DCMTCA-2011

Proceedings

of

District Conference on Modern Trends in Computer Application

DCMTCA -2011

Organized

By

ComputronicS

A Gateway to Computer World

Serampore Hooghly, W.B.

November 6th, 2011, Serampore, Hooghly, West Bengal

District Conference on Modern Trends in Computer Application (DCMTCA-2011)

November 6th, 2011
Serampore, Hooghly, West Bengal

Organizer

ComputronicS

A Gateway to Computer World
Associated with an ISO-9001-2008 concern

Venue

Serampore Town Hall, Serampore , Hooghly
West Bengal

District Conference on Modern Trends in Computer Application

DCMTCA-2011

District Conference On Modern Trends In Computer Application (DCMTCA-2011)

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District Conference On Modern Trends In Computer Application (DCMTCA-2011)

6th November, 2011

Program Schedule

Time	Event	Venue	By
8.15am-8.50am	Welcome, Registration	Reception	DCMTCA-2011 Org. Committee
9.00am-10.00am	Assembly and Inauguration	Charles Babbage Auditorium	Dignitaries and Delegates
10.00am-10.20am	Key note	Charles Babbage Auditorium	Prof. S. Daw (HETC)
10.25am-10.40am	**Tea Break**		
10.40am-11.15am	Special Technical Session - I	Charles Babbage Auditorium	Prof. A. Mukherjee (HETC)
11.15am-11.45am	Special Technical Session – II	Charles Babbage Auditorium	Mr. S. Banerjee ,(ALUMNUS)
11.45am-12.15pm	Special Technical Session – III	Charles Babbage Auditorium	Mr. A. Chatterjee (City Tech Software ,Kolkata)
12.15pm-12.55pm	Special Technical Session - IV	Charles Babbage Auditorium	Prof. A. Chatterjee (HETC)
1.00pm-2.00pm	**Lunch Break**		
2.05pm-3.15pm	Student Session	Charles Babbage Auditorium	Participants
3.20pm-3.55pm	Special Technical Session - V	Charles Babbage Auditorium	Prof. T. Roy (MCKV)
4.00pm-4.15pm	**Tea-Break**		
4.20pm-4.45pm	Valedictory Session	Charles Babbage Auditorium	Prof. (Dr.) N.K. Ghosh (Gen. Chair, DCMTCA_2011)
4.45pm-5:00pm	Cultural Program	Charles Babbage Auditorium	By Students
5:00pm-5:15pm	Vote of Thanks	Charles Babbage Auditorium	Secretary

Contents

Keynote

Prof. S. Daw
Faculty of Computer Science and Engineering
Hooghly , West Bengal

Keynote Abstract

The last forty years have seen computer science evolve as a major academic discipline. Today the field is changing dramatically. Some of the drivers of this change are the internet, the World Wide Web, large quantities of information in digital form and wide spread use of computers for accessing information. These changes in the theoretical foundations of computer science need to support the information age. This conference just creates a platform to provide some modern trends in computer application such as Cyber Security, Web Mining, Artificial Intelligence, Pattern Matching, Signal Processing and Robotics etc. for the young scientist to enhance their knowledge and develop themselves as per job sector requirements.

Bibliography:

M.Sc. in Software Engineering and M . Tech. in CSE. One year of Industry and Seven Years of Teaching Experience . Interested area is Cyber Security and Pattern Matching.

:

Special Technical Session

Session -1

"*An Introduction to Computer Applications*"

Prof. A. Mukherjee

Asst. Prof. Electrical Engineering, HETC, Hooghly, West Bengal

Abstract

The computer is a relatively new invention which has already changed many facets of the way we live. Computer applications are likely to have an even bigger role in the shaping of society in the future. We understand "literacy" as a mastery of basic terminology about the issue at hand. In this particular case, our main aim will be to provide a list of definitions of key computing terms that the student may encounter in his/her daily life: in an office environment, in the newspaper, etc. Having thus stated our approach, we start our exposition with the most basic term of all : computer.

A computer is an information processing device. Its function is to produce new items of information from old ones. The most recent tends in computer application can be acknowledged as the impact it had on higher learning a feature most subserviently utilized worldwide. Notwithstanding the impact it had on our financial institutions.

Keywords: Computer, terminology information, institutions

Bibliography:

BE in Electrical Engineering, ME from (JU). Industrial experience of seven years and Teaching experience nine years. At present Asst. Prof. of EE Department (HETC).

Session -2

"*Email-Spam*"

Mr. S. Banerjee

Senior Engineer, Alumnus Software, West Bengal

Abstract::

The use of internet is gradually increasing and the Internet becomes an insecure channel for exchanging information leading to a high risk of intrusion or fraud. But our daily life may not run without such an asynchronous channel well known as Email Service. Spam is one of the insecure fields in Internet which mostly spared through Email. In the year 2011, the estimated figure for spam messages is around seven trillion (CISCO data) which may cost a lot for the internet users. What may be the different problems with Email-Spam? How does it cost? My presentation is a probable solution to stamp out Email-Spam.

Keywords: Intrusion, Asynchronous, Spam.

Bibliography :

Software Engineer in Alumnus Software, Kolkata. He is completed his B.Tech. in Electronics & Communication Engineering. He is expertise in the field of Embedded System.

Session -3

"*Being Employed in the IT Domain*"

Mr. A. Chatterjee
Senior Software Developer , Citytech Software Ltd. , West Bengal

Abstrac ::

In this synopsis I am going to spot light on My Experience field and which I gather from the different section of my professional life. Those moments and glimpse I am going to share to give you some idea about dos and don'ts about this fast track industry. I started my journey without any guidance about this domain. So through this speech I am going to enlighten the difficulties-gains-losses before you from the way of reaching the Everest, step by step concurring to the goal.

It was being an interested field i.e. software development of mine I joined in a computer learning center. From there a faculty job and keep alive my wish torch and from that faculty profile I ultimately able to got the developer profile. My speech is all about ASK factor and the present scenario of the ASP.NET and its application on software development.

Keywords: ASK Factor, ASP.NET, idea on development.

Bibliography:

I started as a faculty in a govt. setup where I have to teach some group of employees on the computer operation and applications. Next I entered in the software development in the same company, which was the beginning of change in my working profile. Next I got a new job as a software developer, there I got chance to work in VB.NET framework. From that designation currently I am into ASP.NET development which is web development precisely.

Session -4

"*MATLAB and Its Applicatio* "

Prof. *A. Chatterjee*

Asst. Prof. Electrical Engineering, HETC, Hooghly, West Bengal

Abstract::

The name MATLAB stands for **MATrix LABoratory**. MATLAB allows matrix manipulations, plotting of functions and data, implementation of algorithms, creation of user interfaces, and interfacing with programs written in other languages, including C, C++, Java, and Fortran. Some toolboxes and blocksets are there and which is used for designing purpose. So in modern days lots of work can be done using Matlab, specially in the field of Engineering and Technology.

