

लड़की की व्यथा

~एकजोत कौर (CRN: 2099004)

कभी कभी मैं बिखर क्यों जाती हूँ?
स्ट्रॉंग होते हुए भी डर सी जाती हू।
रास्ते पर चलते कोई घूर रहा है, महसूस क्यों होता है?
पीछे देखने पर अँधेरा भी क्यों द्वारा सा जाता है?

"इधर उधर मत रुकना, सीधा घर आना"
मुझे क्यों बोल दिया जाता है?
"इधर उधर मत तंग करना!"
लड़कों को क्यों नहीं समझाया जाता है?

मैं सिर्फ घर ही नहीं, ऑफिस भी संभल सकती हूँ
अरे तुम मौका तो दो, गाड़ी क्या, पूरी दुनिया घुमा सकती हूँ!

"क्या चाहती हो ज़िन्दगी में?" क्यों पूछा नहीं कभी मुझसे?
"शादी को 'द ऐंडगेम' " क्यों बना दी तुमने?

क्यों बचपन से ही पराया धन बता दी जाती हूँ?
अरे अपना बना कर तो देखो, मैं कितनी ऊँचाइयाँ छू सकती हूँ!

पढ़ाई करने का हक सिर्फ लड़कों को ही क्यों है ?
भगवन ने तो सबको एक जैसा बनाया था ना!
तोह यह भेदभाव क्यों है?

अरे मैं भी इंसान हूँ!
मेरे अंदर भी जज़्बात हैं!

काश एक दिन मैं भी चैन की सांस ले सकूँ!
न्यूज़ में आज ऐसी कोई हैडलाइन नहीं है ये एहसास ले सकूँ!!

हम जो आदमी हैं

~राहुल कुमार (CRN: 2115108)

हम जो आदमी हैं अब
पहले कभी समंदर होंगे मचल गए होंगे
हम जो आदमी हैं अब
पहले कभी शाम होंगे ढल गए होंगे
हम जो आदमी हैं अब
पहले कभी जाम होंगे छलक गए होंगे
हम जो आदमी हैं अब
पहले कभी राग होंगे सुर से भटक गए होंगे
हम जो आदमी हैं अब
पहले कभी बेदाग होंगे कहीं रंग गए होंगे
हम जो आदमी हैं अब
पहले कभी किनारे पर होंगे फिसल गए होंगे
मसलन हम वोह आदमी हैं अब
जो कल खाक थे और कल राख होंगे।

रुक गया

~राहुल कुमार (CRN: 2115108)

जो रुक गया वोह क्या मुसाफ़िर
जो रुक गया तोह क्या समय है
हम थोड़ा ठहरे फिर चल दिए
अब जो रुके तो बस प्रलय है
वोह रेत का था इक बवंडर
छुआ जो मैंने मिट गई लकीरें
मैं फिर से ठहरा और वो भी ठहरा
फिर रेत पर ही लिख दीं तकदीरें
सब रुक गया जो दिख रहा
जो चल रहीं वोह बस हवाएं
अपनी मर्ज़ी से क्या चलें
इस वज़ीर-ए-शत्रंज की चालें?

एक दोस्ती ऐसी भी

~हरमनदीप (CRN: 2104162)

हर पल मैं जो सोचती
कहाँ गयी वोह दोस्ती
अपने से जो लगते थे
बड़े बड़े वादे जो करते थे
शायद मैं नासमझ थी
कुछ ज्यादा ही मासुम सी
अपना जिहने मैं मानती
मुश्किलें उनसे मैं बांटती
पहचान ही न सकी
ठहरे वोह तो अजनबी
अजनबी में भी दिल होगा
पर यह तो है उनसे भी जालिम तोहफा
जो खुदा ने मुझे है सौंपा
है नहीं मुझे कोई गिला
बस असली चेहरा अब मिला
मेरी परेशानियों का तमाशा बनाना
हसीं मजाक में सब को बताना
तुम से क्या ही गिला
हे खुदा मैं इनसे क्यों ही मिला
तुम से तो बगैरत ही अच्छे हैं
कम से कम इंसानियत तो समझते हैं
मैं चाहे तुम्हे माफ़ भी कर दूँ पर ईश्वरसब कुछ देखता है
एक बार खुद सोचना किसी और की जगह पर कैसा महसूस होता है
किसी और की जगह पर कैसा महसूस होता है

नारी

~राहुल सचदेवा (CRN: 2215145)

वो मां भी और पत्नी भी, बहु भी और भाभी भी
बहन भी और बेटा भी, दादी भी और नानी भी
सरस्वती भी और लक्ष्मी भी, दुर्गा भी और काली भी

दासी भी और रानी भी, सुनाती वो कहानी भी
दुख दर्द की सानी भी, स्वतंत्रता सेनानी भी
ज्ञानी भी विज्ञानी भी, कभी कभी दीवानी भी
तूने अगर छेड़खानी की, तो जानती वो पहलवानी भी

न परवाह उसे जमाने की, कर लेती जो वो ठानेगी
जय हो भारत की नारी की, जय हो भारत की नारी की

तुझे यह क्यों लगता कि वो कोई काम न करती
सच तो यह है कि उसके बिना चल सकती न यह धरती
नारी में है शक्ति, नारी में है भक्ति
नारी है तो आज है, नारी पर हमें नाज है
नारी में कुछ खास है, रोज वो रचती इतिहास है

सच बताऊं तो दिल से मेरा यही कहना है
नारी सिर्फ नारी नहीं दुनिया का यह गहना है
नारी सिर्फ नारी नहीं दुनिया का यह गहना है

हम समझते हैं उसके कामों को आसान रे
हम ले जाते हैं उसकी बातों को मजाक में
लेकिन असल में हम उसकी मेहनत से अनजान रे
महिलाएं न हैं कम बल्कि सबसे बेहतर वो कई काम में
वो क्या क्या बन सकती है न उसका तुझे अनुमान रे

वही रानी लक्ष्मीबाई, वो आज़ादी की जब ठान ले
वही पीवी सिंधू, जो मेडल जीतती देश की शान में
वही अरुणिमा सिन्हा, जो चढ़ती है पहाड़ पे
वही शकुंतला देवी, जो कंप्यूटर को पछाड़ दे
वही हरमनप्रीत कौर, जो खेलती है जी-जान से
वही मदर टेरेसा, जो मदद करती है प्रदान रे
वही लता मंगेशकर, जिसकी आवाज़ है महान रे
वही किरण बेदी, जब देश की सुरक्षा की वो ठान ले
वही कल्पना चावला, जिसकी अंतरिक्ष तक उड़ान रे
वही इंदिरा गांधी, जो देश की राजनीति को संभाल ले
वही पुनीता अरोड़ा, जो लड़ती देश के सम्मान में
वही सविताबाई फूले, जो देती हमको ज्ञान रे
वही प्रियंका चोपड़ा, जिसकी कलाकारी सराहे सारा जहान रे

हमारे देश की नारी को दिल से सलाम रे
तू है सच में महान रे, तुम्हें दिल से सलाम रे
तुम्हें दिल से सलाम रे, तुम्हें दिल से सलाम रे

सच बताऊं तो दिल से मेरा यही कहना है
नारी सिर्फ नारी नहीं दुनिया का यह गहना है

गुरु

~अनिरुद्ध वर्मा (CRN: 2030009)

सबसे पहले सब गुरुजनों को मेरा प्रणाम और आदाब,
एक गुरु हैं ज्ञान का सागर और हम हैं जैसे एक तालाब,
हमारी जिंदगी के हर प्रश्न का रहता हैं उनके पास जवाब,
माता-पिता ही हैं पहले गुरु जिनके बिना जीवन है सैलाब,
हर हाल में पाला हमें और रखा खुश जैसे हम एक नवाब,
हमें दिया सबसे श्रेष्ठ ज्ञान और बनाई हमारी जिंदगी नायाब,
सिखाया हमें हर मुश्किलों से लड़कर ही पूरे होते हैं ख्वाब ।

कहते हैं... हम सबकी सबसे अच्छी दोस्त होती है किताब,
पर अच्छी किताबों का मित्र एक शिक्षक होता है जनाब,
गुरु ही तो हमारी किताबों से दोस्ती होने नहीं देता खराब,
और जो साथ में सिखाए हमें नैतिकता वही है गुरु लाजवाब,
एक गुरु की डांट और आशीर्वाद से ही हम बनते कामयाब,
जैसे नीचे से टहनी पर होते कांटे ऊंचाई पर खिलता गुलाब,
और शिक्षकों के नाम होता है शिष्य की जिंदगी का खिताब ।

मेरा देश, भारत !

