-programmers and programmers can start programming right away.

Readability

Python's syntax is very clear, so it is easy to understand program code. (Python is often referred to as "executable pseudo-code" because its syntax mostly follows the conventions used by programmers to outline their ideas without the formal verbosity of code in most programming languages; in other words syntax of Python is almost identical to the simplified "pseudo-code" used by many programmers to prototype and describe their solution to other programmers. Thus Python can be used to prototype and test code which is later to be implemented in other programming language.

High-Level Language

Python looks more like a readable, human language than like a low-level language. This gives you the ability to program at a faster rate than a low-level language will allow you.

Object oriented programming

Object-oriented programming allows you to create data structures that can be re-used, which reduces the amount of repetitive work that you'll need to do. Programming languages usually define objects with namespaces, like class or def, and objects can edit themselves by using keyword, like this or self. Most modern programming languages are object-oriented (such as Java, C++, and C#) or have support for OOP features (such as Perl version 5 and later). Additionally object-oriented techniques can be used in the design of almost any non-trivial software and implemented in almost any programming or scripting language. (For example a number of Linux kernel features are "objects" which implement their own encapsulation of behaviour and data structive via pointers, specifically pointers to functions, in the C programming language). Python's support for object-oriented programming is one of its greatest benefits to new programmers because they will be encountering the same concepts and terminology in their work envirnment. If you ever decide to switch languages, or use any other for that fact, you'll have a significant chance that you'll be working with object-oriented programming.

Free Python and open-source

The Python Software Foundation distributes premade binaries that are freely available for use on all major operating systems called CPython. You can get CPython's source-code, too. Plus, you can modify the source code and distribute as allowed by CPython's license.

Cross-platform

Python runs on all major operating systems like Microsoft Windows, Linux, and Mac OS X.

Widely Supported

Python has an active support community with many web sites, mailing lists, and USENET "netnews" groups that attract a large number of knowledgeable and helpful contributes.

Safe

Python doesn't have pointers like other C-based languages, making it much more reliable. Along with that, errors never pass silently unless they're explicitly silenced. This allows you to see and read why the program crashed and where to correct your error.

Batteries Included

Python is famous for being the "batteries are included" language.There are over 300 standard library modules which contain modules and classes for a wide variety of programming tasks. For example the standard library contains modules for safely creating temporary files (named or anonymous), mapping files into memory (including use of shared and anonymous memory mappings), spawning and controlling sub-processes, compressing and decompressing files (compatible with gzip or PK-zip) and archives files (such as Unix/Linux "tar"), accessing indexed "DBM" (database) files, interfacing to various graphical user interfaces (such as the TK toolkit and the popular WxWindows multi-platform windowing system), parsing and maintaining CSV (comma-separated values) and ".cfg" or ".ini" configuration files (similar in syntax to the venerable WIN.INI files from MS-DOS and MS-Windows), for sending e-mail, fetching and parsing web pages, etc. It's possible, for example, to create a custom web server in Python using less than a dozen lines of code, and one of the standard libraries, of course.

Extensible

In addition to the standard libraries there are extensive collections of freely available add-on modules, libraries, frameworks, and tool-kits. These generally conform to similar standards and conventions; for example almost all of the database adapters (to talk to almost any client-server RDBMS engine such as MySQL, Postgres, Oracle, etc) conform to the Python DBAPI and thus can mostly be accessed using the same code. So it's usually easy to modify a Python program to support any database engine.