Keywords: MATLAB, Toolbox, Blocksets, Command Window.

Bibliography:

BE in Electrical Engineering , ME from (BESU). Teaching experience two years. At present Asst. Prof. of EE Department (HETC).

Session -5

" *ROBOT* "

Prof. *T. Roy*
Asst. Prof. Electrical Engineering , MCKVIE, Howrah , West Bengal

Abstract::

The history of industrial automation is characterized by periods of rapid change in popular methods. Either as a cause or, perhaps, an effect, such periods of change in automation techniques seem closely tied to world economics. Use of the industrial robot, which became identifiable as a unique device in the 1960s, along with computer-aided design (CAD) systems and computer-aided manufacturing (CAM) systems, characterizes the latest trends in the automation of the manufacturing process.

A major reason for the growth in the use of industrial robots is their declining cost. Robots are not just getting cheaper, they are becoming more effective—faster, more accurate, more flexible. If we factor these *quality adjustments* into the numbers, the cost of using robots is dropping even faster than their price tag is. As a robot become more cost effective at their jobs, and as human labor continues to become more expensive, more and more industrial jobs become candidates for robotic automation. This is the single most important trend propelling growth of the industrial robot market. A secondary trend is that, economics aside, as robots become more capable they become able to do more and more tasks that might be dangerous or impossible for human workers to perform.

Keywords: Kinematics, degrees of freedoms, manipulators, position control, artificial intelligence.

Bibliography:

B. Tech in Electrical Engineering , M. Tech. from (NITTTR). Teaching experience six years. At present Asst. Prof. of EE Department (MCKV).

Projects

❖ **System Modeling (SM)**

Positional Computation and Identification of Moving Object

D. Das , *Raja Pearymohan College ,Uttarpara, (e-mail: 007dipak1991@gmail.com)*
A. Mondal, *Raja Pearymohan College, Uttarpara, (e-mail: avi007mondal @gmail.com)*
P. Chakraborty, *Hooghly Engineering and Technology College, Hooghly , e-mail: pinakinil@yahoo.co.in)*

Abstract
In this project we have tried to develop an analytic (theory based) scheme to incorporate the volumetric nature of the variable conical angular object (as tornado) with the methodology of rotational geometry.

We are going to find out the area , volume and the co ordinates of conics where two end points of the diameter of the guiding curve and the vertical angle ϴ is varies. Now as the shape of a tornado is also like right circular cone so by finding the vertex we can get the probable path of tornado.

keyword: Projection, Transformation

Description chart ::

Symbols	Description	Range
h	Height of the conic	10m.-50m.
r	Radius of the conic	----------
ϴ	Angle between vertical line and generating line	$-90^0 < \Theta < +90^0$
ω	Angular velocity	
α	Angle between generating line and earth surface	
s	Displacement	
t	Time	
v	Linear velocity	150km/hr-250km/hr.
β	Transformation angle of the vertical axes	

Experimented value:

H	r1	r2	r3	r4	r5	avg r	avg (r/h)	v	ω	avg ω
10	0	3.25	7.26	13.76	30.78	11.01		150	13.624	6.2216
20	0	6.5	14.52	27.52	61.56	22.02			6.812	
30	0	9.75	21.78	41.28	92.34	33.03	1.101		4.541	
40	0	13	29.04	55.04	123.12	44.04			3.406	
50	0	16.25	36.3	68.8	153.9	55.05			2.725	
10	0	3.25	7.26	13.76	30.78	11.01		175	15.895	7.2586
20	0	6.5	14.52	27.52	61.56	22.02			7.947	
30	0	9.75	21.78	41.28	92.34	33.03	1.101		5.298	
40	0	13	29.04	55.04	123.12	44.04			3.974	

50	0	16.25	36.3	68.8	153.9	55.05			3.179	
10	0	3.25	7.26	13.76	30.78	11.01			18.164	
20	0	6.5	14.52	27.52	61.56	22.02		200	9.081	
30	0	9.75	21.78	41.28	92.34	33.03	1.101		6.055	8.2948
40	0	13	29.04	55.04	123.12	44.04			4.541	
50	0	16.25	36.3	68.8	153.9	55.05			3.633	
10	0	3.25	7.26	13.76	30.78	11.01			20.435	
20	0	6.5	14.52	27.52	61.56	22.02		225	10.218	
30	0	9.75	21.78	41.28	92.34	33.03	1.101		6.812	9.332
40	0	13	29.04	55.04	123.12	44.04			5.108	
50	0	16.25	36.3	68.8	153.9	55.05			4.087	
10	0	3.25	7.26	13.76	30.78	11.01			22.077	
20	0	6.5	14.52	27.52	61.56	22.02		250	11.353	
30	0	9.75	21.78	41.28	92.34	33.03	1.101		7.569	10.2434
40	0	13	29.04	55.04	123.12	44.04			5.677	
50	0	16.25	36.3	68.8	153.9	55.05			4.541	

Table -01

t	s	area
0	0	0
0.05	0.342499	0.36834
0.1	0.684998	1.473359
0.15	1.027497	3.315057
0.2	1.369996	5.893434
0.25	1.712495	9.208491

Table -02

From the observation table it is been clearly shown that the radius to height ratio of the tornado are constant for a particular case i.e. when ever the height increases the radius compensated and vice versa in the dependence of the velocity of the same.

The probable path of the tornado movement might be a feature of sinusoidal in nature because of the angular velocity and basic shape of the storm.

