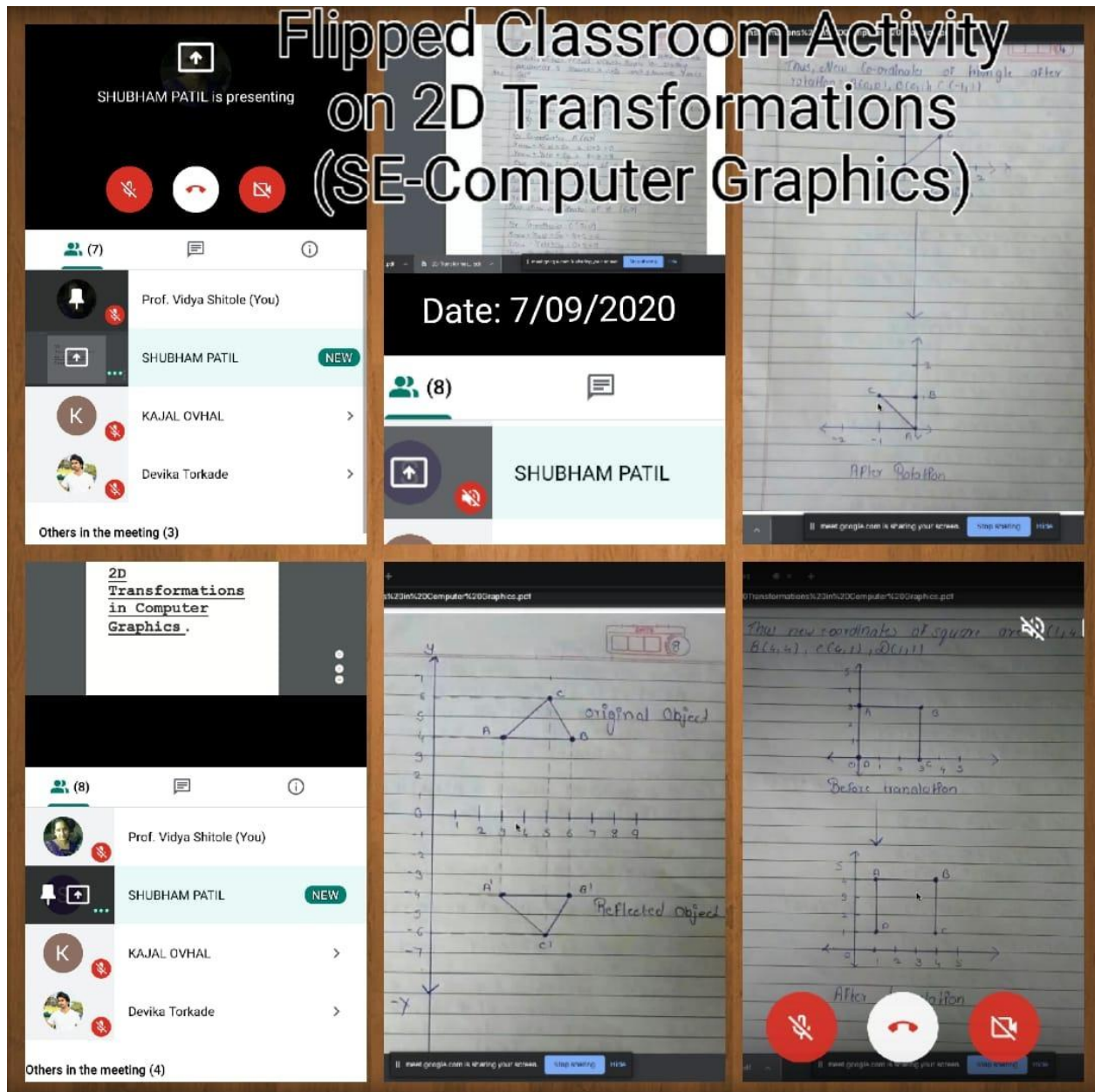


Flipped Classroom Execution Samples:

**Flipped Classroom Activity
on 2D Transformations
(SE-Computer Graphics)**



The collage consists of six screenshots from a Google Meet session. The top-left screenshot shows the meeting interface with participants: Prof. Vidya Shitole (You), SHUBHAM PATIL (NEW), KAJAL OVHAL, and Devika Torkade. The top-right screenshot shows a hand-drawn diagram of a triangle ABC on a coordinate plane, with its new coordinates after translation: A'(a+b), B'(b+b), C'(c+b). The middle-left screenshot shows the title '2D Transformations in Computer Graphics.' and the same participant list. The middle-right screenshot shows the date 'Date: 7/09/2020' and the presenter 'SHUBHAM PATIL'. The bottom-left screenshot shows a hand-drawn diagram of a triangle ABC on a coordinate plane, with its reflected image A'B'C' across the y-axis. The bottom-right screenshot shows a hand-drawn diagram of a square ABCD on a coordinate plane, with its new coordinates after translation: A'(a+b), B'(b+b), C'(c+b), D'(d+b). The bottom-right screenshot also shows the presenter 'SHUBHAM PATIL'.