IF YOU LOVE WHATS APP BUT HAVE AN OLDER SMART PHONE THEN ITS TIME TO UPGRADE

BY: MONIKA SHARMA

For all the lovers of whats app who have a little older smart phone there comes a bad news. Whats app in a 2016 notification had said that it will stop its support of outdated devices including iPhone, Windows Phone, Nokia, Android and BlackBerry by December 2016 but they later changed their mind and continued giving support upto June 30, 2017 as told by them in a latest notification about the same. However, in December 2016, many other old smartphones did lose the support of the popular messaging application. But perhaps you do not have to worry as if specifications are taken into consideration then not too many devices will get affected, especially on iOS and Android. If your device still runs the iOS 6, WhatsApp has already ended its support and it is the same case with Windows 7 mobiles. But now, by the end of this month, the app will stop working on BlackBerry 10, BlackBerry OS, Nokia Symbian and Nokia S40 too. For Android, the support for WhatsApp ends for devices which are running on Android 2.1 and A droid 2.2 while for Windows it is devices with Windows 7 as their OS. When it comes to Apple devices, the iPhone 3GS and iPhones which still run on iOS 6. There are way too fewer phones with the Android specifications. According to the Google's dashboard in November this year, only 0.1 percent smartphones still run on Android Froyo. So if you have an Android IceCream Sandwich or the Android Jelly Bean then you need not worry as of now. Apple's data from October this year, suggest that about 8 percent of smartphones run on iOS below the iOS9 version.

WhatsApp in its previous blog had said that the support for the messaging app will end on many smartphones because they do not 'offer the kind of capabilities' needed by it to expand the features of the app. WhatsApp, with more than a billion monthly active users, has become the world's most popular instant messaging app.

These devices will not run WhatsApp anymore:

- **BlackBerry OS and BlackBerry 10**
- **Nokia S40**
- **Nokia Symbian S60**
- **Android 2.1 and Android 2.2**
- **Windows Phone 7**
- **iPhone 3GS/iOS 6**

iOS 11

A giant step for iPhone. A monumental leap for iPad.

iOS 11 sets a new standard for what is already the world's most advanced mobile operating system. It makes iPhone better than before. It makes iPad more capable than ever. And now it opens up both to amazing possibilities for augmented reality in games and apps. With iOS 11, iPhone and iPad are the most powerful, personal and intelligent devices they've ever been.

Updated design elements:-

Many built-in apps have been refined with darker lines and bolder fonts. Some apps, like Phone and Calculator have new designs with darker fonts and round buttons sans borders, while others, like Reminders and Calendar, remain entirely unchanged. Still others, like Messages, Podcasts, and Apple News, feature smaller design tweaks. Important UI elements like the Control Center and the Lock screen have seen the most significant updates.

Control Center:-

In iOS 10, Apple split the Control Center, accessed by swiping upwards from the bottom of the display, into multiple windows. In iOS 11, it's back to a single consolidated window and it has an entirely new look with bubble-style icons. There are two top sections for basic networking options and Apple Music controls, plus sliders for volume and brightness. Smaller icons are available for rotation lock, Do Not Disturb, and other options.

Drag and Drop:-

A new Drag and Drop feature allows text, links, photos, files, and more to be transferred between one app to another without the need to bother with in-app share sheets. A tap and a hold with a finger initiates a drag action, while another finger can be used to bring up the Dock or access the Home screen to open up another app where the item being dragged can be dropped.

Siri improvements:-

Siri has been updated with more realistic male and female voices that are designed to more closely mimic natural human speech. Apple says Siri's new voice options are powered by deep learning for better pronunciation and a more expressive voice.

Peer-to-peer Apple Pay:-

Messages is also gaining support for a new person-to-person Apple Pay feature that lets you send money to friends and family right through an iMessage, and iMessages themselves are now stored in iCloud, sync across devices, and take up less storage space.

iPad Dock:-

For the iPad, Apple has introduced a persistent Dock at the bottom of the display which makes it easy to launch and switch between apps, and there's a new App Switcher that's similar to Mission Control on the Mac, letting you see everything you're working on at a glance.

ARKit:-

Apple is introducing new APIs, including CoreML and ARKit. CoreML provides machine learning tools to developers, while ARKit lets developers build complex and richly detailed augmented reality features into their apps.