~अनिरुद्ध वर्मा (CRN: 2030009)

जिस देश में सुकून और मज़े से रहते हों उस देश का करो सम्मान,
क्योंकि हमारी रक्षा के लिए ही अपनी जिंदगी दाव पर लगाते हैं
जवान,

और महफूज़ रखते तिरंगे की शान को चाहे देनी पड़े उन्हें अपनी
जान,

सीने में लिए साहस की दीवार जिसे हिला न सका कोई भी तुफान
जिस देश में नहीं रहते हों उस देश का भूल से भी न करों अपमान,
चाहे देश, धर्म, भाषा अलग हो पर सबसे पहले तो हम सब हैं इंसान,
तो अपनी अच्छाई पर क्यूं हावी हो हमारे अंदर बैठा बुराई का शैतान?
वैसे भी गांधी जी हम सब को सीखाकर गए हैं अहिंसा का

ज्ञान,

अहिंसा की तोप से भारत को आजाद किया अंग्रेजों को करके हैरान।
यूं तो सिर्फ गांधी जी का नहीं सुभाष चन्द्र बोस का भी हैं हिंदुस्तान,
आजादी के लिए लाखों शूरवीरों ने अपनी जानों का दिया बलिदान,
अपने शस्त्रों और हिम्मत से अंग्रेजों को दिया उनके पापों का लगान,

क्योंकि जान से ज्यादा प्यारी थी उनको अपनी आन,
बान और शान। जरूरी नहीं ५६ इंच का जिगरा, काफी हैं अच्छी
सोच का दिमाग में स्थान,

क्योंकि देश के लिए तो काम दोनों करते हैं चाहे सिपाही या हो
किसान,

हम जिंदा हैं जब फ़सलो से बनता खाना और खाने से मिलती है
जुबान, और अगर किसान है अन्नपूर्णा तो विद्वान चिकित्सक है जैसे
भगवान, हमारी जान है बचाते जैसे लक्ष्मण के लिए संजीवनी लाए थे
हनुमान।

अपने जीवन में कुछ ऐसा कर जाए कि देश को हम पर हो अभियान,
जितने लंबे और बड़े पंख हम फैलाएंगे उतनी ऊंची होगी देश की
उड़ान,

तो आओ सही सोच से हम सब मिलकर बनाए अपने भारत को महान

लो आ गया वापिस

~राहुल सचदेवा (CRN: 2215145)

ले आज क्या किया ले कल क्या किया था
ले क्या ही कर पाएगा तू आने वाले कल
कैसे यह बीत रहा है मेरा पल पल
किसी भी तरीके से तू खुद को बदल
तभी पार कर पाएगा तू मुश्किलों का दलदल

पल पल हो रही हलचल जीवन बन गया उलझन
पल पल हो रही हलचल जीवन बन गया उलझन

बस बहुत हुआ यह बस बहुत हुआ यह
किस्मत मैं अपनी खुद लिखूँगा रे खुद लिखूँगा रे
आग लगाऊँ अपने दिल में जैसे हूँ मैं माचिस
भगवान मेरे साथ जब आऊँगा मैं वापिस
जब आऊँगा मैं वापिस, जब आऊँगा मैं वापिस

फासले बड़े तोह फासले घटा, एक एक कदम आगे बढ़ा
कोई रोके तो तू ना रुक, जा धोनी जैसे तू छक्का लगा
देख तेरी मंज़िल है वहाँ
देख तेरी मंज़िल है आसमान
देख तेरी मंज़िल है यह जहान
देख तेरी मंज़िल ओ इंसान

लो आ गया वापिस मैं लो आ गया वापिस मैं

लो आ गया वापिस, लो आ गया वापिस,
लो आ गया वापिस, आया हूँ मैं जीतने,
शेर के मुँह से जीत को है छीनने।
सोच लिया था मैंने की मैं नहीं हूँ रे काबिल,
ठान लिया अब मैंने की करके रहूँगा लक्ष्य हासिल।

पता नहीं कहाँ खो दिया था मैंने खुदको,
अंधेरी राहों में छुपाया था खुदसे खुदको,
कैसे मैं ब्यान करूँ अपना यह दर्द तुझको,
वापसी मेरी देखेगा जहाँ यह अब तोह।

लो आ गया वापिस मैं लो आ गया वापिस मैं

सोच चुका तू बहुत अब करके दिखाना है,
अपने खून को तूने ज्वाला बनाना है,
माँ बाप के सपनों को सच कर दिखाना है,
क्योंकि लक्ष्य को हर हाल में पाना है।

मुश्किलों से निकलकर लक्ष्य तक पहुँच सके,
तू अपने अंदर जोश जगा कि थकने पर भी ना रुके,
कर दिखा कुछ ऐसा की सब लोग तेरी शान में झुके।

यह मत भूलना की यह उतना नहीं आसान,
कई मुश्किलें है तेरे रास्ते में ओ इंसान,
जिंदगी बनाने के लिए लगा दे अपने जान प्राण,
तब जाके बना पाएगा इस कल्युग में पहचान।

लो आ गया वापिस मैं लो आ गया वापिस मैं

लो आ गया वापिस, लो आ गया वापिस!
लो आ गया वापिस, आया हूँ मैं जीतने,
शेर के मुँह से जीत को है छीनने।
सोच लिया था मैंने की मैं नहीं हूँ रे काबिल,
ठान लिया अब मैंने की करके रहूँगा लक्ष्य हासिल।

हां डरता हूँ मैं भी

~राहुल सचदेवा (CRN: 2215145)

हां डरता हूँ मैं भी पर दिखता नहीं
दिखता है जो बिकता वही
अगर मैं अपने जज्बातों को लिखता नहीं
तोह खोया मैं होता ख्वाबों में कहीं
कैसी यह होती मेरी जिंदगी
कैसी यह होती मेरी जिंदगी

बाहर चिल्लाता अंदर सन्नाटा
समय गिराता समय उठाता
समय रुलाता समय हंसाता
समय हराता समय जिताता
तू घबराता तोह वो फायदा उठाता
गम छुप-छुपाता मैं, हूँ गुनगुनाता
न गाता क्योंकि मैं हूँ शर्माता
कोई ठुकराता तोह तू क्यों डगमगाता
क्या था तेरा उसका नाता
जो वो तुझे बचाता तुझे आगे बढ़ाता
मैं अब न पछताता न गुस्सा आता
बुरा सपना समझ इसको भुलाता
यह दाता आजमाता दुनिया के रंग दिखलाता
तुझे तड़पाता, समझाता और आखिर सक्षम बनाता

जो सब मिला उसका सम्मान किया कर
भगवान का हरपल तू धन्यवाद किया कर
लोगों की तू पहचान किया कर
समय अपना अपनो को दिया कर

मौका जो मिले बुला लिया कर
खुशियों को अपनी कई गुना किया कर
जिंदगी अपनी खुलके जिया कर
सब के सुख की दुआ किया कर
सब के सुख की दुआ किया कर
सब के सुख की दुआ किया कर

खुले आसमान का हूँ मैं परिंदा
हार नहीं मानूँगा जब तक हूँ मैं जिंदा
खुले आसमान का हूँ मैं परिंदा
हार नहीं मानूँगा जब तक हूँ मैं जिंदा

The background of the page is a technical drawing featuring a complex network of thin, light gray lines. These lines form a series of interconnected hexagonal shapes, some of which are solid outlines, while others are partial or overlapping. Small, dark gray circular dots are placed at various points where the lines intersect or terminate, suggesting nodes or connection points in a technical or engineering context. The overall appearance is that of a schematic or a structural diagram.

