INVENTION OF SEQUENCE MANAGEMENT

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ABSTRACT : *The sequence management is a most wanted opportunities of science and technology as well as industrial state, corporate world, engineering, education, nuclear physics, economics, matrix, determinants, geometry, trigonometry, series, arithmetic, calculus space science, electric and electronic field, computer science, issue currency, issue mobile recharges, to prevent duplicate of any product, issue password, daily uses, life science, banking, military force, police, administration, statics etc. The commercial management and remainder theory are the important concept which solve many problems based on several fields of life. The representation of remainder symbol (..) how so easy. It is more easy to provide in calculator, computer, laptop, and many other system.*

Key Word : $\sqrt{X}^{n}$, $\overline{\circ}$, *(..), group, sequence.*

I. INTRODUCTION

This is a creation of mine child hood mind makeup when I read in intermediate and passed out the difficulties to solve the problem of series. It is pasted with our mind & the result sequence management, produced. Generally it is seen as a very simple but it plays most important role in our life. In industrial state & corporate world the imitation stands as a world level problem. If we see as a view of solution, the sequence management is more suitable to prevent duplicity. We can find out the accurate position of any process through this article. Next we will study that what is sequence management, opportunities & its uses in our life.

II. SEQUENCE MANAGEMENT

The sequence management is the collection of commercial management with remainder theory and next part of fundamentals of sequence system. The previous parts, fundamentals of sequence system have been published in IOSR-JAP journal (see reference - 5). The commercial management is a new fundamental and not published anywhere. The commercial management is most wanted opportunities for construction field, production work, corporate world, engineering and technology.

III. REMAINDER THEORY

Since we know that if,

$A \div B = C$, *then* $A = B \times C$

Where A = *Dividend*

B = *Divisor*

C = *quotient*

But if $A \div B \neq C$ *then*

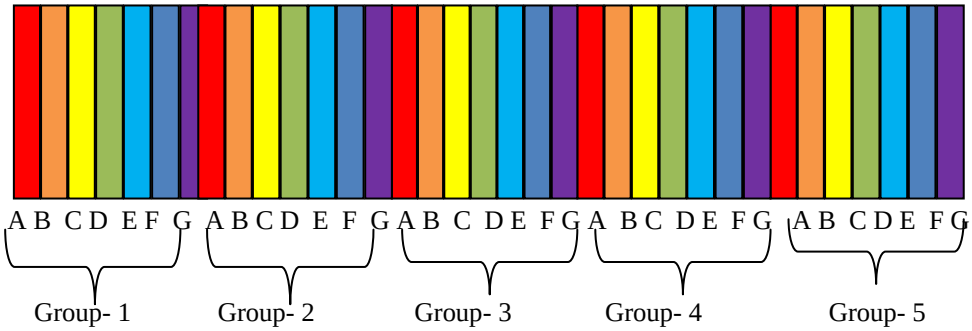
$A \div B = C..R$ *where R is remainder.*

A ÷ B =C..R will known as avadh remainder theory.

And read as – A divided by B or A upon B is equal to C remainder R, and the symbol ***"(..)"*** *denoted as remainder.*

IV. CONCEPT OF SEQUENCE MANAGEMENT

The sequence management acts as a managing director of any process. Consider a process is happened again & again up to n times under any described sequence as given below-



…up to n times.

1-Red(A) 2- Orange(B) 3- Yellow(C) 4- Yellow-green(D) 5- Blue(E) 6- Indigo(F) 7-Voilet (G)
8-Red(A) 9- Orange(B) 10- Yellow(C) 11- Yellow-green(D) 12- Blue(E) 13- Indigo(F) 14-Voilet (G)
15-Red(A) 16- Orange(B) 17- Yellow(C) 18- Yellow-green(D) 19- Blue(E) 20- Indigo(F) 21-Voilet (G)
……
……..……..n times.

Then it can be represented as-

$\prod_{P_{(A,G,7)}}^{n}$ Where the symbol $\prod$ is represented as a process and read as

Process P, under sequence A to G ,seven up to n.

To find out the status of any group or step, we will use ***avadh remainder theory*** as given below-

RULES - For status of any step or group of any process–

When the step of any process, whose status we required is divided by total step of one group in described sequence , then according to avadh remainder theory –

For Status of Any Group

If, quotients contains no remainder,

group number = quotient

but if, quotient contains any remainder,

group number = quoitent+1

For status of any step .

If remainder is 1, then the step will be A.
If remainder is 2, then the step will be B.
If remainder is 3, then the step will be C.
If remainder is 4, then the step will be D.
If remainder is 5, then the step will be E.
If remainder is 6, then the step will be F.
If remainder is 0, then the step will be G.