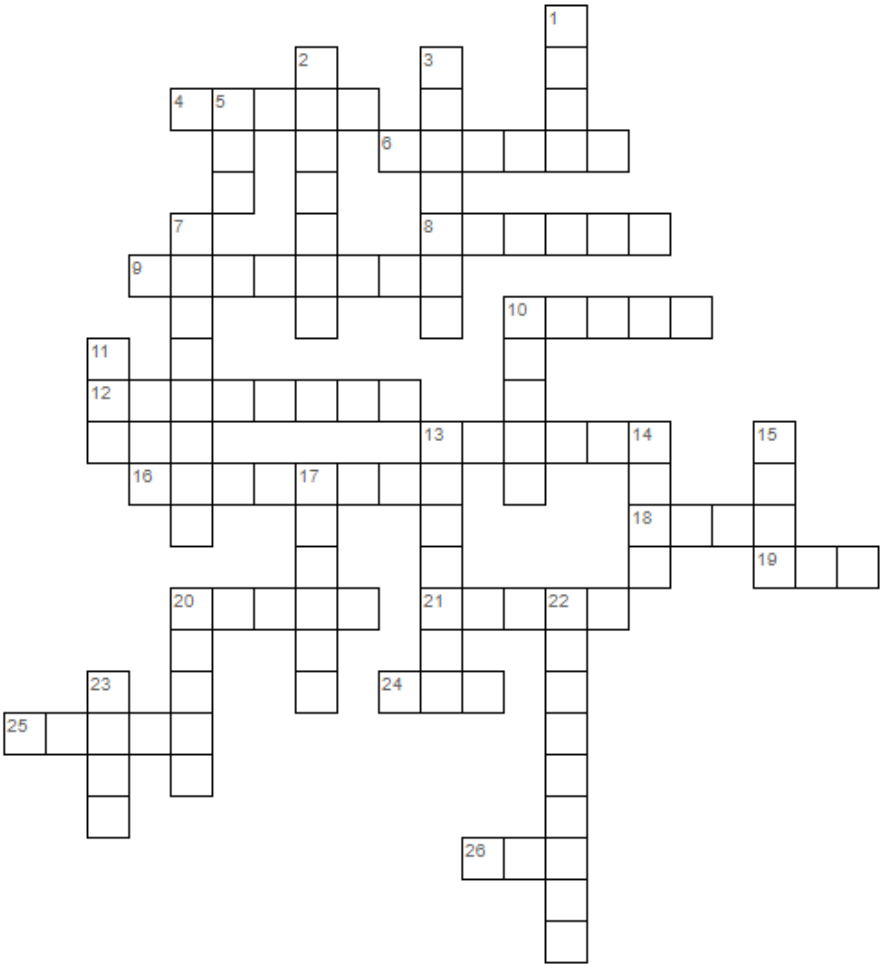
Do Not Disturb While Driving:-

Do Not Disturb has been expanded with a new "Do Not Disturb While Driving" feature that mutes all incoming notifications on an iPhone when it's connected to a car's Bluetooth or WiFi. The feature is meant to cut down on distracted driving.

WHAT'S NEW

- Updated design elements
- Revamped Control Center
- Drag and Drop
- iPad Dock
- Siri improvements
- Peer-to-peer Apple Pay
- Do Not Disturb driving mode
- ARKit