Technical Section

QUANTUM COMPUTERS

by Ragavjit (CRN: 2115106)

In 1965, Intel's co-founder and CEO Gordon Moore made an interesting observation. He noticed that the number of components of an Integrated Circuit doubled roughly every two years. This observation later came to be known as Moore's Law. Our computational power has been increasing substantially, from the days of Abacus and Adding Machines to computers that used vacuum tubes. In 1947, Walter Brattain, John Bardeen and William Shockley invented the transistor, which are the basic building blocks of any digital device. In a few years, transistors shrunk rapidly in size from a few centimeter to 3nm nowadays! But for Moore's Law to remain a 'law' we need to fit even more computational power in smaller physical space. Diminishing the size of transistors further would mean entering the quantum realm, where the classical transistors will fail. But we can instead, exploit the Quantum phenomenon such as Superposition, Entanglement and Interference to create computers, which have a significant edge over the classical ones.

Concept of Superposition

You might have heard about Schrödinger's cat experiment, which is often misused as an explanation of the Quantum Superposition. The thought experiment goes as follows: There is a cat placed inside a closed box. It also contains a poison releasing mechanism that is operated by radioactive decay of an atom. If the atom decays, the mechanism will release poison and the cat will die otherwise, it lives. Since, decay of an atom is a Quantum phenomenon, we can't say that cat is either dead or alive, rather it is in a superposition of the two states. It might seem quite counter-intuitive, and that's exactly what Schrödinger wanted to convey. He was not particularly

happy with the idea of Superposition and the Copenhagen interpretation. A quantum system evolves according to the Schrödinger's wave equation. This system remains in a superposition until a measurement is made. The act of measurement collapses the wave-function in one of the definite states.

Qubits over Bits

A superposition is analogous to a vector which is a combination of its orthogonal components. Such a vector inclined at some angle with x-axis is neither vertical nor horizontal but a combination of the two states. A Qubit (quantum bit) is a similar combination of the orthogonal states and . Further, each state has an amplitude associated with it. Square of these amplitudes denote probabilities of the qubit collapsing in the corresponding state upon measurement. These probabilities add up to 1. This gives qubit a significant advantage over the standard qubit.

$$\vec{v} = \alpha \hat{i} + \beta \hat{j}$$

Vector where α and β are x and y components of the vector

$$|\psi\rangle = \alpha|0\rangle + \beta|1\rangle$$

Qubit represented by $|\Psi\rangle$. having orthogonal components $|0\rangle$ with magnitude α and with magnitude β .

Probability of state $|0\rangle$ is $|\alpha|^2$ and for $|1\rangle$ is $|\beta|^2$, obviously

$$|\alpha|^2 + |\beta|^2 = 1$$

Classically, for one binary bit, it takes only a single bit information to define it. Similarly, two bits require two bits of information to be defined. In general, 'n' bits can be defined with 'n' bits of information. But it takes two pieces of information to define a single qubit

(amplitudes of the two orthogonal states) this is because a qubit can represent all its states simultaneously. Similarly, a two qubit system can be explained with four pieces of information i.e. amplitude of all four orthogonal states. Therefor we can store 2^n bits of information in just 'n' qubits.

$$|\psi\rangle = \alpha|00\rangle + \beta|01\rangle + \gamma|10\rangle + \delta|11\rangle$$

Two qubit system defined by four variables.

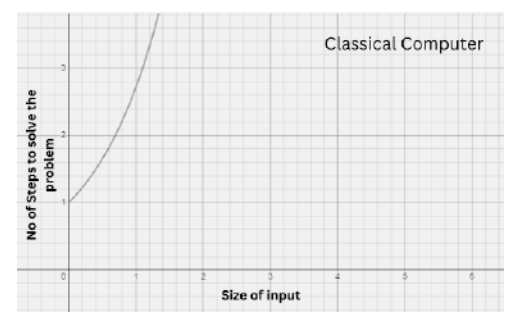


Figure-1

Figure-1 is the graph of an algorithm that becomes exponentially harder with the size of input vales. It is visualized with exponential function, plotted on a liner scale, one can observe how the slope of graph increases as we have larger input values. If I plot the same graph on a logarithmic scale, it will become liner.

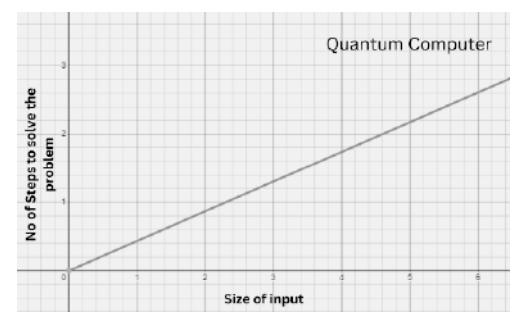


figure -2

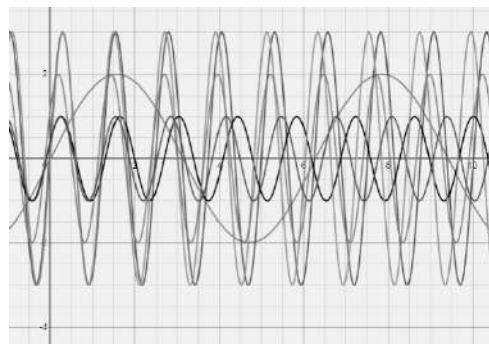
Figure-2 is the graph of same algorithm being computed by a Quantum computer. They help us perform calculation in such a way that even algorithms that blow up exponentially can be compensated by the exponential behavior of

qubits. If to solve a problem, classical computer takes $2n$ steps a quantum computer can do the same in just 'n' steps.

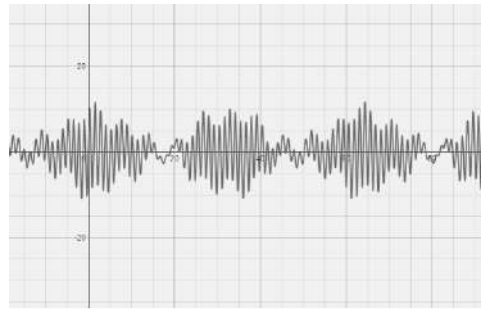
Quantum Objects

Qubits are quantum objects which display wave particle duality. Heisenberg's Uncertainty Principle says 'the position and momentum of a quantum particle can't be measured with absolute certainty simultaneously.' It is generally explained that the act of measuring the location makes velocity immeasurable and vice versa. However the real cause of Heisenberg principle is the wave particle duality.

Imagine I play a song, and ask you to identify it. If I play the composition for a really small duration, you will be very uncertain about the song. Furthermore, if I prolong the duration of the melody I play, it will become easier to guess its name. Uncertainty Principle is a similar puzzle. The wave associated with the velocity of the particle is like the song you are trying to guess, if I provide you with a very short sample of that wave (giving you a very accurate position of the particle, because the wave is spread in a small domain) you will not be sure about the velocity of that particle, but will know the location of the particle, very accurately. On other hand if I give you to hear the complete composition, now you don't have the exact position of



particle ($v, v+\Delta v, v+2*\Delta v, v+3*\Delta v...$)



Superimposed wave, having Δv and Δx error in velocity and location

the particle as the wave is non-localized. But a very interesting thing happens when I superimpose all those waves together into one. They emerge out as packets of waves which have a certain spread in space and a certain ambiguity in velocity. This wave packet represents the superposition of all the possible combinations of position and velocity for that particle, thus we create a quantum object.