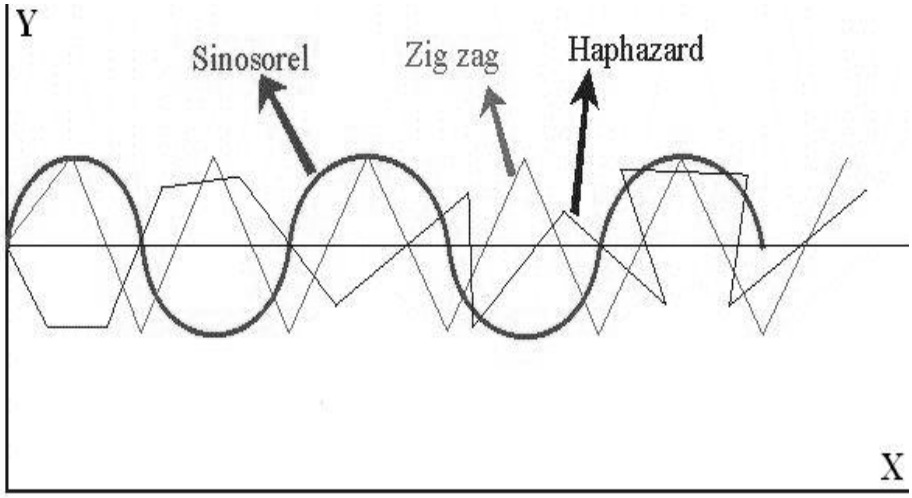
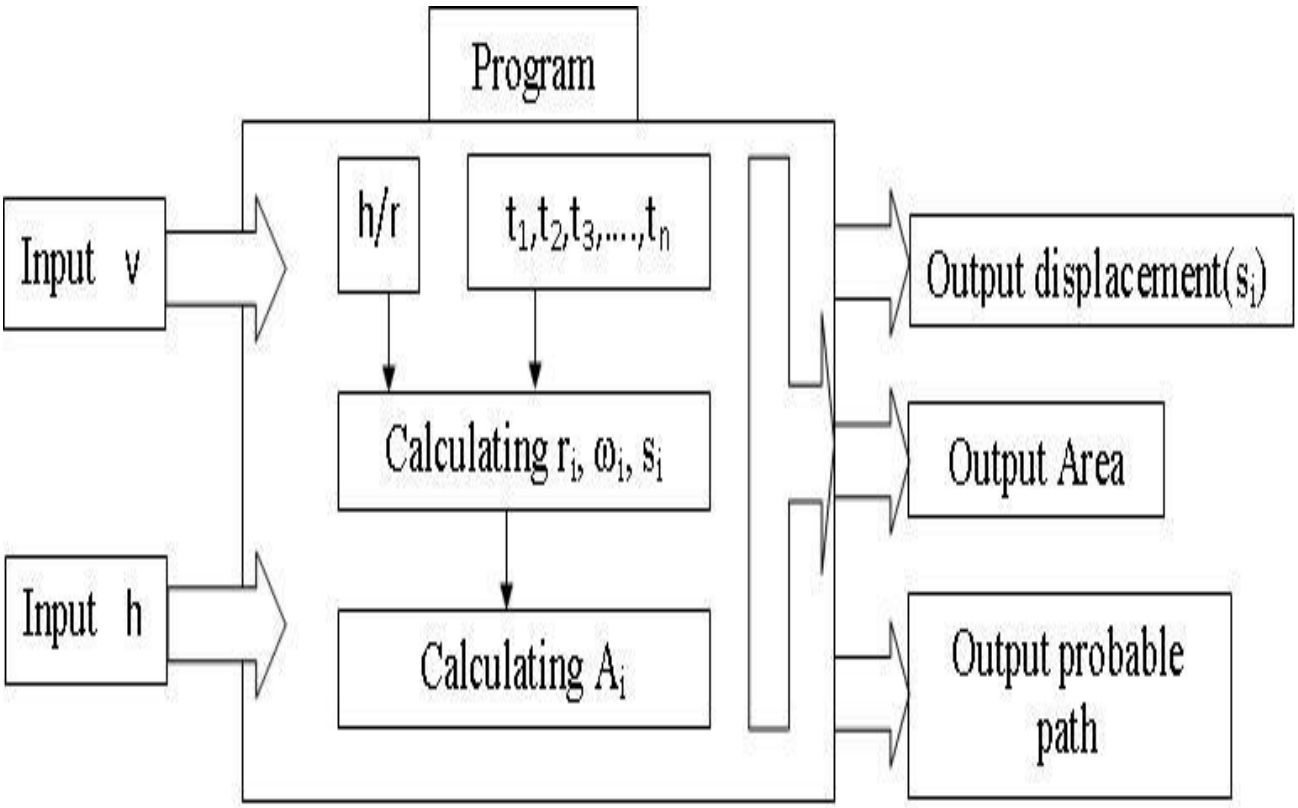


Fig. No.

Proposed Scheme:
The algorithm been proposed for the logical programming for the device used for measurement the velocity of the storm and with this application of the algorithm we can easily predict the probable disaster or the way of approach on the basis of the duration of the storm.



Future scope: From this sort of approach it will be easier to monitor the probable strength of the storm as well as can helps to find the feature of the storm . This algorithm can modified to predict the water column storm.

Position Computation with Globe Co-Ordinate System

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A. Mondal , *Raja Pearymohan College, Uttarpara, (e-mail: avi007mondal @gmail.com)*
A. Bhattacharyay , *Anon Softwares India, Serampore, Hoghly (e-mail: anitabhattacharyya@yahoo.com)*

Abstract

In this project we are going to combined latitude and time zone of any desired places of the globe basis on the co-ordinate geometry. In this process we tried to flow the basic theorems of geography, latitude, longitude calculation and basic co-ordinate principle. In our project we are using calculation, graphical present, algorithm and database. Basis on those data base and algorithm we are trying to estimate the time differences, clock-orientation and spot finding. Through our project we are trying to make the relevant data's and theorems in a single column. Under this project head we are going to incorporate the idea of computation only basis of minimum input data's. In this project we are going to develop an algorithm and to implement the logic to find out the antipode of that given point on the globe along with there time projection. We have tried to implement a relation in single application for finding the angular location of the point been selected and its proximate area. In this project we have considered some specified locations on our globe and there latitude and longitude for finding the unknown with the reference of the known points.

keyword: **Antipodes, Latitude, Longitude, Local time, Standard time, Angular-Location.**

Experimentation :

Following the developed algorithm to find out the Antipode, Time zone , Surface distance and Angular location on the basis of the give time difference (reference to the "G" standard) or the latitude-longitude co-ordinate we calculate the data which are in tabulated form .

In solid geometry the sphere is a surface traced out by a moving point which is always at a distance from a fixed point. The fixed point is called centre of the sphere and the constant distance is called the radius of the sphere.