The remainder shows the accurate figure of that step, under the process.

Example- Find out the group number and colour of spectrum at 25th step consider A to G as a group?

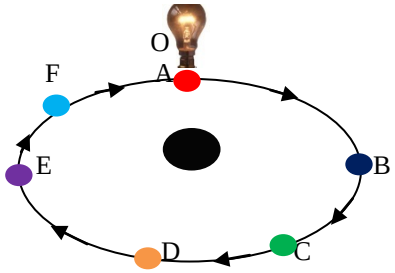
Solution:

Using avadh remainder theory total number of colour in one group=7

We have to find out the colour of step number=25

then, 25÷7=3**..**4 Here quotient contains remainder, hence the 25th step exist in group number 3+1= 4 and colour will be4{ D(yellow- green)}.

2- Consider that six sphere are rounding in a circular form around a system as given below-



1-Red(A) →2-Black(B) →3-Green (C) → 4-Orange (D) →5-Voilet (E) → 6-Blue (F)

The movement start from A and time measured from A to B 1/6 second, from B to C 1/6 second, for C to D 1/6 second from D to E 1/6 second, from E to F 1/6 second & from F to A 1/6 second. Total time taken in one round is one second. When the one round complete a bulb is on & off as indicator that one round is completed. Now start the movement. The whole process can be represented as-

$\prod_{Z_{(A,F,6)}}^{S\ n}$ Read as Process Z under sequence A to F,6 up to n under condition S. Here S shows that at every 6th step a bulb is on and off as indicator.

V. FORMS OF SEQUENCE SYSTEM

1- General form of Sequence System-

If a system is in the form of $x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8, x_9, x_{10}, x_{11}, x_{12}, x_{13}, x_{14}, x_{15}, x_{16}, x_{17}, x_{18}, x_{19}, x_{20}, x_{21}, x_{22}, x_{23}, x_{24}, x_{25}, x_{26}, x_{27}, x_{28}, x_{29}, x_{30}$, ... n times then this process can be represented as-

Xn

and read as a Process X under sequence from n is equal to one to n.

OR

If a system is work done in the form of
$X_1 \rightarrow X_2 \rightarrow X_3 \rightarrow X_4 \rightarrow X_5 \rightarrow X_6 \rightarrow X_7 \rightarrow X_8 \rightarrow X_9 \rightarrow X_{10} \rightarrow X_{11} \rightarrow X_{12} \rightarrow X_{13} \rightarrow X_{14}$……..n times = X_n (n, n=1)

This is called general form of sequence system.

2 - Conditional form of Sequence System-

If a system is work done in the form of-
$X_1 \rightarrow X_2 \rightarrow X_3 \rightarrow X_4 \rightarrow \mathbf{Z} \rightarrow X_6 \rightarrow X_7 \rightarrow X_8 \rightarrow X_9 \rightarrow \mathbf{Z} \rightarrow X_{11} \rightarrow X_{12} \rightarrow X_{13} \rightarrow X_{14} \rightarrow \mathbf{Z}$……..…….n times .

Under sequence system it can be represented as-

s n
Xn
n=1 where s shows that every 5^{th} step of this process is Z,

Example - Find out the status of 38^{th} & 60^{th} steps?

Solution- For status of 38^{th} term.

Now applying avadh remainder theory-
Given that total number of step in one group=5 , then

38÷5=7..3

Here quotient contains remainder hence the step number 38^{th} will be X_3 under group number.
For status of 60^{th} step.

60÷5=12..00 Here quotient contain no remainder hence step 60^{th} will be Z under group number 12.

3 - Argumentative form of Sequence System-

3.1 If a system or process will be done again and again such as-
$X_1, X_2, X_3, X_4, X_1, X_2, X_3, X_4, X_1, X_2, X_3, X_4$…………n times, then it can be represented as-

n
$X_{(1,4,4)}$

Consider X_1, X_2, X_3, X_4 as a group. Find out the status of steps number 3250^{th} and 6440^{th} steps?

Solution- Under sequence system, the above function can be written as-

$A_{(1,4,4)}$ n

Here total number of members under one group=4 , then
Using avadh remainder theory-

3250÷4=812..2

Hence the step number 3250 will be X_2 under group number 812+1=813.

For status of 6440th step-

6440÷4=1610..00

Here remainder is zero. Hence the step number 6440 will be X_4 under group number1610.