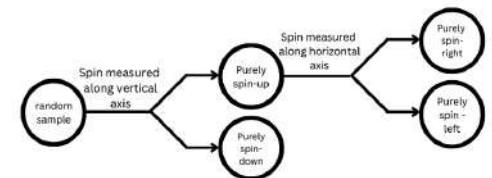
Entanglement

Now one might make a logical argument that we already have analog computers, where values between 0 and 1 are also valid (Unlike a digital computer, an analog computer use analog signals, which can vary between 0 and 1). The reason why such a set-up trying to mimic a quantum computer will not work is Quantum Entanglement.

Let's perform a thought experiment. Imagine two electrons really stuck close to each other, they will accelerate in opposite direction with equal magnitudes. If I observe the location of one electron, its velocity will become uncertain. But I can instead measure the velocity of the other electron and that will be exactly equal to the first electron, hence I can know the position and velocity of the both electrons simultaneously. So did we just break the Heisenberg principle? When we paired the electrons close together, their states became entangled i.e. evolution of the

system can be explained by just one wave-function instead of two separate wave-functions. Such a condition is called Entanglement in Quantum Mechanics. Therefore, when we measure the location of first electron, the wave-function of both the electrons will collapse instantaneously.

Likewise, we can make two qubits entangled with each other, such that measurement of one qubit in superposition leads to wave-function collapse of both the qubits. We can have two entangled qubits, upon measuring one, the other one will always collapse in the opposite state, irrespective of the observation angle.



If we take a random sample of electrons and separate them in spin-up and spin-down using Stern-Grelach setup, they will always separate into opposite spin samples. Same can't be said for analog signals.

Conclusion

With Quantum computers at our disposal we can solve problems which were practically unsolvable by classical computers. They can revolutionize fields like Artificial Intelligence, Chemistry, Pharmaceuticals and Mathematics. These machines are very difficult to build and run, and only a handful of companies like Strangeworks, I.B.M. and Google have dared to take up the challenge. We have not been able to create programmable quantum computers yet. Quantum Computers are in research stage right now and can't solve any real world problems. But, we can hope that Quantum Computers will one day resurrect the Moore's Law and push our computational capabilities beyond our imagination.

CLOUD SECURITY: THE LESS EXPLORED PATH

by Chetan Kashyap (CRN: 2228023)

Cloud security encompasses managing people, process & technology with thorough policies, that safeguard data and applications operating in the cloud. Cloud security includes examining how a government department processes and stores data and then outline a customized approach to comprehensively protect the data. Departments can rarely afford a monumental hit to their reputation, so employing the best cloud security practices is critical for any modern department.

Cloud security has evolved pretty much as security has evolved for all new technologies and innovations. In the unfortunate event of a government department experiencing such a breach, having a cloud incident response plan in place is crucial to mitigate the impact of suspicious activity and minimize damage. Enduring any catastrophic event is traumatic enough, but how the department reacts after such an event will often determine the fate of that department. The department's response plan will often determine the cost of a cyberbreach.

Need for Cloud Security

Although cloud computing services are a great option for Government Departments, there are some risks that come with the technology offered. Since the inception of cloud computing by Government of India, multiple Departments have been steadily switching to the empaneled cloud service providers. This availability of valuable data in a single location makes CSPs a prime target for malicious activity. Government Departments directly or through their SIs, MSPs need to collaborate with CSPs in order to secure their critical data and ensure necessary security measures are in place. Apart from MeitY imposed regulations/compliances, a security fabric

needs to be merged at the data center and cloud level. Issues such as insider threats are becoming a prevalent concern for many CSPs. Certain security concerns (including some OWASP Cloud Security risks) have been covered below:



1. Data Breaches

Though Cloud computing services are new and critical, yet data breaches in all forms have existed for decades. One of the main questions which generally Government Departments come across is "With department's sensitive data being stored online rather than on premise, is the cloud safe?" Cloud would provide the User Departments with enhanced security measures and necessary certifications. As per the MeitY empanelment of Cloud Service Provider (CSP), all CSPs enforce security controls as per ISO 27001, 27017 etc. but due to non-enforcement of security policies by the Government Department users it may lead to data breaches.

2. Improper Cloud Account Management

The development and execution of the cloud in many organizations has opened a whole new set of issues in account attacks and hijackings. Attackers now can use the department's cloud login accounts information to remotely access critical/sensitive data stored on the platform / cloud; additionally, attackers can

misrepresent and manipulate information through hijacked credentials. Hence appropriate cloud account management methodologies need to be implemented. In some cases, a Managed Service Provider (MSP) may also have access to Government Department cloud account hence appropriate controls should be implemented for such a condition as well.

3. Insider Threat

An intrusion in Government department may seem unlikely, but the insider threat does exist. Government Department's users can use their authorized access to department's cloud-based services to misuse or access information such as citizen information, financial information, and other sensitive information. Hence it becomes imperative for Government Departments to implement a secure strategy for their cloud implementation and access and ensure that proper access control mechanism is in place to avoid security issues.

4. Regulatory Compliance

Data that is perceived to be secure in one country may not be perceived as secure in another country or region. Hence data ownership and governance become important factors while choosing cloud. As per MeitY's empanelment all empaneled Cloud Service Provider would be offering cloud services out of Indian Data Centre facilities and ensure data residency within the country. Data ownership resides with the Government Department.

5. Insecure APIs

Application Programming Interfaces (API) give operators the opportunity to customize their cloud platform. Even though APIs give users the ability to customize features of their cloud services to

suffice the needs, but they also affect encryption, authentication and provision for access / controls. The growth of APIs provides better services and do increase security risks. APIs give programmers the gears to build their programs to integrate their applications. The vulnerability of an API lies in the communication that takes place between applications. They also originate an opportunity for exploitable

security.

Conclusion

As we upgrade towards the cloud many organizations/institutions ignore the security aspect. Cloud technology is an excellent way to expand your business in a cost-effective way but as it also brings a lot of challenges with it. Managing the cloud with correct policies is a difficult and a complex task and a single policy which was not rightly configured can lead to a data breach. A separate team should be

hired for managing the security aspect as after breach cost of recovering way too much than hiring a team and playing them regularly. Using a hybrid cloud environment is also a good choice, you can keep your most confidential data on your private cloud so that only authorized staff can access it and other data to the public cloud. In the end cloud technology is a fantastic way to scale but only if used effectively and intelligently.

SECURE ONLINE- PRECAUTIONS FOR SAFE BROWING

by Shreya (CRN: 2004394)

A large corporation with weak security can experience a data breach that exposes your personal information, password information, or profile pictures. In that situation, we can't do anything. However, that doesn't imply you cannot defend yourself. Concentrate your efforts on safeguarding your privacy and security at home. You don't want to let a banking Trojan steal all of your money or lose the book you're working on to ransomware, do you? Thankfully, you can construct a local defence against these regional issues.

It doesn't take much effort to make your gadgets, online identity, and activities more secure. In reality, many of our recommendations to increase your online security comes down to using common sense. You'll be safer if you follow this advice for improving your internet security.

Following are the ways to secure your device:

1. **Antivirus:** Antivirus does not only serve us by finding computer viruses but also provides additional functionalities like protecting the device from certain attacks such as ransomware and trojans. Under ransomware, attackers encrypt your data

and ask for money to restore it. Whereas in trojans, attackers steal your private information behind the scenes. Hence to protect your device effective antivirus is required with regular updation.

2. **Explore the Security Tools You Install:** Most all antivirus can prevent potentially unwanted applications (PAUs) and problematic apps that are not malware but are not even required by the device. Sometimes they are out of the radar of PAU detection by default. Hence check the detection settings to block all the annoyance. Similarly, certain security suite components are inactive unless you turn them on.

3. **Use Unique Passwords for Every Login:** A weak password results in a threat to personal information. The common and easiest way to steal information is by collecting a batch of usernames and passwords and combining them to unlock. For instance, a hacker has your username and password by hacking an email. With that information, they might try to access your banking sites and steal money from them. Hence, a strong password has become a necessity.