If (x_1, y_1, z_1) be the centre of the sphere and r be the radius of it then :

$$(x-x_1)^2 + (y-y_1)^2 + (z-z_1)^2 = r^2$$

If r is the radius of the sphere and ϴ be the angle and dr be the curve length then surface area is

$$dv = \iint_0^r r^2.sin\theta.d\theta.dr$$

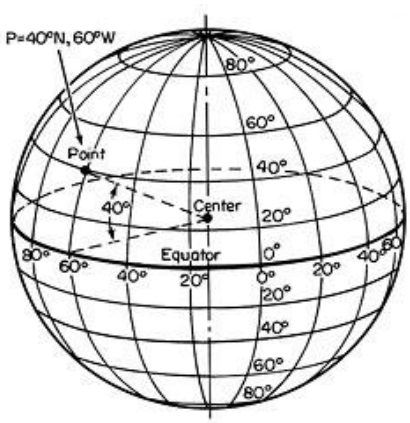


Fig. No.-05

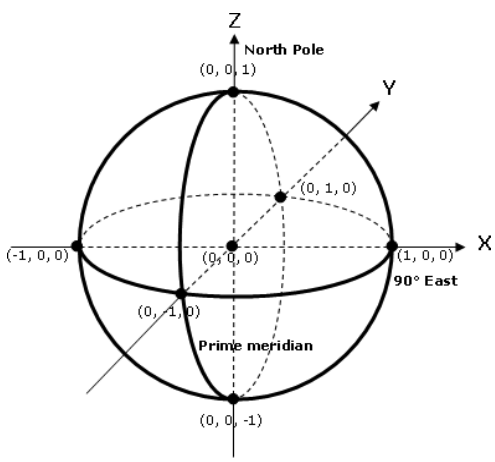
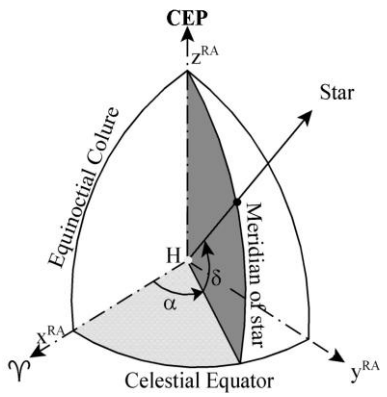


Fig. No.-06



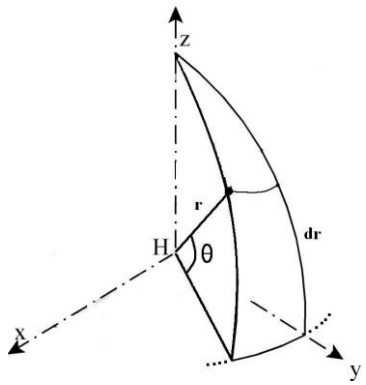


Fig. No.-07

Considerations :

For sample latitude and longitude we have chosen some renowned location across the globe for standardization.

Bombay , India:	18.55°N, 72.54°E
Sydney, Australia:	30°S, 151°E
Cairo, Egypt:	30.2°N, 3°.21E
Jakarta, Indonesia:	6.16°S, 106.48°E
Lima, Peru:	12.0°S, 77.2°W
Moscow, Russia:	55.45^0N,37.36E

When the point (given) and point to be drive are in same part of the globe (longitudinally) then we should subtract the longitude from higher to lesser.

Observation :

Sl.	From	To	X		Y		Time difference (minute)	Distance (Km.)	Angular distance (Rad)
			x_1	x_2	y_1	y_2			
1.	India	Moscow	18.55	55.45	72.54	37.36	140.72	15619.6	2.45
2.	India	Lima	18.55	12.0	72.54	77.2	738.64	8198.9	12.8
3.	India	Jakarta	18.55	6.16	72.54	106.48	135.76	1506.93	2.36
4.	India	Cairo	18.55	30.2	72.54	3.21	277.32	3078.25	4.82
5.	Jakarta	Moscow	6.16	55.45	106.48	37.36	276.48	3068.92	4.81
6.	Jakarta	Cairo	6.16	30.2	106.48	3.21	413.08	4585.18	7.19
7.	Cairo	Moscow	30.2	55.45	3.21	37.36	136.6	1516.26	2.38
8.	Cairo	Lima	30.2	12.0	3.21	77.2	1015.96	1127.7	17.6
9.	Jakarta	Lima	6.16	12.0	106.48	77.2	602.88	6691.96	10.4
10.	Lima	Moscow	12.0	55.45	77.2	37.36	879.36	9760.8	15.3