SRTCT'S
**SUMAN RAMESH TULSIANI TECHNICAL CAMPUS – FACULTY OF
 ENGINEERING,
 KHAMSHET**

An ISO 9001:2015 Certified Institute
DEPARTMENT OF COMPUTER ENGINEERING

BE Comp Flipped Classroom Presentation by Diksha on selenium installation on 9 Sep 2020

Address	Rooms	Type	Price
13378 anime values			
88 Turner St	2		1,888,000.00
15 Broadway St	3		1,800,000.00
5 Char St	3		1,400,000.00
44 Fiddlers Ln	3		2,000,000.00
25a Park St	4		1,600,000.00
124 Char St	2		947,000.00
104 Fenne St	2		1,870,000.00
68 Char St	2		1,000,000.00
4/241, North St	3		1,000,000.00
4/241, North St	3		1,000,000.00

SRTCT'S
SUMAN RAMESH TULSIANI TECHNICAL CAMPUS – FACULTY OF
ENGINEERING,
KHAMSHET

An ISO 9001:2015 Certified Institute
DEPARTMENT OF COMPUTER ENGINEERING

12:53 PM 4G LTE 52

What is Normalization ??

- Normalization is the process of organizing the data in the database.
- Normalization is used to minimize the redundancy from a relation or set of relations. It is also used to eliminate the undesirable characteristics like **Insertion, Update and Deletion** Anomalies.
- Normalization divides the larger table into the smaller table and links them using relationship.
- The **normal** form is used to reduce redundancy from the database table.

(40)

HOD Computer (You)

DEVENDRA PITALIYA >

DEVENDRA PITALIYA >

APURWA BHOIR >

Others in the meeting (36)

Akshay Raut >

Flipped Classroom Execution Details:



Flipped Classroom on "COUNTING"
Subject: Discrete Maths
Date: 18/09/20

Presented by: Devika Torkade

2] Given a group of 10 students 3 are chosen to pick up the books for the class , How many ways to chose 3 students in the 10 students?

Solution :
Given:
 $n = 10$
 $r = 3$
 $nCr = \frac{n!}{r!(n-r)!}$
 $= \frac{10!}{3!7!}$
 $= \frac{10 \times 9 \times 8 \times 7!}{3!7!}$
 $= 120$

Permutation with Repetation
If 'n' objects of which n₁ are alike , n₂ are alike then permutation is so on...
 $= \frac{n!}{n_1!n_2!n_3!.....n_k!}$

3] From a group of 7 men and 6 women , 5 persons are to be selected to form a committee so that at least 3 men are there on the committee . in how many ways can it be done.

Solution : here , at least 3 men must be chosen, so we consider here all committees which include .
For selecting 5 persons , chose 3 from 7 men and 2 from 6 women (3+2=5 person)
 ${}^7C_3 \times {}^6C_2 = 525$
chose 4 from 7 men and 1 from 6 women (4+1=5 person)
 ${}^7C_4 \times {}^6C_1 = 210$
chose 5 from 7 men
 ${}^7C_5 = 21$ OR chose 0 women from 6 women: ${}^6C_0 \times {}^7C_5 = 21$

therefore, $525 + 210 + 21 = 756$
In 756 ways committee can be done.

Meeting details
People (7)
Add people
Prof. Vidya Shitole
DEVKA TORKADE
DILIP BHOSLE
Munali Bhargava
POOLJA BHATNAGER
Prof. Vidya Shitole

Others in the meeting (5)
DEVKA TORKADE
Munali Bhargava
SHUHAM PATIL
Prof. Vidya Shitole
POOLJA BHATNAGER

Prof. Vidya Shitole (You)

Flipped Classroom on Circle Generation Algorithms

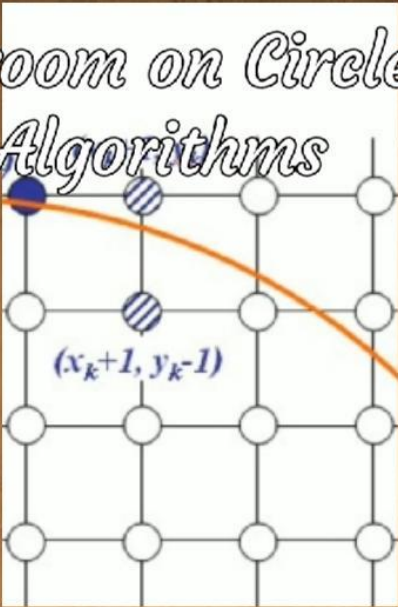
Subject: Computer Graphics

DHRUV BHIRUD

Date: 21/09/20'