3.2 If $X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8$, Z, $X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8$, Z, $X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8$, Z, $X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8$, Z,……n times, then it can be represented as-

$$\left[X_{(1,8,10)} \right]_{n=1}^{s \quad n}$$

consider $X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9$, Z as a one group.

3.3 If the system is in the form of -

$$\begin{matrix} A_1 & A_1 & A_1 & A_1 \ldots\ldots\ldots \\ A_2 & A_2 & A_2 & A_2 \ldots\ldots\ldots \\ A_3 & A_3 & A_3 & A_3 \ldots\ldots\ldots \\ A_1 & A_1 & A_1 & A_1 \ldots\ldots\ldots \\ A_2 & A_2 & A_2 & A_2 \ldots\ldots\ldots \\ A_3 & A_3 & A_3 & A_3 \ldots\ldots\ldots \end{matrix} \qquad \left[A_{(1,3,6)} \right]^{n}$$

3.4 If the system is in the form of -

$$\begin{matrix} A_1 & A_2 & A_3 & A_1 & A_2 & A_3 \\ A_1 & A_2 & A_3 & A_1 & A_2 & A_3 \\ A_1 & A_2 & A_3 & A_1 & A_2 & A_3 \\ A_1 & A_2 & A_3 & A_1 & A_2 & A_3 \\ A_1 & A_2 & A_3 & A_1 & A_2 & A_3 \\ \\ .. & .. & .. & .. & .. & .. \\ .. & .. & .. & .. & .. & .. \end{matrix} = \left[A_{(1,3,6)} \right]^{n}$$

Consider, for row $\left.\begin{matrix} A_1 \\ A_2 \\ A_3 \end{matrix}\right\}$ as a group and for column A_1 to A_3 as a group, then-

Example-Find out the status of 625th and 813 step of -

If any term more than 3 divided by 3, then by avadh remainder theory–

When quotients have no remainder-

quotient = group number

When quotient have any remainder ,then

quotient+1 = group number,

For status of step-

If remainder is 1 then step will be A_1

If remainder is 2 then step will be A_2

If remainder is 0 then step will be A_3.

Solution –

625 ÷ 3 = 208..1 Here quotient = 208, contain remainder, hence the status of step number 625th will be group number 208+1=209 & type of step A_1.

For status of 815th step

813 ÷ 3 = 271..0

Here remainder is zero hence the step number 813 will be under group number 271 and type of step will be A3.

4. Operating forms of Sequence System:-

4.1 $\left[> 2 \right]_{X=1}^{n}$ = n……14>12>10>8>6>4>2

4.2 $\sum_{X=1}^{n} 2X$ =2<4<6<8<10……n times.

4.3 $\sum_{X=1}^{n} (+)\,2X$ =2-4+6-8+10-12+14……n times.

4.4 $\sum_{X=1}^{\cdot} (\cdot)\,3X$ =3. 6. 9. 12. 15. 18……n times.

VI. COMMERCIAL MANAGEMENT

The commercial management is the method to represent any process including many type (categories) units as meter(m) , kilogram(kg) ,gram(gm), kilometer(Km) , second, minute, number, cubic meter ,volt(V), mega electron volt (MeV) and many other units, separately under a platform and we will solve the problems based on it easily. This concept can be using for construction work, production work, corporate world ,industrial state, and many other fields of life. For example consider we have to make 200 km road. The average of required material details for one meter road is-

1- 0.5 cubic meter boulder(P), 2-Two liter Koltar(Q), 3.0.3cubic meter small size stone((R),
4. 10 kg sand(S) 5. 5 labour(T) 6. Average cost for one meter road 50Dollrer(X).
Then the whole process can be represented as-

$\sum_{(P,Q,R,S,T,X=1)}^{n}$ 0.5.P — 2.Q — 0.3.R — 10.S — 5.T — 50. X

Now we can find out charges of any item as well as total cost also. See the example under application of sequence management headline 02 and 06.

Other example:-Purchasing & sell detail for one sugar bag(100 kg) is given below-Find out the purchasing cost & taxes for 150 number sugar bags?