4. **Get a VPN:** sometimes, we use Wi-Fi networks that are not owned by us in some places such as coffee shops. We connect to these free Wi-Fi, but these can be a threat to your device. It increases the possibility for someone to access the network without your knowledge and steal files and data. Hence, a user must always use a virtual private network or VPN. A VPN route the internet traffic through the server of the VPN company. It will prevent every attacker even the owner of the network, not access and stealing the information.

5. **Clear Your Cache:** ever wondered what and how much information your browser cache has? All the cookies, web searches and history can indicate home address, family information and other personal data. To prevent this, make sure to delete all the browser cookies and clear all the browser history regularly. Popular browsers like chrome, edge, Firefox and opera it is very easy to delete. Press Ctrl+Shift+Del, and it will bring up a dialogue box that will mention will data to delete. Different browsers can have separate combination sections.

Artificial intelligence in Nanotechnology

by Karandeep Singh (CRN: 2015071)

Nanotechnology is used for various purposes and fields, such as computer sciences, medicine, physiology, industrial work, and mechanical or chemical fields. Artificial intelligence is another such field in which the use of nanotechnology has now been initiated and is constantly being proven as a way of utmost success and ease.

Introduction

Nanomaterials are those materials that are present on a nanometric scale which means it is below nm in either one of its dimension. The physical properties the nanomaterials show are uniformity, conductivity, and optical properties, making these nanoparticles very much desirable in science and biology.

AI which stands for artificial intelligence refers to systems or machines that mimic human

intelligence to perform tasks and can iteratively improve themselves based on the information they collect.

How Artificial Intelligence and Nanotechnology is integrated?

Medical advancement: The areas using or studying the application of Nanotechnologies, such as microscopy and organ regeneration from stem cells, can greatly benefit from the precision, command, improved signal, etc., offered by the AI.

Treatment: In any medical research and treatment, precision is imperative, even more so when using nanotechnology. AI helps by supporting the intricate programming of the nanobots and making the transformation of stem cells to bone cells through command plausible, treating multiple diseases.

Introducing better and sustainable food alternatives: Livestock farming is one of the world's largest and most resource-intensive markets, which also makes for 60% of total greenhouse-related emissions.

Nano-computing: Nano-computing is yet another greatly focused aspect for researchers and computer manufacturers around the world. The efforts to advance nanotechnology such that it surpasses the computing power proposed by GPUs are in place, a breakthrough in systems that utilize models such as Deep learning.

Conclusion: Due to a great deal of advancement in technology and science, it is only natural to witness the changing forms of human interaction and ways to adapt to it.

BLOCKCHAIN

by Rajat Kapoor (CRN: 2015110)

The word blockchain is derived from two words block and chain, here block means data block, and chain means chain formed by joining data blocks. The data in the data block is encoded by cryptography technology and kept secure. In this, each block is interconnected and each block contains a timestamp of the block behind it, a cryptographic hash, and transaction data. In this way, the data of each previous block is also preserved in the block next to it.

Blockchain technology was described in 1991 by the research scientist Stuart Haber and W. Scott Stornetta. They wanted to introduce a computationally practical solution for time-stamping digital documents so

that they could not be backdated or tampered. In 1992, Merkle Trees were incorporated into the design, which makes blockchain more efficient by allowing several documents to be collected into one block. In 2004, computer scientist



and cryptographic activist Hal Finney introduced a system called Reusable Proof of Work as a prototype for digital cash. It was a significant early step in the history

of cryptocurrencies. Further, in 2008, Satoshi Nakamoto conceptualized the theory of distributed blockchains. He improves the design in a unique way to add blocks to the initial chain without requiring them to be signed by trusted parties.

Benefits of Blockchain Technology:

- Blockchain creates an audit trail that documents the provenance of an asset at every step of its journey.
- Data is sensitive and crucial, and blockchain can significantly change how your critical information is viewed.
- It is used to complete the

transactions in lesser time and more efficiently as the traditional method of paperwork was time-consuming and was prone to human error.

- It is used to store information in a decentralized manner.

Blockchain technology is revolutionary. It will make life

simpler and safer, changing the way personal information is stored and how transactions for goods and services are made. Blockchain technology creates a permanent and immutable record of every transaction. This impenetrable digital ledger makes fraud, hacking, data theft, and information loss impossible. The technology will affect every industry in the world,

including manufacturing, retail, transportation, healthcare, and real estate companies as Google, IBM, Microsoft, American Express, Walmart, Nestle, Chase, Intel, Hitachi, and Dole are all working to become early adopters of blockchain. Nearly \$400 trillion across various industries is set to be transformed by blockchain.

Passage Leading towards Entrepreneurship

by Sehajbir Singh (CRN: 2021105)

The recent trend of layoffs likely from Facebook laying off nearly 11,000 employees, a 50% cut-off of employees after Elon takes over Twitter's charge has diverged the world to reconsider the fact that despite being insecure about the future "Is it worth beneficial to prepare hard for applying for the jobs?" or someone who has the potential to change the world can lead in some other way.

The world today is changing its professional habits by shifting



from the traditional approach of acquiring jobs as job seekers to leading in the way by becoming job providers. People working towards personal branding, leaving their jobs to become full-time YouTubers, and doing brand promotions through affiliate marketing and blogging are becoming the new norms in today's corporate arena.

After the successful season of Shark Tank, it has given people new food for thought to think

upon new creative ideas, build start-ups, develop amazing technologies, changing traditional business models that can influence the world and lead humanity. Today the world seeks more skill sets, exemplary leadership qualities, and attractive communication skills rather than just acquiring degrees.

The recent wave blown of start-ups has led to various successful entrepreneurs who walked some extra mile to do something extraordinary, something unique, who acknowledged the business market, understood the needs of a common man, and all alone stood still to build out history's best Unicorn businesses. All these entrepreneurial successes demand just 2P qualities – Passion and Perseverance.

Companies like Zomato, and Swiggy change the way of ordering food from restaurants, Ola-Uber changed the way we travel, Canva has transformed the world of Graphic Designing, Coursera has shaken up the Ed-Tech industry, and many more to list down. All these start-ups carve out from just one thing – An Idea. Recently BITS Pilani has become the first college to allow students to take a drop year to work on their own start-ups and even help its students to fetch grants and investments.

The world is a sea of opportunities We all need to dive deeply into the sea to grab those opportunities and lead the world through our Innovative Ideas. We all need to follow the path of entrepreneurs like Dr. Inderjit Singh, former chairman of Punjab & Sind Bank who single handedly revolutionized the banking industry and facilitated humanity by providing nearly 18,000 jobs to youth and helping them become financially independent.



We all should acquire the necessary skill set, come out of our comfort zone, and works towards achieving prosperity in the world by developing new technologies and businesses which could work for replenishing poverty, providing quality education, transforming our businesses into serving our mother earth by achieving and working towards sustainable development goals, more kindness, more livelihood, more cherish and high aspirations of humanity.

GUIDE TO NLP

by Muskandeep Kaur (CRN: 2015093)
& Prabhdeep Kaur (CRN: 2015105)

As you heard about sentiment analysis, Apple Siri, and Alexa. Everything we express (either verbally or written) have different meaning and huge amounts of information. How do they recognize our meaning of speech and text? The technology behind their working is NLP. In this article, we explore about NLP.

NLP stands for Natural Language Processing. NLP is a subfield of AI that focuses on the interaction between computers and human language. It uses algorithms and machine learning techniques to analyze, understand, and generate human language in the way that it is spoken or written. NLP technologies enable machines to extract meaning from text, classify it, and respond to it in a way that is like human communication.

Benefits of NLP

NLP has many benefits, including increased efficiency, accuracy, and automation. For example, NLP technologies analyze and summarize large amounts of text data, such as social media posts, customer reviews, or medical records, helping businesses to make better-informed decisions. NLP can also help to automate tasks such as customer service inquiries or content creation, reducing costs and improving productivity.