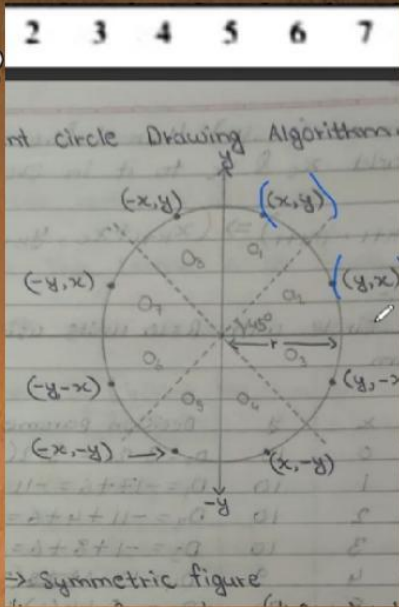
(7)

DHRUV BHIRUD

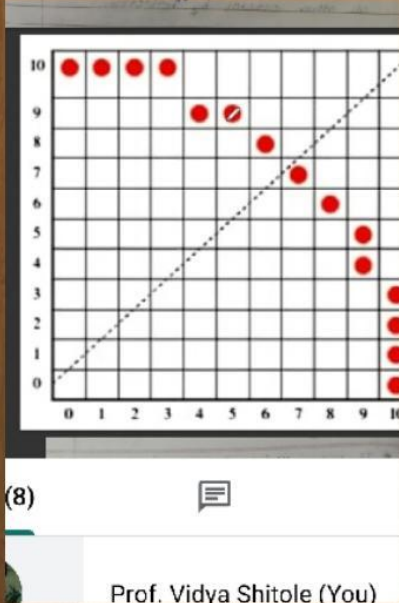


(x_k+1, y_k-1)

Circle Drawing Algorithms



Symmetric figure



(8)

Prof. Vidya Shitole (You)

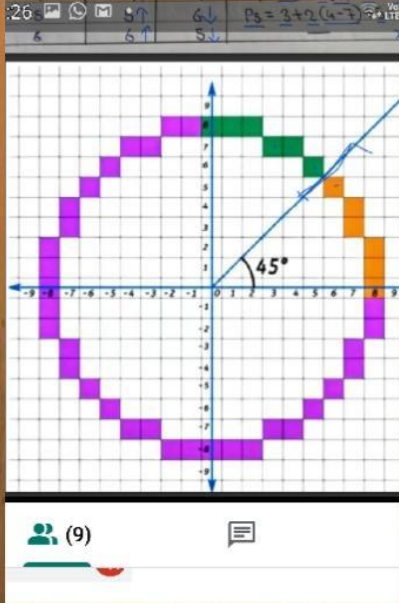
radius = 10 units

$(x, y) = (0, 10) \Rightarrow (x_0, y_0)$

$P_0 = 1 - 10 = -9$

x	y	Decision parameter
0	10	$P_0 = 1 - 10 = -9$
1	10	$P_1 = -9 + 3 = -6$
2	10	$P_2 = -6 + 2 + 3 = -1$
3	10	$P_3 = -1 + 4 + 3 = 6$
4	9	$P_4 = 6 + 2(3 - 10) + 5$
5	9	$P_5 = -3 + 2(8 - 3) + 5$
6	8	$P_6 = 8 + 2(5 - 8) + 5$
7	7	$P_7 = 5 + 2(6 - 8) + 5$

$P_3 = 3 + 2(4 - 3) + 5$



(9)

Flipped Classroom on Mathematical Induction

Mathematical Induction.

[Document Subtitle]

Date: 17/09/20'

By :- Shubham Patil.

[Company Name]

Step involved in mathematical induction:-

Step 1 :- Basic of induction.

Here, check, validity or correctness of given statement: say $S(n)$ is true for the smallest integral value of $n = 1$ or 2 or 3....

Step 2 :- Induction step.

In this step, assume given statement $S(n)$ is true $n = k$ where k denotes any value of n , then it is also true that $S(n)$ is true for $n = k + 1$.

Step 3 :- Conclusion.