Table No.-01

Proposed algorithm

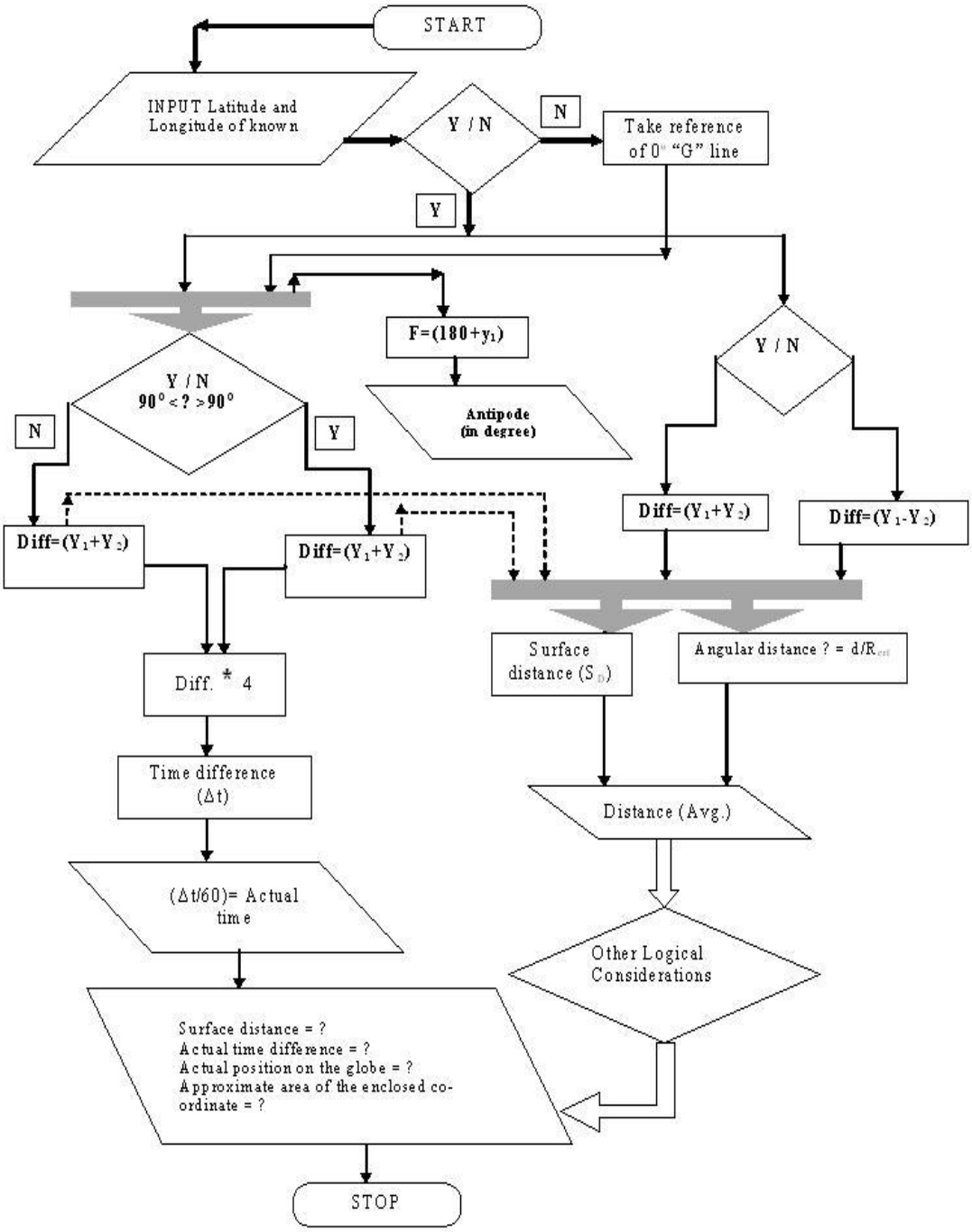


Fig. No. 08

This is the algorithm which been proposed by this project for developing such a logical tool to find out the over described data for finding the location on the globe with reference places considered.

Future work :

Through this project algorithm we can find the approximate area of that particular zone confined by co-ordinate.

❖ **Condition Monitoring (CM)**

Computational Approach in Seebeck Effect on Power Saving

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P. Chakraborty, *Hooghly Engineering and Technology College, Hooghly (e-mail: pinakiet@gmail.com)*

Abstract

We use electrical heater to heat water rather use gas-oven, stove to heat water for the sake of saving time and energy (fuel). In the context of saving the time in terms of electrical energy saving we have to optimum the time of heating without compromising the required heat of the water.

But here is also a problem to heat water in this way, there is no way to know the temperature of the water. We can not know how much the water is heated. To know how much the water is heated we often deep our hand in the water. But it is dangerous. If we deep our hand in water without switching off the voltage supply, we get current shock , that causes death . To avoid this kind of trouble we use a thermocouple ,that is made of two different types metals, with the heater coil and we arrange a digital display with the heater. This thermocouple is gathered heat from the heater coil and the temperature of the water is shown in the digital display.

keyword: Heater, Thermocouple, Seebeck effect, Display, Algorithm

Results : (using the programming logic)

In winter condition the Table-01 shows the results

Table No.-01

Osrv.	Room temperature(^oC)	Display temperature(^oC)	Actual temp. of the water (^oC)
1	20	68.12	48.12
2	19	64.71	45.71
3	18	61.31	43.31
4	17	57.90	40.9
5	16	54.50	38.5
6	15	51.09	36.09
7	14	47.68	33.68
8	13	44.28	31.28
9	12	40.87	28.87
10	11	37.47	26.47
11	10	34.06	24.06
12	9	30.65	21.65

It is been clear to see from the table that the gradual room temperature decrease or the increase from the temperature span the temperature rise up or drop down been depends upon the room temperature linearly.
In summer condition the Table-02 shows the results

Osrv.	Room temperature(^oC)	Display temperature(^oC)	Actual temp. of the water (^oC)
1	21	71.53	50.53
2	22	74.93	52.93
3	23	78.34	55.34
4	24	81.74	55.74
5	25	85.15	60.15
6	26	88.56	62.56
7	27	91.96	64.9
8	28	95.37	67.37
9	29	98.77	69.77
10	30	102.18	72.1
11	31	105.59	74.5
12	32	108.99	76.9
13	33	112.40	79.4
14	34	115.80	81.8
15	35	119.21	84.2
16	36	122.65	86.6
17	37	126.02	89.0
18	38	129.43	91.4
19	39	132.83	93.8
20	40	136.24	96.2

Table-02

Consideration-I : Weight varies from 1 Liter to 10 liter and Time of current flow is fixed at 25 min (1500 sec)
Taking the room temperature for the winter time as the avg. temp of 14.5°C and for the summer time avg. temp. as (30.5°C)

Weight(gm)	Summer Display Temperature(°C)	Winter Display temperature(°C)
1000	213.96	101.72
2000	122.23	58.12
3000	91.65	43.57
4000	76.36	36.30
5000	67.19	31.94
10000	48.84	23.22

Table-03

Consideration-II: Weight 10 liter been fixed and Time of the current flowing varies 5 min. to 25 min.

Time of the current flowing through the coil(min)	Summer avg. room temperature(30.5°C) Display Temperature(°C)	Winter avg. room temperature(14.5°C) Display temperature(°C)
5	34.17	16.24
10	37.83	17.99
15	41.51	19.73
20	45.18	21.48
25	48.84	23.22

Table -04

Observation:

Combining the table 03 and 04 we can develop the following table -05 and 06 and from those table it been clear to see that the Δt(°C) of winter and summer are following a logical formation to measured temperature and the heat absorbed by the water .

Weight (gm)	Summer(avg. temp. 30.5°C)		Winter(avg. temp.14.5°C)	
	Δt(°C)	Display Temperature(°C)	Δt(°C)	Display Temperature(°C)
2000	91.73	122.23	43.62	58.12
3000	61.15	91.65	29.07	43.57
4000	45.86	76.36	21.80	36.30
5000	36.69	67.19	17.44	31.94
10000	18.34	48.84	8.72	23.22

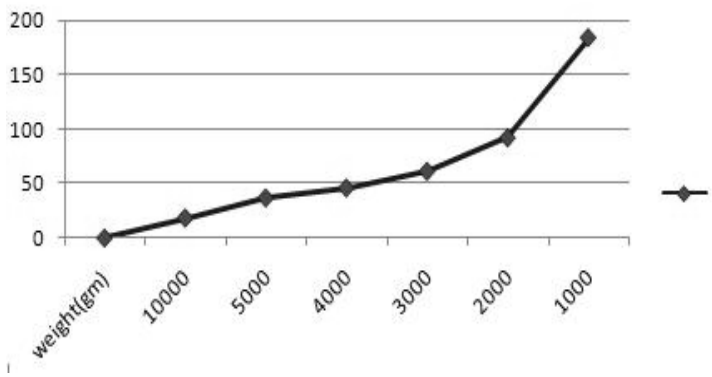
Table no.-05

Time (min)	Summer(30.5°c)		Winter(14.5°c)	
	Δt(°c)	Display Temperature(°c)	Δt(°c)	Display Temperature(°c)
5	3.67	34.17	1.74	16.24
10	7.33	37.83	3.49	17.99
15	11.01	41.51	5.23	19.73
20	14.68	45.18	6.98	21.48
25	18.34	48.84	8.72	23.22