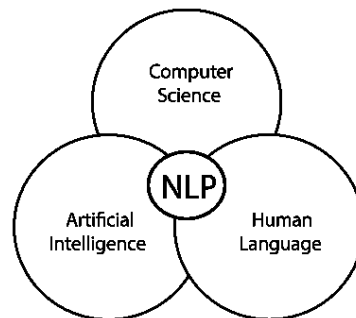
Another benefit of NLP is its ability to facilitate multilingual communication. NLP technologies can translate text and speech from one language to another, opening new markets and opportunities for businesses to communicate with a global audience.

For example, Amazon Comprehend Medical is a service that uses NLP

to extract disease conditions, medications, and treatment outcomes from patient notes, clinical trial reports, and other electronic health records.

There are various steps in NLP:

- Sentence segmentation
- Word tokenization
- Stemming
- Lemmatization
- Identifying stop words
- Dependency Parsing
- POS(Parts of Speech) tags
- Named entity recognition
- Chunking



For example:

Given a paragraph,
Guru Nanak Dev Engineering College (GNDEC) is located at gill road, Ludhiana. It is one of the best colleges of engineering in Ludhiana.

1. Firstly, sentence segmentation is done. The paragraph is divided into sentences.

“Guru Nanak Dev Engineering College (GNDEC) is located at gill road, Ludhiana.”

“It is one of the best colleges of engineering in Ludhiana.”

2. Tokenization is done. A sentence is divided into tokens.

“guru,” “Nanak,” “dev””.

After completing all the

steps, the data is processed.

Future Applications of NLP

The potential applications of NLP are vast and exciting. Some of the future applications of NLP in AI include:

Chatbots and virtual assistants: NLP technologies can be used to create chatbots and virtual assistants that can understand and respond to customer inquiries or requests, reducing the need for human intervention.

Personalized medicine: NLP technologies can be used to analyze medical records and identify patterns in patients' symptoms and treatments, leading to more personalized and effective treatments.

Language learning: NLP technologies can be used to improve language learning and create more engaging and interactive language learning tools.

Sentiment analysis: NLP technologies can be used to analyze social media posts and other text data to understand public sentiment towards a particular topic, helping businesses to make more informed decisions.

Conclusion

In conclusion, NLP is a critical component of AI that has the potential to transform the way we communicate and interact with machines. While there are still challenges to overcome, the benefits of NLP are significant, and the future applications are vast and exciting. As NLP technologies continue to advance, they will undoubtedly play an increasingly important role in our daily lives, improving efficiency, accuracy, and our ability to communicate and collaborate.

The Dual Nature of Artificial Intelligence: Potential Benefits and Pitfalls

by Amandeep Singh (CRN: 2215009)

Artificial Intelligence (AI) has been hailed as revolutionary and world-changing, but it's not without drawbacks.

As AI grows more sophisticated and ubiquitous, the voices warning against its current and future pitfalls grow louder. Whether it's the increasing automation of certain jobs, gender and racial bias issues stemming from outdated information sources, or autonomous weapons that operate without human oversight (to name just a few), unease abounds on a number of fronts. And we're still in the very early stages. Artificial Intelligence (AI) can be programmed to do devastating things. For instance, autonomous weapons, and lethal equipment that kills without human supervision and with limited human

control. These arm drones could soon be a reality and the obvious next step would be the killer robots, this may sound like a science fiction plot, it could well be the future. The potential of Artificial intelligence is immense so is the harm and damage it can unleash. Let me give you a small example, AI enables devices that usually rely on the internet which means that they are open to a host of opportunities for hackers. Imagine someone hacking a killer drone and targeting innocent people, cyber criminals can temper with devices remotely and get caused unimaginable harm. In fact, AI can also be used to threaten critical infrastructure in the best-case scenario for ransom and there is no same for the worst can be. There are fears that Artificial intelligence may pose new threats

or change the nature of existing threats across the cyber, physical and political spheres. Government can use advanced technologies to sift through data collected from surveillance networks to spy on their own people. Technologies advancing but the same cannot be said of human control of them. Will Artificial Intelligence then be helpful or harmful in the long run? The answer to that depends on that as much on the technology as on those who use it. Automation of jobs, the spread of fake news, and a dangerous arms race of AI-powered weaponry have been proposed as a few of the biggest dangers posed by AI. Destructive super intelligence as known as artificial general intelligence created by humans and escapes our control to wreak havoc – is in a category of its own.

Node.js: JavaScript Server Optimization

by Mehak Kalia (CRN: 2015089)

Software development refers to a set of computer science activities dedicated to the process of creating, designing, deploying, and supporting software. Application Software usually consists of a front and a backend. While general languages for frontend development include HTML, CSS, etc. A popular language used for backend and servers is JavaScript. Essentially, JavaScript has proved to be an important asset for the development of servers. But a major restriction was that JavaScript would eventually end up being stuck up in browsers and just the development of backend servers for websites only. Hence, to resolve this node was first introduced.

Node.js is a runtime

environment that allows software developers to use JavaScript to work on the front-end and back-end of web applications. It can be used in full-stack JavaScript development and features APIs to support HTTP requests, file systems, and other server-side features.

With Node.js, you can now 'extend' JS to design and develop code to work on the server side. This means you move away from the DOM model, browser intrinsic, and other JS framework components.

Node.js offers its own ecosystem of software modules and packages that you can use to build applications with ease. It has a library of over 350 thousand

packages.

Node.js allows you to use JavaScript on the front-end, middle-ware, back-end, and any OS, including MacOS, Linux, and Windows, making it cross-platform. Node has modules that allow you to recover or restart an application with zero downtime and improve the Node processes' availability should it hit a problem. Allows I/O and non-blocking operations. It provides scalability so that you can build applications that are high-performance, accept high user loads, and have zero downtimes during recovery.

Hence, a node is essentially a breakthrough technology that one can learn to advance better in backend server development.

The Impact of Artificial Intelligence on Human Evolution

by Vansh Jindal (CRN: 2216003)

With the evolution of human beings, the technology has evolved at a greater pace. Thinking about the times of late 80's & 90's when humans were themselves working like machines. With the changing times, to ease their work, human started developing the machines. There was time, when machines used to work like a stubborn and dumb object which was solely managed by humans. But the era has taken a drastic shift. Likewise, we are able to work with just one click; a new technology is coming up every minute. The moment we end up learning about new technology another one evolves.

Artificial intelligence (AI) is no way less than that. AI has always fascinated the humans. They have always been expecting someone working just like them on their behalf and that too with the

fewer commands. With the upcoming of AI, the intervention of humans has decreased and it has proved to be boon for the humans.

Now a days, these machines can handle complex problems and operate various amazing tasks such as facial recognition, automatic driving, identifying human needs etc. AI has helped the humans in numerous ways like enhancement in the automation, decrease of tedious work, disaster responses, lesser chances of error, disease detection, no down time etc. AI not only helped the humans but also gave birth to new technologies such as neuro marketing, crypto currency, big data analysis, block chain technology, Augmented reality, Virtual reality, Metaverse etc. No matter how many new concepts

we come up with the base will always remain the AI.

Recently scientists have developed a robot named SOPHIA with AI. It is the first robot to get the citizenship of Saudi Arabia and can even understand the human emotions. Further companies like Apple & Google have already developed first generation AIs.

The future of AI is very bright in the upcoming times. Still, AI is only a small step but a giant leap for mankind. Our future depends on it. As the saying goes, nothing is perfect in the world. So, AI does have some bad effects on humans. But looking at the positive side, fascinating features of AI overshadow the bad effects. Till our surroundings become totally automated, lets enjoy the human activities because later on probably we may be going to miss them.