Solution-

1-Name of material=100Kg sugar bag, 2.Purchasing cost=Rs. 3800.00, 3. Taxes=Rs.150.00
4. Carriage charges =Rs.50.00 5.other cost-Rs.20.00, 6. Total cost=Rs.4020
7. Sell=Rs. 4200 , 8. Profit=Rs. 180.00,

$\sum_{(P,Q,R,S,T,X=1)}^{n}$ 100kg (P) — 3800 (Q) — 150(R) — 50(S) — 20(T) — 4020(U) — 4200(V) — 4200(W) — 180(X)

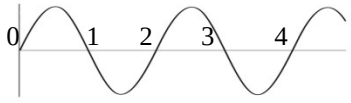
Find out the purchasing cost & taxes for 150 number sugar bags-

From concept-

Purchasing cost = 3800x150 = 5,70,000.00
Taxes = 150x150 = 28,500.00

VII. APPLICATION OF SEQUENCE MANAGEMENT

1. Physics:- Simple Harmonic Motion

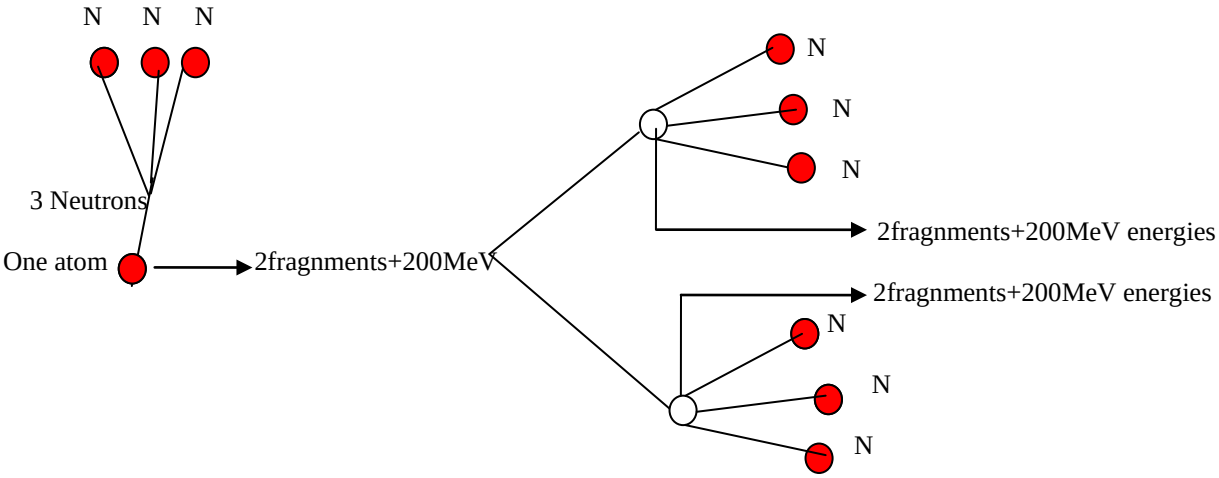


$= \sum_{X=1}^{n} (X-1)$

2 . Nuclear physics:

Nuclear fission-

When nuclear fission is happened the one atom distributed into about 2 fragments, 200MeV energy and, 3 neutron emitted and it will be happened again and again as given below



…….....
……and so on.

The above nuclear fission event can be represented under commercial management as-

$$\text{2 fragments (X)} \multimap \text{200MeV energy (Y)} \multimap 3^{x}\ \text{neutrons (Z)}$$

(X, Y, Z = 1)

Find out the status at 15th steps-

Given that,

X, Y, Z = 15

then fission event at 15th steps-

$$= 2x15 \multimap 3^{15} \multimap 200x15$$
$$= 30 \multimap 6581 \multimap 3000\text{MeV energy.}$$

Hence at the step number 15th atoms divided into about 30 fragments with 6581 new neutrons & 3000MeV energy.

3. To Prevent Duplicity A manufacturing company launches your product in market, to prevent duplicity; we can use coding system as –

Batch No.	01															
Lot No.	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Product Code	X	M	Y	N	Z	O	Q	P	X	M	Y	N	Z	O	Q	P
Serial number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

.

Batch No.	02															
Lot No.	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Product Code	X	M	Y	N	Z	O	Q	P	X	M	Y	N	Z	O	Q	P
Serial number	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

. ……..
……up to n times.

Find out status of product serial number 800th and 650th .?

Soln :- Under sequence system with use of avadh remainder theory, we write it,

$$X_{(X,P,16)}^{\,n}$$

Where,

X	M	Y	N	Z	O	Q	P	X	M	Y	N	Z	O	Q	P

is as a group in upper described sequence. For status of product serial number 800th -

800 ÷ 16= 50..00, Here quotient contains no remainder, hence the 800th will be existed in batch number 50 and the product code will be P.

For status of product serial number 650th -

650 ÷ 16= 40..10, Here quotient contains 10 remainder, hence the 650th will be existed in batch number 40+1= 41and the product code will be M.