Subject : Discrete Mathematics

g) By using mathematical induction show

$$1+2+3+\dots+n = \frac{n(n+1)}{2}$$

Ans) Soln

Let $S(n) = 1+2+3+\dots+n = \frac{n(n+1)}{2}$

Step I :-

Check $S(n)$ is true for $n=1$

LHS = 1

RHS = $\frac{1(1+1)}{2} = \frac{1 \cdot 2}{2} = 1$

∴ from equation 1 & 2 LHS = RHS

Hence, $S(n)$ is true for $n=1$

Step II :- Induction step

Assume $S(n)$ is true for $n=k$

Thus we get

$$S(n) = 1+2+3+\dots+k = \frac{k(k+1)}{2}$$

Now, check $S(n)$ is true for $n=k+1$

$$S(k+1) = 1+2+3+\dots+k+k+1 = \frac{k(k+1)}{2} + (k+1)$$

$$= \frac{k(k+1) + 2(k+1)}{2} = \frac{(k+1)(k+2)}{2}$$

$S(k+1) = \frac{(k+1)(k+2)}{2}$

Step III :-

Conclusion:- Hence $S(n)$ is true by induction

$S(k+1) = 1+2+3+\dots+k+k+1 = \frac{k(k+1)}{2} + (k+1)$

$$= \frac{k(k+1) + 2(k+1)}{2} = \frac{(k+1)(k+2)}{2}$$

$S(k+1) = \frac{(k+1)(k+2)}{2}$

Step III :-

Conclusion:- Hence $S(n)$ is true by induction

Step II :- Induction step

Assume, $S(n)$ is true is multiply by 5

Now, check $S(k+1)$ is true for

$$S(k+1) = 8^{k+1} - 3^{k+1}$$

$$= 8^k \cdot 8^1 - 3^k \cdot 3^1$$

$$= 8^k(5+3) - 3^k$$

$$= 8^k \cdot 5 + 3 \cdot 8^k$$

$$= 8^k \cdot 5 + 3 \cdot 8^k$$

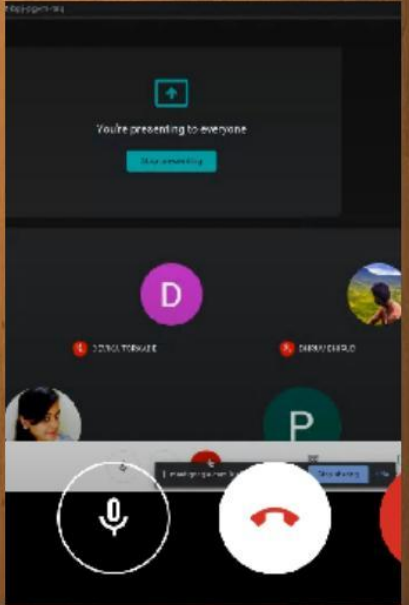
$$= 8^k \cdot 5 + 3 \cdot 8^k$$

Here $5 \cdot 8^k$ is multiply by 5

∴ $8^{k+1} - 3^{k+1}$ is multiply

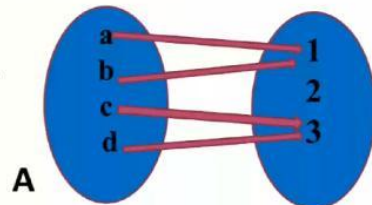
Step III :-

Conclusion:- $S(n) = 8^n - 3^n$ is



- A function $f : A \rightarrow B$ is said to be **Many to One**, if two or more distinct elements in A have the same image in B.

- For eg. :-



Flipped Classroom on Relation & Functions

By
Mrunali Bhong

Warshall's Algorithm

Subject: Discrete Maths
Date: 15/09/20'

Boolean Operations for Warshall's Algorithm

OR

A	B	A+B
0	0	0
0	1	1
1	0	1
1	1	1

AND

A	B	A*B
0	0	0
0	1	0
1	0	0
1	1	1

Example 1

Q 1)

Let $R = \{(1,4), (2,1), (2,5), (2,4), (4,3), (5,3), (3,2)\}$

$A = \{1, 2, 3, 4, 5\}$;

Use warshall's algorithm to find transitive closure of R.

[6 Marks]

[Nov.-Dec. 2018]



Step 6:- $k=5$

1	1	1	1	1
1	1	1	1	1
0	1	1	0	0
0	0	1	0	0
0	0	1	0	0

Row3 = Row3 OR Row1

0 1 1 0 0

OR 1 1 1 1 1

1 1 1 1 1

Row4 = Row4 OR Row1

0 0 1 0 0

OR 1 1 1 1 1

1 1 1 1 1

Row5 = Row5 OR Row1

0 0 1 0 0

OR 1 1 1 1 1

1 1 1 1 1

Row3, Row4 & Row5 are modified.

Thank You !

Mrunali Manohar Bhong.

Gr No.:- 191043

Online Workshop attended by SE students along with Prof. Vidya Shitole Execution Glimpses:

