

WE THINK ABOUT YOUR FUTURE

A cyber attack, just a week ago, originally targeting a single company is now being described by experts as one of the biggest Distributed Denial of Service (DDoS) attacks in Internet history. The assault, which recently began impacting elements of the Internet's physical infrastructure, has been dragging down Internet speeds all over the world.

In a common DDoS attack, hackers use thousands of computers to send bogus traffic at a particular server in the hopes of overloading it. The computers involved in DDoS attacks have often been previously infected with malware gave a hacker control of the machine without the legitimate owner's knowledge.

In India, it happened in the beginning of this year when the mother of all sensitive organizations- the Defence Research and Development Organization (DRDO) was been hacked by group of hackers from China. Yes, we are talking about attacks in the cyber world, the most recent one being on DRDO, and which is being touted as the biggest ever attack on critical systems nestling our country's most sensitive information

The information that was extracted as a result of this attack has been traced to to a server in Guangdong in China.



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A **hacker** is a person who attempts to find computer security vulnerabilities and exploit them for personal financial gain or other malicious reasons. Hackers can inflict major damage on both individual computer users and large organizations by stealing personal financial information, compromising the security of major systems, or shutting down or altering the function of websites and networks.

Hacker Vs. Ethical Hacker

An **ethical hacker** is a computer and network expert who attacks a security system on behalf of its owners, seeking vulnerabilities that a malicious hacker could exploit. To test a security system, ethical hackers use the same methods as their less principled counterparts, but report problems instead of taking advantage of them.



Shubham Jain

10 Steps for being professional

- 1. Know about the pros and cons** ! of different types of hackers, such as White Hat, Grey Hat and Black Hat hackers.
- 2. Seek out job opportunities for ethical hackers.** There are lucrative jobs available in government organizations, banks, financial institutions, military establishments and private companies.
- 3. Analyze the basic requirements to become an ethical hacker.** Try to find out the areas where will you need to work really hard.
- 4. Decide the area where you would prefer to work primarily with hardware or software.** Do not think of specializing in both the areas. Though knowledge of both is required but the decision will help you to know where to begin. You must be aware of every function, every component of computer on which you will have to work on.
- 5. Evaluate your strengths and interests and gain some programming knowledge such as C, or Java.** These programming languages can be learned by taking formal programming courses and reading books. It will help you to read and write code.
- 6. Learn the UNIX operating system as it is regarded as the original operating system built by hackers.** Also learn about Windows and Mac OS.
- 7. Take a professional course.** There are a wide variety of courses available for IT security professionals in "Ethical Hacking" or "Internet Security" which would help you to expand your knowledge in ethical hacking.
- 8. Do the experiments on your own to know the actual happening of a situation.**
- 9. Start experimenting with hardware and software to learn how to take control of the situations and how to prevent a computer from getting hacked.**
- 10. Get certified as it would help you to succeed in the vanguard of your profession.**

Dr. Sarabhai was considered as the Father of the Indian space program; He was a great institution builder and established or helped to establish a large number of institutions in diverse fields. He was instrumental in establishing the Physical Research Laboratory (PRL) in Ahmedabad : after returning from Cambridge to an independent India in 1947, he persuaded charitable trusts controlled by his family and friends to endow a research institution near home in Ahmedabad. Thus, Vikram Sarabhai founded the Physical Research Laboratory (PRL) in Ahmedabad on November 11, 1947. He was only 28 at that time. Sarabhai was a creator and cultivator of institutions and PRL was the first step in that direction. Vikram Sarabhai served of PRL from 1966-1971. He was also Chairman of the Atomic Energy Commission. He along with other Ahmedabad-based industrialists played a major role in the creation of the Indian Institute of Management, Ahmedabad. The establishment of the Indian Space Research Organization (ISRO) was one of his greatest achievements. He successfully convinced the government of the importance of a space programme for a developing country like India after the Russian Sputnik launch.



Born	12 August 1919 Ahmedabad, India
Died	30 December 1971 (aged 52) Halcyon Cattle, Kovaarupatel76 lam inThiruvananthapuram, Kerala
Fields	Physics
Institutions	Indian Space Research Organisation Physical Research Laboratory
Alma mater	University of Cambridge
Doctoral advisor	Sir C. V. Raman
Known for	Indian space program IIM Ahmedabad
Notable awards	Padma Bhushan (1966) Padma Vibhushan(posthumously) (1972)

“Innovation distinguishes between a leader and a follower.” Steve Jobs

“NOW ALARM WILL INDICATE YOU THAT GAS WILL EMPTY VERY SOON.”



Now a day, Gas cylinder is the basic need of every family. If the alarm is indicate us before the cylinder is empty then we can manage the other cylinder before it emptied. The students named **NAITIK SHAH** and **SALIM PATEL** of final year mechanical from Silver oak college of engineering and technology has made a mechanical project which helps the middle family to manage cylinders. It is very economical, safe and best project.

The projects prepared by students have an alarm fitted with a weighting scale which indicates the user when the cylinder contains 2 kilograms of LPG. So by this indication housewife can understand that the cylinder will be empty within one or two days. This project is very helpful to small cities and villages. This is only educational project. The guide **Mr. REEPEN SHAH** said that we have prepared this project by centering the people of small cities and villages. And we are trying to make more projects for them.

“The students of degree mechanical has invent a instrument by considering LPG usage”

Google Glass could change the way we look into the future –and, change the way we see in the future. The very near future (as early as 2014).



Google’s Project Glass is in the R&D stages at the time of this writing.

It’s an attempt to create head-mounted display technology that the wearer will use to “augment reality”. The Google Glass HMD is to be like a thin pair of glasses which would have the capabilities of a smartphone but be hands-free (similar to a Bluetooth telephone) and display information on the inside of one of the lenses. Interacting with the HMD would be facilitated by Google’s own Android technology and will be 3G and 4G enabled.

Interaction with and navigation of the Internet would be done via natural-voice spoken commands. Accessing Google Maps, receiving and reading e-mails, interacting on social media, looking up information, and all other Internet-driven smartphone functions would be do-able with Google Glass HMDs. At the time of this writing, the projected retail price, when the HMDs are first put on the market, is \$1,500 USD (approx. 81500Rs).



Ukshil Jain

World's highest rail bridge to come up across Chenab river

The **Chenab Bridge** is an arch bridge under construction in India. It spans the Chenab River between Bakkal and Kauri, in Reasi district of Jammu and Kashmir. When completed, the bridge will be 1,263 m (4,144 ft) long, with a 480 m (1,570 ft) trussed arch span 359 m (1,178 ft) above the river Chenab and a 650 m (2,130 ft) long viaduct on the Kauri side.

The bridge is part of several bridges and tunnels which makes up the Katra-Laole Section of the USBRL Project in Jammu and Kashmir. Another, smaller, arch bridge in the link will be the 657 m (2,156 ft) long, 189 m (620 ft) high Anji Khad bridge between Katra and Reasi.

The Chenab Bridge was originally scheduled to be completed in December 2009. However, in September 2008 it was announced that the Chenab bridge had been cancelled due to fears over its stability and safety. Work on the bridge restarted in 2010 and once construction is completed in 2015 the Chenab Bridge is expected to be the world's highest rail bridge.

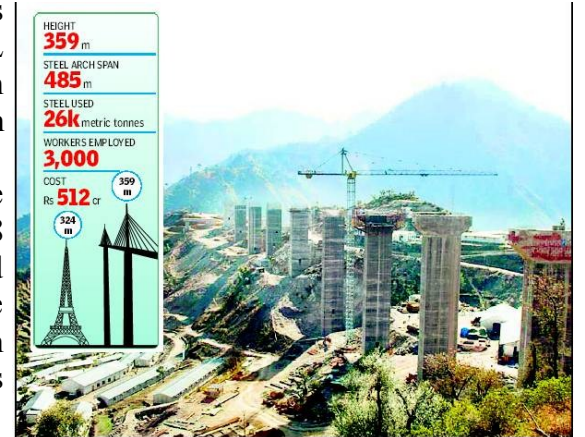
Special considerations

The structural concept of the bridge over the river Chenab is a large span arch over the river, with approach viaducts on either side. The proposed arch is a two-ribbed arch, fabricated from large steel trusses. The chords of the trusses will be sealed steel boxes, filled with concrete to assist in controlling wind-induced forces on the bridge. Another advantage of concrete filling is that internal painting will not be required. The boxes will be stiffened internally.

The numbers of bearings have been minimized, particularly on the approach viaduct, through the use of continuous construction. This is advantageous, as it reduces the maintenance and inspection efforts, and improves the riding quality. The viaduct piers are of concrete, while the piers near the arch are in steel.

The design of major arch rail bridges requires considerations of a number of additional parameters, such as fatigue, global stability, second order effects, composite action, etc. It also requires that such a bridge is designed to achieve a consistent level of reliability for all load cases, and that the design standards match the construction standards.

The Indian Railway Standards (IRS) is primarily intended for simply supported bridges with spans up to 100m (although these have been successfully used for higher spans up to 154m). The spans proposed for this bridge greatly exceed this limit, and are continuous. In order to provide these additional features, it will be necessary to augment the design with additional international codes and standards that enable the designer to produce a safe design.



Chenab Bridge	
Carries	Kashmir Railway
Crosses	Chenab River between Bakkal and Kauri.
Design	arch bridge
Material	steel and concrete
Total length	1,263 m (4,144 ft)
Height	(river bed to formation) 359 m (1,178 ft)
Longest span	480 m (1,570 ft)
Number of spans	17
Coordinates	33°9'3"N 74°52'59"E



Vidhi Bhavsar

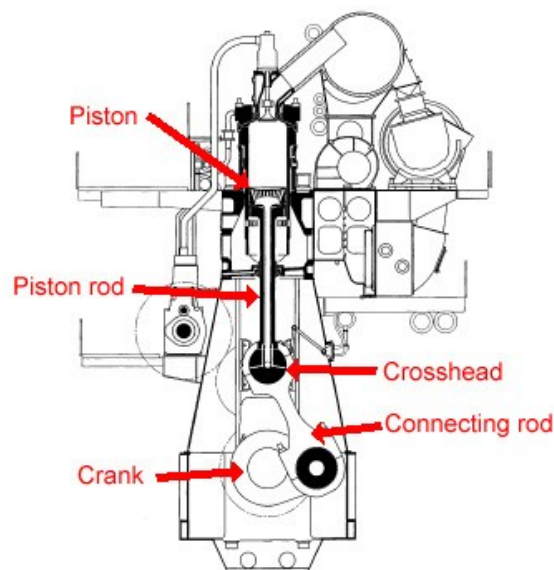
Ref. - Wikipedia

Most Powerful Diesel Engine in World

If the Seven Wonders of the World was updated for the 21st century, The Wartsila-Sulzer RTA96-C turbocharged two-stroke diesel engine could be a contender. If you are a student of the internal combustion engine in all its wondrous configurations, then feast your eyes on this set of numbers which outline the truly astounding engineering feat. It is the most powerful and most efficient engine in the world today.

Designed to provide the motive force for a variety of supertankers and container ships, it comes in 6 cylinder in-line through to a whopping 14 cylinder version. Each cylinder displaces 1820 liters and produces 7780 horsepower. Total displacement comes out to 25,480 liters for the 14-cylinder version. At a **length** of 89 feet and a **height** of 44 feet, the total engine **weight** is 2300 tons.

Despite the large amounts of power produced by these engines, surprisingly low wear rates have been achieved. Diametral cylinder liner wear is in the order of only about 0.03 mm/1000 hours.



The internals of this engine are a bit different than most automotive engines. The top of the connecting rod is not attached directly to the piston. The top of the connecting rod attaches to a "crosshead" which rides in guide channels. A long piston rod then connects the crosshead to the piston. I assume this is done so the the sideways forces produced by the connecting rod are absorbed by the crosshead and not by the piston. Those sideways forces are what makes the cylinders in an auto en-

gine get oval-shaped over time.

Fuel consumption at maximum economy is 0.260 lbs/hp/hour. Comparatively, most automotive and small aircraft engines can only achieve BSFC figures in the 0.40-0.60 lbs/hp/hr range and 25-30% thermal efficiency range.



Details	
Configuration	Turbocharged two-stroke diesel straight engine, 14 cylinders
Bore	960 mm
Stroke	2,500 mm
Displacement	1,820 liters/cylinder
Engine speed	22–102 RPM
Torque	7,603,850 Newton meters@ 102 rpm
Mean effective pressure	1.96 MPa @ full load,
Mean piston speed	8.5 m/s
Specific fuel consumption	171 g/(kW·h)
Power	7,670 BHP/cylinder, 108,920 BHP total
fuel injected per cylinder per cycle	~ 160 g @ full load
Crankshaft weight	300 tones



Jimit Vyas

Maglev Train Levitation

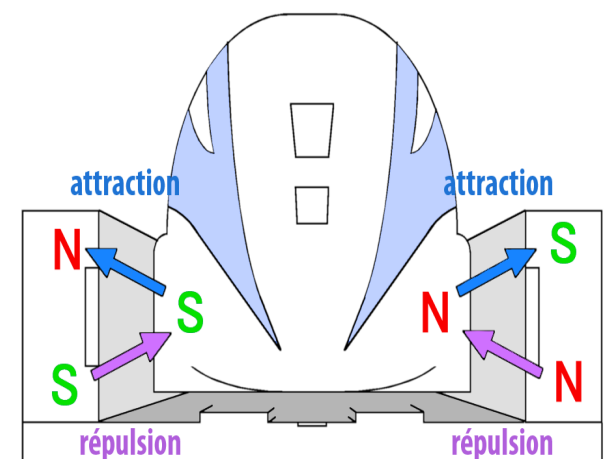
The magnetic levitation trains exclude influences of the friction caused by ordinary rail-wheel contact, so the engineers should worry only about the friction from the air. So the aerodynamics is the reason why this train looks so futuristic. The front car is 92 ft (28 m) long, the aerodynamic nose took the front 45 feet of it. Behind that is seating for 24 passengers, and the rest of the train will consist of another 13 cars, with a total capacity for 864 seating passengers.

Maglev trains use magnetic repulsion to lift the train above the track, eliminating friction. The picture above shows the first production prototype of the train that will carry passengers between Tokyo and Nagoya. Like any maglev, the train needs a special track that allows it to levitate slightly, negating the majority of the friction that traditional trains have to overcome and making amazing speeds possible. It gets top speed of 311 mph, or 500 km/h. With such speed the distance between Tokyo and Nagoya will be passed in 40 minutes, which is twice faster than a conventional bullet train.

Building the new section of maglev railway will start in 2014, but this train will start carrying its first passengers in 2027. But building won't stop and till 2045 Japan's maglev railway will be extended to Osaka.



Levitation (from Latin levitas "lightness") is the process by which an object is suspended by a physical force against gravity, in a stable position without solid physical contact. A number of different techniques have been developed to levitate matter, including the aerodynamic, magnetic, acoustic, electromagnetic, electrostatic, gas film, and optical levitation methods.



Ishan Pandya

HACK IT

Unhide the virus effected Hidden files.

Steps 1 1. Go to Start > Run > type cmd

2. Dos will open type cd\

3. Now type the drive letter in which you want to Unhide the files lets suppose in my case its E: this will open the E: drive

4. If you want to see all hidden files and folders type E:\>dir/ah

5. Now type attrib *. -h -s /s /d

6. Now close cmd using exit command

Steps 2 (folder by folder)

1. Go to Start > Run > type cmd

2. Dos will open type cd\

3. Now type the drive letter in which you want to Unhide the files lets suppose in my case its E: this will open the E: drive

4. If you want to see all hidden files and folders

type E:\>dir/ah (*you will now see the files/folders with hidden attributes)

5. Type “attrib [name of file/folder] -r -a -s -h” if you’re going to unhide files, you should type the whole name plus the extension (example: attrib banner.psd -r -a -s -h)