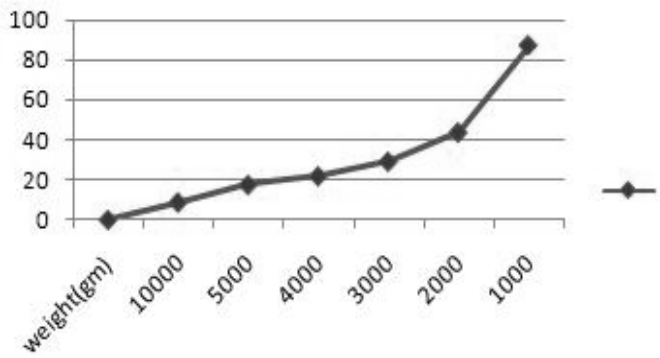
Table no.-06

Conclusion :

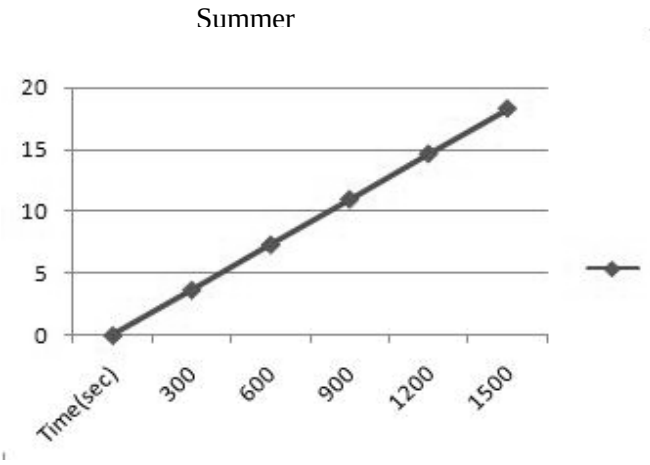
Summer

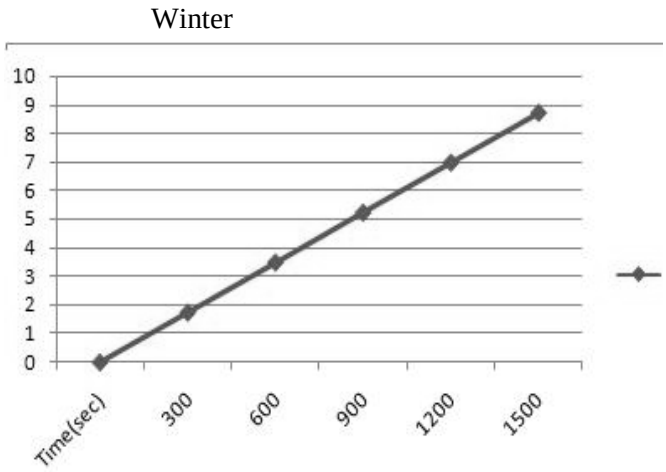


Winter

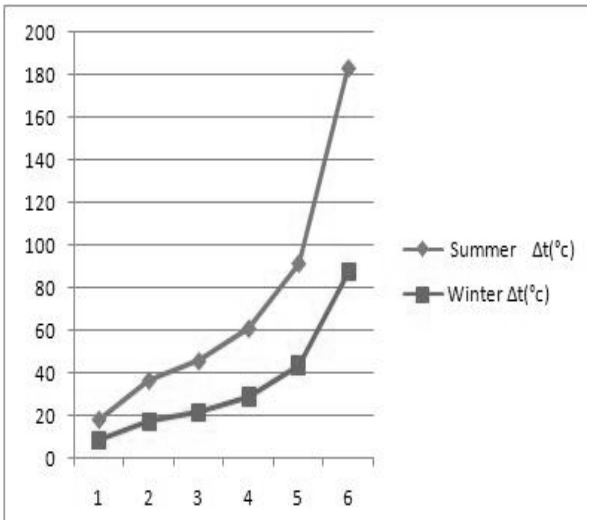


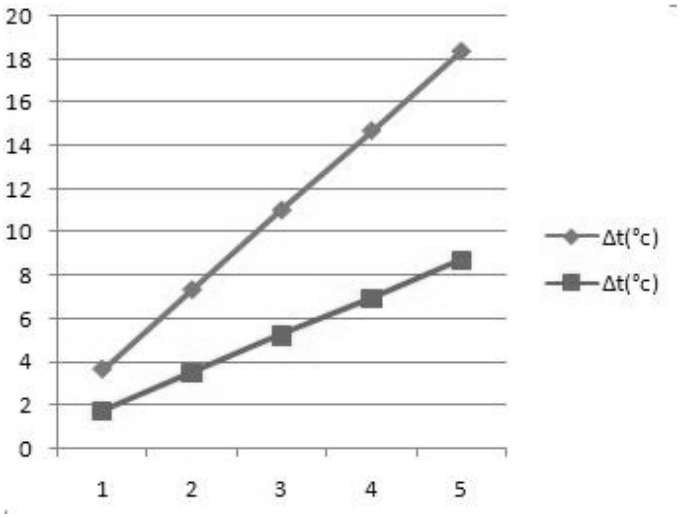
Weight vs. Δt (Fig. No.- 4 and 5)





Time vs. Δt (Fig. No.- 6 and 7)





(Fig. No.- 8 and 9)

Summer vs. Winter(Weight varies) Summer vs. Winter(Time varies)