Match The Columns

by Ramneet Kaur Sekhon (CRN: 2015111)

1. Developer of Python	a. James Gosling OC
2. Father of Artificial Intelligence	b. Brendan Eich
3. 1st virus detected on ARPANET	c. Turing Test
4. Father of Neuroscience	d. John McCarthy
5. Organization that commissioned the first phase of the Real time Train Information System for India Railways	e. Imhotep
6. Developer of Google Search Engine	f. Tim Berners-Lee and Robert Cailliau
7. Inventor of World Wide Web	g. Ismail al-Jazari
8. Developer of JavaScript	h. Muhammad ibn Mūsā al-Khwārizmī
9. Originally called the 'Imitation Game'	i. Bharat Electronics Ltd.
10. Father of Algorithm	j. Santiago Ramon y Caja
11. Founder and lead designer of Java	k. Larry Page and Sergey Brin
12. Father of Robotics	l. Creeper Virus
13. First Engineer known by name and achievement	m. Guido van Rossum

13- E
12- G
11- A
10- H
9- C
8- B
7- F
6- K
5- I
4- J
3- L
2- D
1- M
ANSWERS

Sustainable Architecture: Designing Buildings for a Greener Future

By Anudesh Saini (CRN: 1999001)
& Jaismeen Kaur (CRN: 1999008)

Sustainable architecture is a design approach that focuses on creating buildings that are energy-efficient, environmentally friendly, and healthy for occupants. Sustainable architecture is beneficial for the environment and helps reduce energy costs, improves indoor air quality, and creates a healthier living and working environment for people.

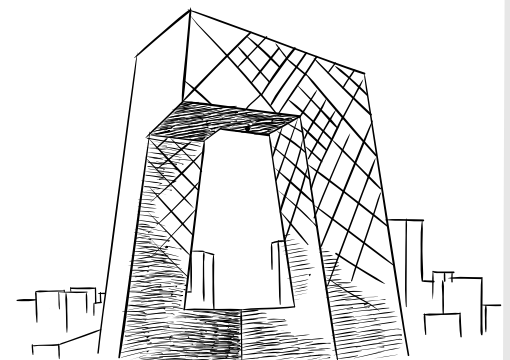
The concept of sustainable architecture has gained increasing importance in recent years as a response to the negative environmental impacts of traditional building practices. Buildings are responsible for a significant portion of global carbon emissions, as they consume large amounts of energy for heating, cooling, and lighting, and require extensive use of natural resources in their construction. Sustainable architecture seeks to address these issues by minimizing the use of energy and resources, reducing carbon emissions, and promoting a healthier and more sustainable living environment. Another important aspect of sustainable architecture is the use of sustainable materials. This includes materials that are renewable, recycled, or have a low environmental impact. Examples of sustainable materials include bamboo, recycled steel, and reclaimed wood.

The principles of sustainable architecture can be applied to all types of buildings, from residential homes to commercial and institutional buildings. Key features of sustainable buildings include:

1. **Energy efficiency:** Sustainable buildings are designed to minimize energy consumption by using energy-efficient systems, such as solar panels, insulation, and LED lighting.
2. **Water conservation:** Sustainable buildings use water-efficient systems, such as low-flow toilets and rainwater harvesting, to reduce water usage and conserve natural resources.
3. **Use of renewable materials:** Sustainable buildings use environmentally friendly materials, such as bamboo, straw, and recycled materials, that are renewable and have a low environmental impact.
4. **Waste reduction:** Sustainable buildings minimize waste by using recycled materials, reducing construction waste, and promoting recycling and composting.
5. **Healthy indoor environment:** Sustainable buildings promote a healthy indoor environment by using natural ventilation, and non-toxic materials, and minimizing the use of chemicals and pollutants.

Sustainable architecture benefits the environment and provides economic benefits to building owners and occupants. Sustainable buildings have lower operating costs due to reduced energy and water consumption, and can also improve the health and productivity of occupants by providing a healthier and more comfortable living environment.

In conclusion, sustainable architecture offers a way to create environmentally responsible, socially equitable, and economically viable buildings. By promoting the use of renewable resources, energy-efficient systems, and environmentally friendly materials, sustainable architecture can help to reduce the negative environmental impact of traditional building practices and create a greener and more sustainable future for all.



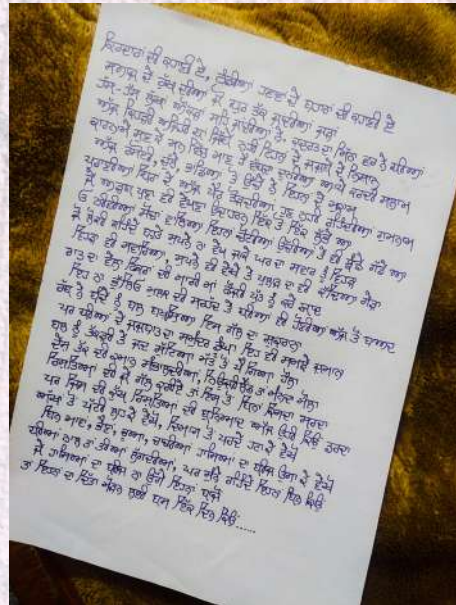


Fine Arts Section





AMANDEEP KAUR
(CRN: 2116007)



AMANJOT SINGH
(CRN: 2230007)



ANSHUL KUMAR
(CRN: 2230013)



ANSHUL KUMAR
(CRN: 2230013)



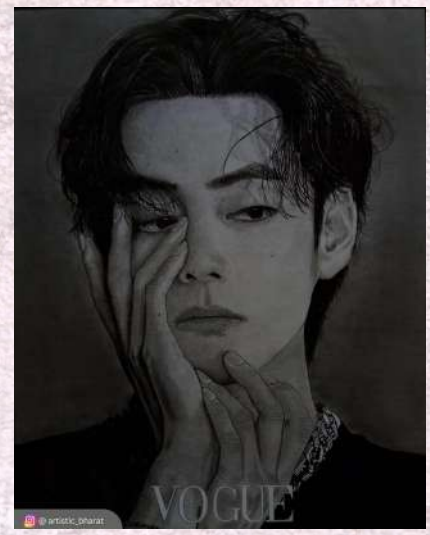
ANSHUL KUMAR
(CRN: 2230013)



BHARATDEEP SINGH
(CRN: 2115026)



BHARATDEEP SINGH
(CRN: 2115026)



BHARATDEEP SINGH
(CRN: 2115026)



BHARATDEEP SINGH
(CRN: 2115026)



BHARATDEEP SINGH
(CRN: 2115026)



EKJOT KAUR
(CRN: 2099004)



DIYA BAWEJA
(CRN: 2215036)



EKJOT KAUR
(CRN: 2099004)



EKJOT KAUR
(CRN: 2099004)



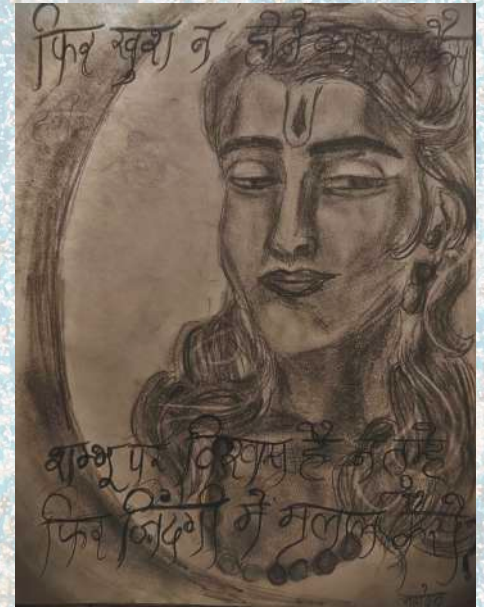
EKJOT KAUR
(CRN: 2099004)



GULSHANDEEP KAUR
(CRN: 2221042)