CROSSWORDS



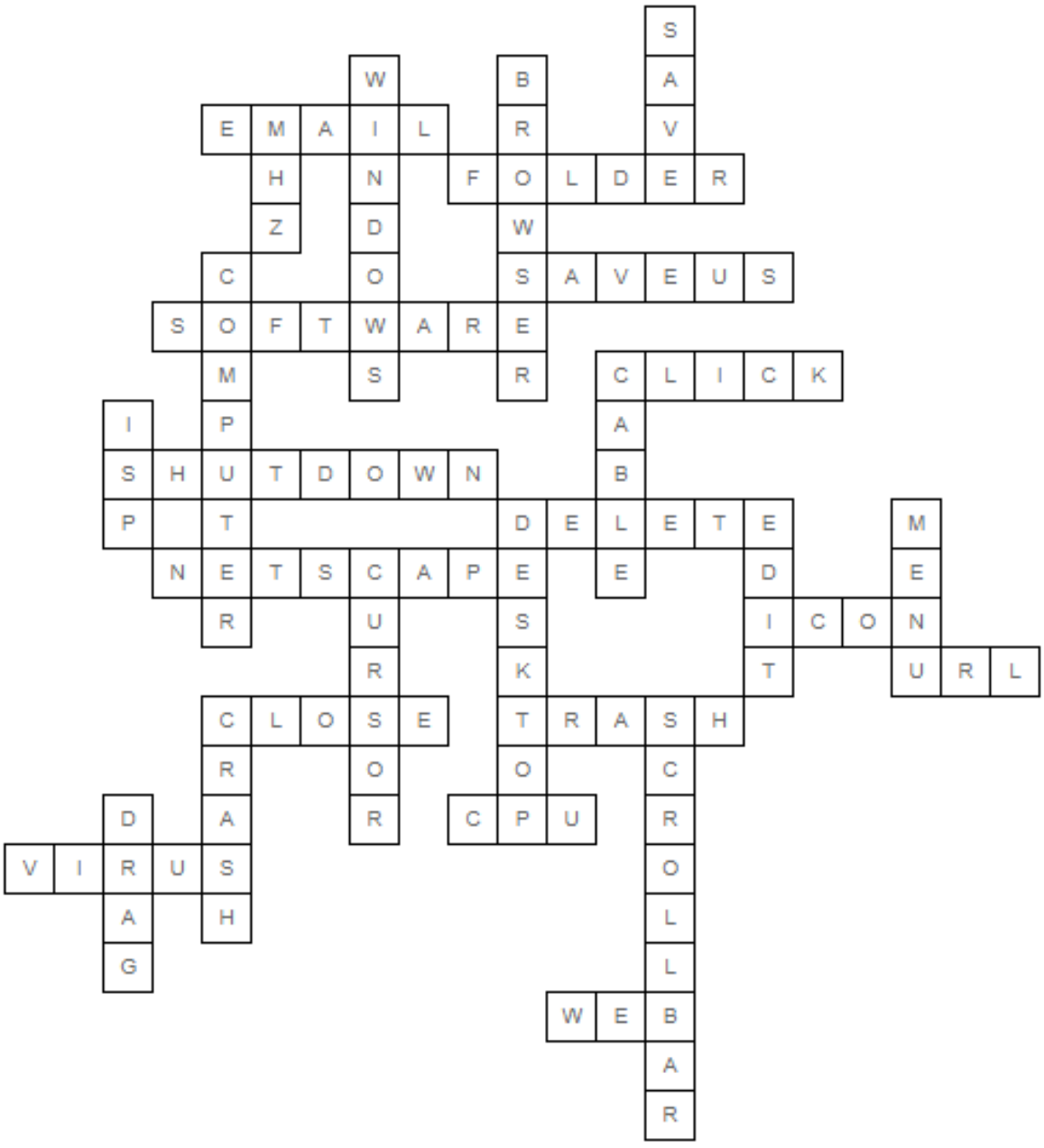
Across

4 When you send a letter to someone
6 Allows you to organize files and other folders.
8 Give the file a name and/or store the file in a certain place.
9 Instructions that tell the computer what to do.
10 To select an object by pressing the mouse button when the cursor is pointing to the required menu option, icon or hypertext link.
12 To quit all applications and turn off the computer.
13 To remove an item of data from a file or to remove a file from the disk.
16 One of the major browsers, that is used on the Internet.
18 In a graphical user interface (GUI), a small, pictorial, on screen representation of an object, such as a document, program, folder or disk drive.
19 Abbreviation for Uniform Resource Locator, which is an address on the World Wide Web.
20 To close a window that has been opened for viewing and / or editing.
21 Place where you put files and folders that you want to delete or get rid of.
24 the main chip on the computer that makes everything go.
25 A file or program that can be uploaded to your computer from the Internet or disk. This file or program is uploaded without your knowledge and is intended to do damage to your computer.
26 WWW stands for the World Wide

Down

1 Tell the computer to create a file on disk that has the information you've put into the document (usually typing).
2 The most widely used operating system for personal computers from Microsoft.
3 A program that you use to view pages on the Internet.
5 This stands for MegaHertz.
7 A general-purpose machine that processes data according to a set of instructions that are stored internally either temporarily or permanently.
10 This kind of Internet connection is much faster than dial up Internet access. You can also watch tv on it.
11 Abbreviation for Internet Service Provider
13 An on-screen representation of a desktop such as used in the Macintosh and Windows operating systems.
14 To make a change to existing data.
15 Displays a list of commands, some with images next to them.
17 The name of the arrow (or other shape) that tracks across the screen as you move the mouse (or other pointing device) around.
20 Your computer or application no longer works correctly and so you 'loose' all the work you've done since the last time you saved.
22 Allows you to move around through your document.
23 To move an object on screen in which its complete movement is visible from starting location to destination.

SOLUTION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