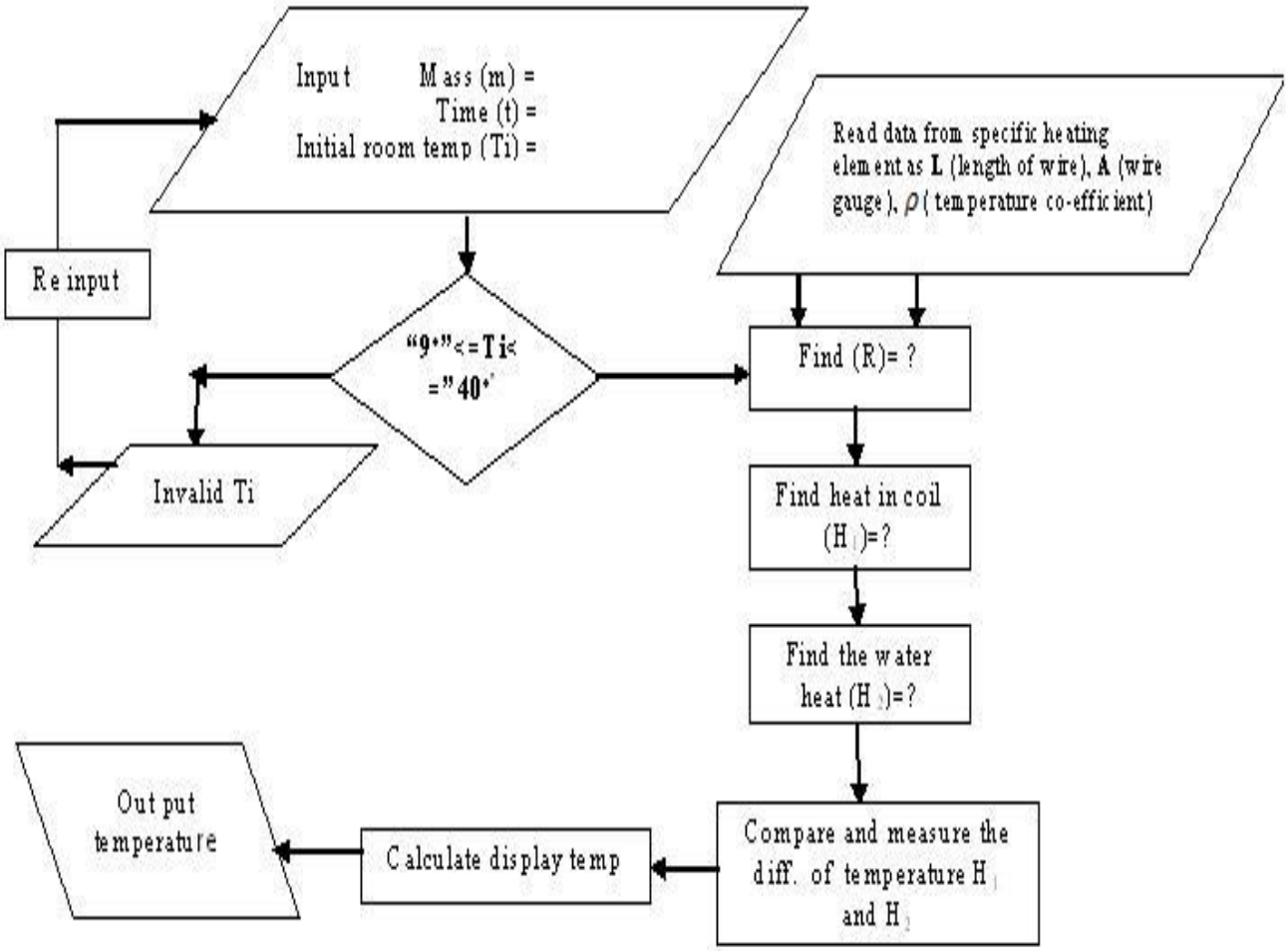
Proposed scheme:

If we apply a.c voltage to the coil is heated and we use a thermocouple sensor in the coil that is induced e.m.f. Now we use a transformer to step up the e.m.f to reduce current in the secondary side which will energize the program circuit to respond for specific heat corresponding current and will display the value of that temperature in terms of heat which have been pre-notified on the water heater display board .

This sort of attachment should follow an algorithm which been developed here by keeping mind the power saving and economic aspect. This algorithm might been implemented by use of timer based circuitry or for much precision (in case of laboratory application) may use microcontroller based circuit.

** Suppose we take 10 liter water to heat in the bowl and deep the heater into the water and switch on the circuit. After some time we see the temperature of the water in the output display.

An algorithm been followed to get the temperature difference in winter time and summer time. On the basis of this algorithm it can be easily calculated the temperature display on the defined logic of the seebek effect.



Future scope: Using this logic incorporating other considerations into account and the chip based arrangement can be used to implement the target to minimize the wastage of electrical energy with an automatic cutoff switch.

Eco-Balancing Fore Casting by O_2 and CO_2 Chemical Equilibrium Computing

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Abstract

The Bio-chemical process Photosynthesis maintains the balance of O_2 and CO_2 in atmosphere with the conjugative chemical process called Respiration of organism . The basic reactant of this two chemical change over are CO_2 , H_2O and products are glucose and O_2 and vice- versa. The quantity of chemical took part in reaction are in terms of molar weight or molar volume can be expressed. In the different places the quantity will be different. Many times we there is no volumetric similarity between O_2 and CO_2 . In our project we are going to compute and trying to develop an algorithmically supported scheme; based on the real data which can be gathered from different pollution control agencies to predict or monitor the balancing between O_2 and CO_2 from the living organism .Through this process we tried to calculate and develop a map on the basis of data generated on hour basis through a week and plotted and visualized the quiescent form between O_2 and CO_2 of a specified region (i.e. urban, suburban or township). The logic beneath this project is the chemical equilibrium ; which revels that the speed of coming equilibrium state or not in equilibrium by calculating the K_P and K_C parameter**.**

keyword: Respiratory Quiescent, Chemical equilibrium, Conditional forecasting

Experimentation and Implications:

Data table from following the algorithm . This values are determined on the basis of starting data (standard) and collected data from the environmental science.

Here we are exploring the data which can be derived by using our logical scheme for easy understanding of the O_2 and CO_2 presence in different time phase of the day .In this following table we can visualize the predicted O_2-CO_2 volumetric condition .

Table- 01

		Morning	R.Q.	Noon	R.Q.	Afternoon	R.Q.	Evening	R.Q.	Night	R.Q.
Day-1	O_2	20.22	0.001	16.176	0.0022	14.154	0.0027	17.187	0.0020	18.198	0.00019
	CO_2	0.03		0.036		0.039		0.035		0.003	
Day-2	O_2	16.378	0.002	14.558	0.0026	13.143	0.0030	15.167	0.0025	17.187	0.0020
	CO_2	0.036		0.038		0.040		0.038		0.035	
Day-3	O_2	16.58	0.0021	13.547	0.0029	12.536	0.0032	15.569	0.0023	17.794	0.00191
	CO_2	0.035		0.040		0.041		0.037		0.034	
Day -4	O_2	16.985	0.0021	14.558	0.0026	12.739	0.0032	13.75	0.0029	15.367	0.0024
	CO_2	0.035		0.038		0.041		0.040		0.037	

Day-5	O_2	17.389	0.0019	16.176	0.0022	14.963	0.0029	15.974	0.0022	16.985	0.0021
	CO_2	0.034		0.036		0.038		0.036		0.035	
Day-6	O_2	17.187	0.0020	15.569	0.0023	13.345	0.0029	14.356	0.0027	16.176	0.0022
	CO_2	0.035		0.037		0.040		0.039		0.036	
Day-7	O_2	17.187	0.0020	14.963	0.0025	12.940	0.0030	14.760	0.0025	16.985	0.0020
	CO_2	0.035		0.038		0.040		0.038		0.035	