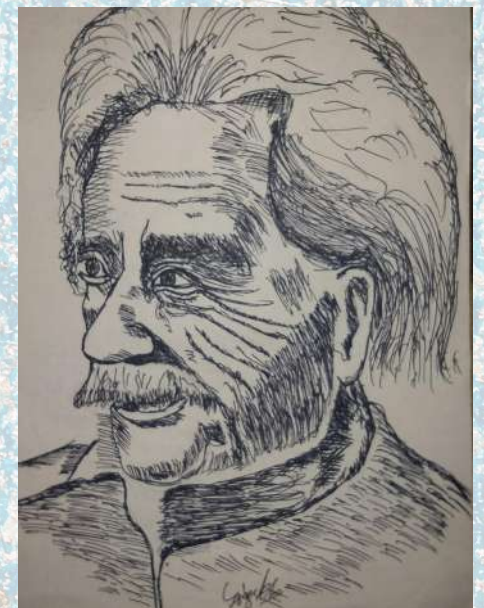
GULSHANDEEP KAUR
(CRN: 2221042)



GUNJAN SOHAL
(CRN: 2215192)



GURSIMRAN KAUR
(CRN: 2215053)



GURDEV SINGH
(CRN: 2115049)



GUNJAN SOHAL
(CRN: 2215192)



HARMANPREET KAUR
(CRN: 2121051)



HARMANPREET KAUR
(CRN: 2121051)



HARMANPREET KAUR
(CRN: 2121051)



HARMANPREET KAUR
(CRN: 2121051)



HARMANPREET KAUR
(CRN: 2121051)



INDERJEET KAUR
(CRN: 2221057)



HARNOOR BIRDI
(CRN: 2115059)



KAMALPREET SINGH
(CRN: 2130057)



INDERJEET KAUR
(CRN: 2221057)

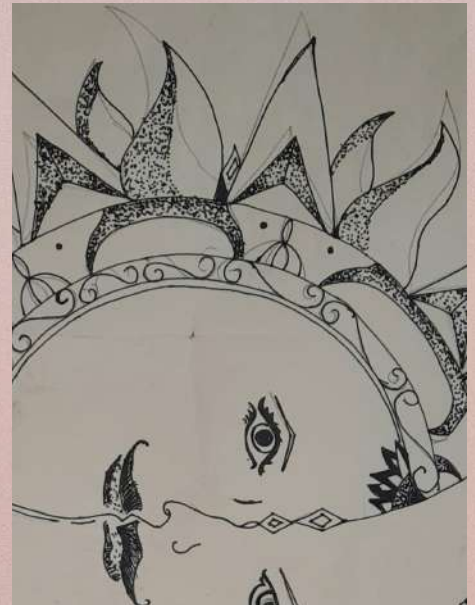


By - Jasmine

JASMINE KAUR
(CRN: 2215083)



JASVIR KAUR
(CRN: 2215086)



SANIYA CHAWLA
(CRN: 2221102)



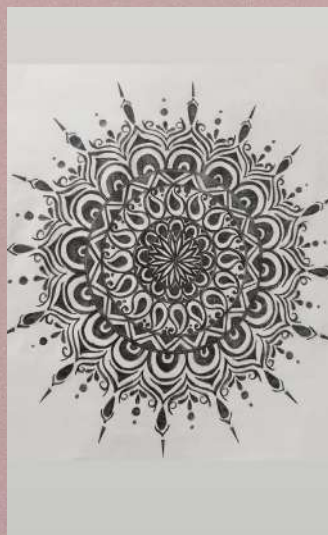
JASVIR KAUR
(CRN: 2215086)



KHUSHI RATHORE
(CRN: 2117046)



INDERJOT SINGH
(CRN: 2230044)



MANSI
(CRN 2217047)





MEHAK
(CRN: 2191037)



MEHAK
(CRN: 2191037)



TANVEER SINGH
(CRN: 2191055)



NUKTA VERMA
(CRN: 2215129)



TANVEER SINGH
(CRN: 2191055)



PRACHI YASH
(CRN: 2221086)



TANVEER SINGH
(CRN: 2191055)



TANVEER SINGH
(CRN: 2191055)



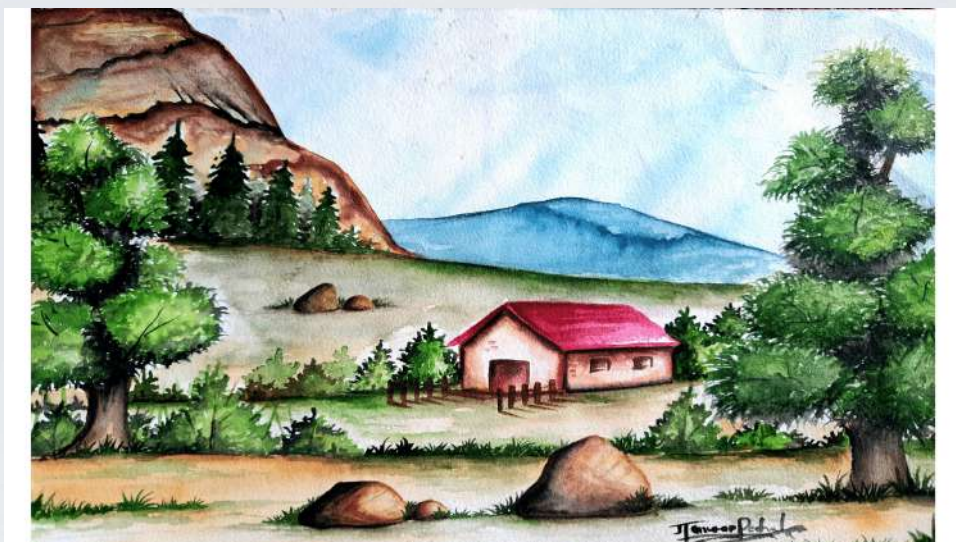
TANVEER SINGH
(CRN: 2191055)



TANVEER SINGH
(CRN: 2191055)



TANVEER SINGH
(CRN: 2191055)



TANVEER SINGH
(CRN: 2191055)



TANYA PRASAD
(CRN: 2215179)



Dr. Rajvir Kaur
Sraw (App. Sci.)



VANI GUPTA
(CRN: 2115154)



TANVEER SINGH
(CRN: 2191055)



PHOTOGRAPHY SECTION





ANMOLDEEP SINGH
(CRN: 2215015)



SIDDH CHHABRA
(CRN 2115136)



GURBAJ SINGH
(CRN: 2215042)



MANAV SHARMA
(CRN: 2221070)



GURBAJ SINGH
(CRN: 2215042)



EKUSPREET SINGH
(CRN:2115043)



SIDDH CHHABRA
(CRN 2115136)



CHANDANBIR SINGH
(CRN: 2115029)



SIDDH CHHABRA
(CRN 2115136)



HARLEEN KAUR
(CRN: 2121131)



PRATHAM GOYAL
(CRN: 2121090)



PRATHAM GOYAL
(CRN: 2121090)



SIDDH CHHABRA
(CRN 2115136)



CHAITANYA ARORA
(CRN: 2215027)



Prof. Lakhvir Singh Khana (ME)



Prof. Lakhvir Singh Khana (ME)



Prof. Lakhvir Singh Khana (ME)



Prof. Lakhvir Singh Khana (ME)



SIDDH CHHABRA
(CRN: 2115136)



Mr. Ramandeep Singh, Assistant Registrar

Photo By :
SIDDH CHHABRA
(CRN: 2115136)



OUR STRENGTH PROUD GENCONIANS!



GURU NANAK DEV ENGINEERING COLLEGE

An Autonomous College under UGC Act 1956, Accredited by NAAC (A Grade) and TCS, Offering NBA and IEI Accredited UG Programs

AICTE Approved, ISO 9001:2000 Certified, Affiliated to I.K Gujral Punjab Technical University, Jalandhar

GILL PARK, GILL ROAD, LUDHIANA - 141006 (PUNJAB) INDIA

Ph : 0161-2502700 (H.O.) Fax : 2502700, 2502240

E-mail : principal@gndec.ac.in Website : www.gndec.ac.in