6. Now check you drive.. it should be there



Dhruv Saidava

Robotics

1st Prize in VGEC, SAL, LJIT, Saffrony, GIT “Hat-Trick + 2”

Rishi Patel	Rakesh Patel
Darshit	Milan Raval
Parth Patel	Jimit Vyas
Dhruv Patel	Akshay Patel
Mehul Jogani	



आगे बढ़ने का जड़बा तो तेरा आज भी जिंदा है ।
तू कर सकता है, ये तू भी जानता है ।
तू आगे बढ़ सकता है ये तू भी जानता है।
रोने से क्या होगा?गिरने का दर्द तो कम न होगा।
ये आंसू पोछ और आगे बढ़।
इतना क्या सोचना?सफर तारो का तो तेरा आज भी अधुरा है।
और फिर , आगे बढ़ने का जड़बा तो तेरा आज भी जिन्दा है ।

तमन्ना ओ की लेहरो को क्यूँ तू दिल में समेट रहा है?
आंधी ओ से डर के क्यूँ तू रुक रहा है?
पीछे देखने से मुश्किल कम तो न होगी।
किस्मत को कोसने से परेशानी खत्म तो न होगी ।
आखिर तुझे ही तो अपना रास्ता बनाना है ।
और फिर ,आगे बढ़ने का जड़बा तो तेरा आज भी जिन्दा है।

गुस्से को अपने बाझुओ में समां।
तू जिद को जरा और मजबूत बना ।
हर मुश्किल के सामने डंट कर खड़ा रहे ।
खुद की आग में तू हर पल जलता रहे।
पसीने से हसरत की प्यास को और बढ़ा ।
खुद को चमकाने खुद में तू इतना डूब जा ,
की खुद की राह में तू खुद को ही एक पल के लिए भूल जा ।
तुजे हर पल ऊपर उठना है ।
आसमान को जो तुझे छुना है।
दिन में भी तुजे चमकना है ।
तुझे और, और आगे बढ़ना है।
और फिर ,आगे बढ़ने का जड़बा तो तेरा आज भी जिन्दा है ।



Gaurav Hardikar

Suggestion : References can be found on SOCET corner. Your suggestions are most welcome. If any achievements of yours has been left out, then please contact us so that we can publish the same in next edition. For any quires and submitting your article in next edition, contact us at SOCET corner. socetcorner@gmail.com

Social Media Landscape



Google Docs

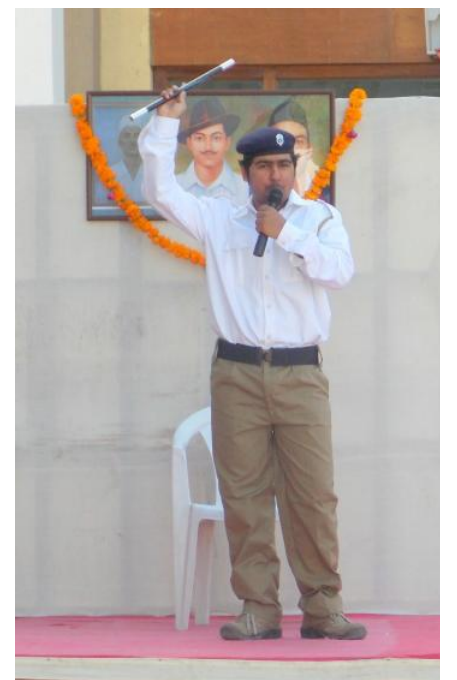
is a free web-based officesuite offered by Google within its Google Drive service. It also was a storage service but has since been replaced by Google Drive It allows users to create and edit documents online while collaborating in real-time with other users. Google Docs combines the features of Writely and Spreadsheets with a presentation program incorporating technology designed by Tonic Systems.



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SOFTWARE of the month : EDRAW MAX

Edraw Max enables students, teachers and business professionals to reliably create and publish kinds of diagrams to represent any ideas. | www.edrawsoft.com



Martyrs' Day on 23rd March :- Song, Drama and Speech was arrange by students .

“Some people dream of great accomplishments, while others stay awake and do them.”