4. Engineering & Technology-

There are supplying 100 number of percupine to divert the direction of the river. One set of percupine contains 6 number. During the carriage 4 number of percupine damage. Find out the total set of percupine

By avadh remainder theory, number of set from 100 porcupine-

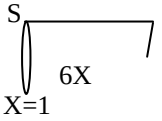
100 ÷ 6 = 16..4

So, the 16 set of percupine prepared and 4 number of percupine damage.

5. Applied Mathematics-

If today is Monday, consider Monday to Sunday as a week. Find out the status of next 256797th day .

Solution-



S shows that four number porcupine have been damaged.

1. Monday 2. Tuesday 3. Wednesday 4.Thursday 5. Friday 6. Saturday 7. Sunday

Using avadh remainder theory-

256797÷7=36685..2

So, the 256797th day will be Tuesday and it will be under week number 36686.

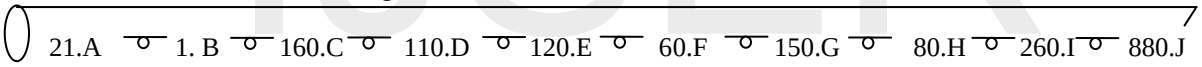
6 . Construction –

Under construction periods of a building, the average material used per square meter as given below-

A-Brick number= 21 number. F. Use sand =60cubic centimeter
B- Cement bag = 1 bag G. labour cost = Rs. 150.00
C- Sand cost =Rs. 160.00 H. other cost = Rs. 80.00
D- Iron cost =Rs. 110.00 I. Cement cost= Rs.260.00
E. Brick cost =Rs. 120 J. Total cost = Rs. 880.00

Find out the cement bag, brick number & labor cost & total cost for construction of 10 square meter building.

Solution- under commercial management it can be written as-



(A, B, C, D, E, F, G, H = 1)

For 10 square meter, use of-

Cement bag = 10 bag.
Brick number = 21x10 = 210 number
Labour cost = 150x10 = Rs. 1500.00
Total cost = 880x10 = Rs. 8800.00

7. Administration:

The election commission of India declares Member of Parliament election and advises to election officer of district election officer to allot a code number and password to all poling officer as given below-

1- Sector Magistrate 7. Sector Magistrate
2- Presiding officer 8. Presiding officer
3- Polling officer – I 9. Polling officer – I
4- Polling officer – II 10. Polling officer – II
5- Polling officer – III 11. Polling officer – III
6- Polling officer – IV 12. Polling officer – IV

……..
……..n times.

There are 120 polling station, 15 sector magistrate 120 presiding officer, 120 polling officer I, 120 polling officer II, 120 polling officer III, 120 polling officer IV. One polling booth officers know as group, 4 groups & 2 sector magistrates is in reserve. One sector magistrate monitoring eight polling stations & password of sector magistrate is (3X-2) find out the status of 75th polling officers.

Solution:- The above can be represented as-For one polling station

Sector magistrate → serial no.	Polling station number-01				
Name of Officer →	Presiding officer	Polling officer I	Polling officer II	Polling officer III	Polling officer IV
Serial number of polling officer →	1	2	3	4	5
Polling Officer code →	2X	2X+8	X+3	X+9	2X+2

Under sequence system it can be written as

$$S \left(2X \text{ o } 2X+1 \text{ o } X+3 \text{ o } X+9 \text{ o } 2X+2 \right)_{X=1}^{n}$$

S Shows that every 8th polling station has one sector magistrate monitoring, four groups and two sector magistrates in reserve.

For status of polling station 75-

Given that total number of polling station=5 ,then

Presiding officer code = 2.X= 2x75 = 150
Polling officer – I =(2.X) = 75x2+8 = 158
Polling officer – II =(X+3) = 75+3 = 78
Polling officer – III (X+9) = 75+9 = 84
Polling officer – IV (2X+2) = 2x75+2 = 152

By using avadh remainder theory, Serial number of sector magistrate-

75÷8= 9..3

The serial number of sector magistrate will be 9+1=10, & Password is (3.X-2) = 3 x 8 – 2 = 22 and at 75th polling, polling officer IV is seated.

VIII. CONCLUSION

The sequence management is most wanted world level opportunities which will able to solve many problem based on several fields of life. It will present the best station to engineering, science & technology as well as mathematics. It is a new topic for physics and easily can provide in calculator, scientific & many other systems. We can prevent the imitation of any product by using this system. We find out the accurate position of any process and term also. The assumption of commercial management is so best fundamental for engineering and technology, corporate world . So, if we see at the view of scientific, it is a world level solution for science , technology, economics.

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5 IOSR-JAP ,Fundamental of sequence system, edition april-2013 page 29 to 37.

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