Table -02

	Morning	**Noon**	**After Noon**	**Evening**	**Night**	**Avg . R.Q.**
Day-1	0.001	**0.0022**	**0.0027**	**0.0020**	**0.0002**	**0.00162**
Day-2	0.002	**0.0026**	**0.0030**	**0.0025**	**0.0020**	**0.00244**
Day-3	**0.0021**	**0.0029**	**0.0032**	**0.0023**	**0.0019**	**0.00248**
Day-4	**0.0021**	**0.0026**	**0.0032**	**0.0029**	**0.0024**	**0.00264**
Day-5	**0.0019**	**0.0022**	**0.0029**	**0.0022**	**0.0021**	**0.00226**
Day-6	**0.002**	**0.0023**	**0.0029**	**0.0027**	**0.0022**	**0.00242**
Day-7	**0.002**	**0.0025**	**0.003**	**0.0025**	**0.0020**	**0.0024**
Average on 7 days	**0.00187**	**0.00247**	**0.00298**	**0.00244**	**0.00182**	

Observation:

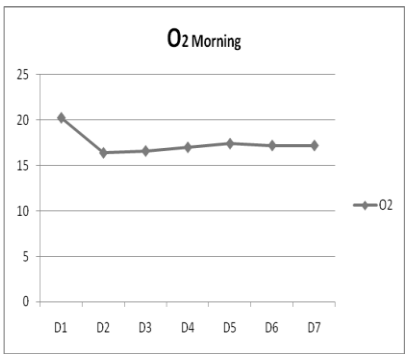
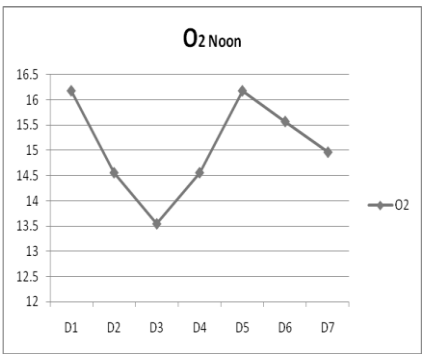
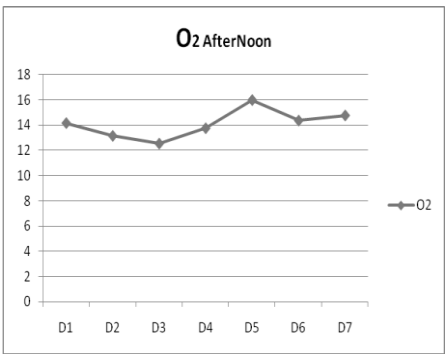


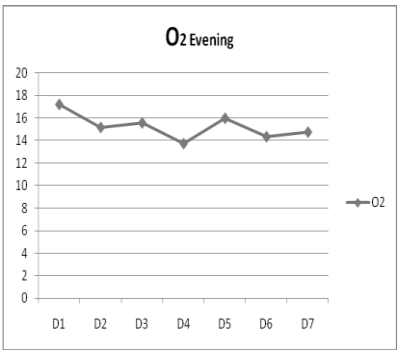
Fig. No.- 1.a



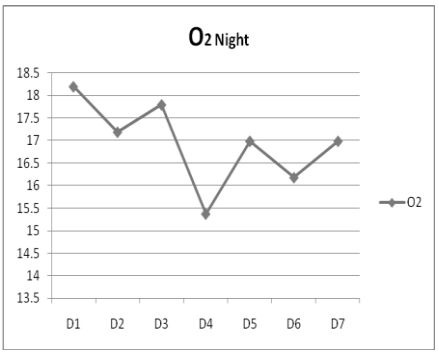
1.b



1.c



1.d



1.e

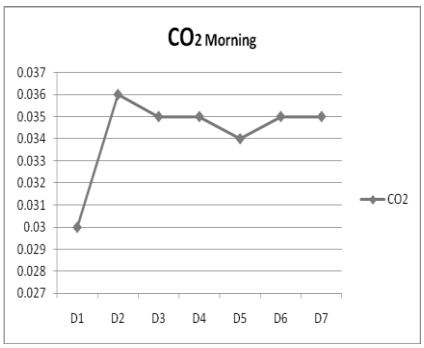
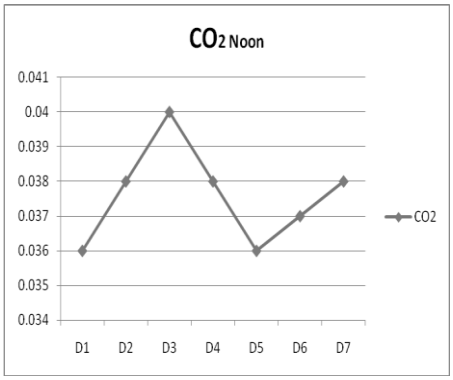
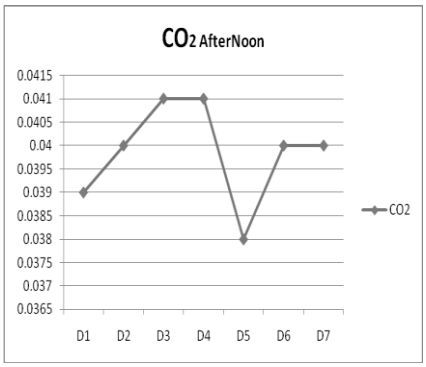


Fig. No.2.a



2.b



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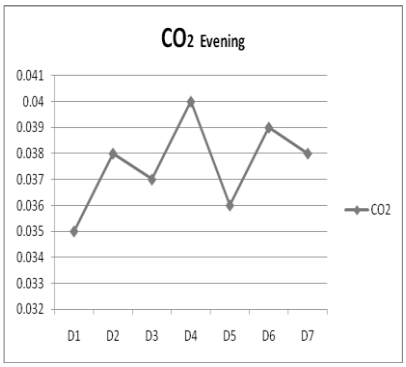
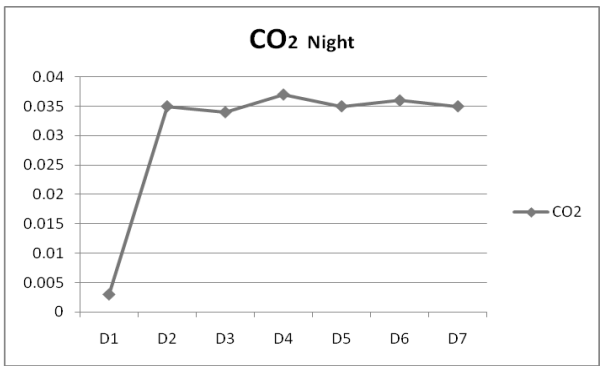


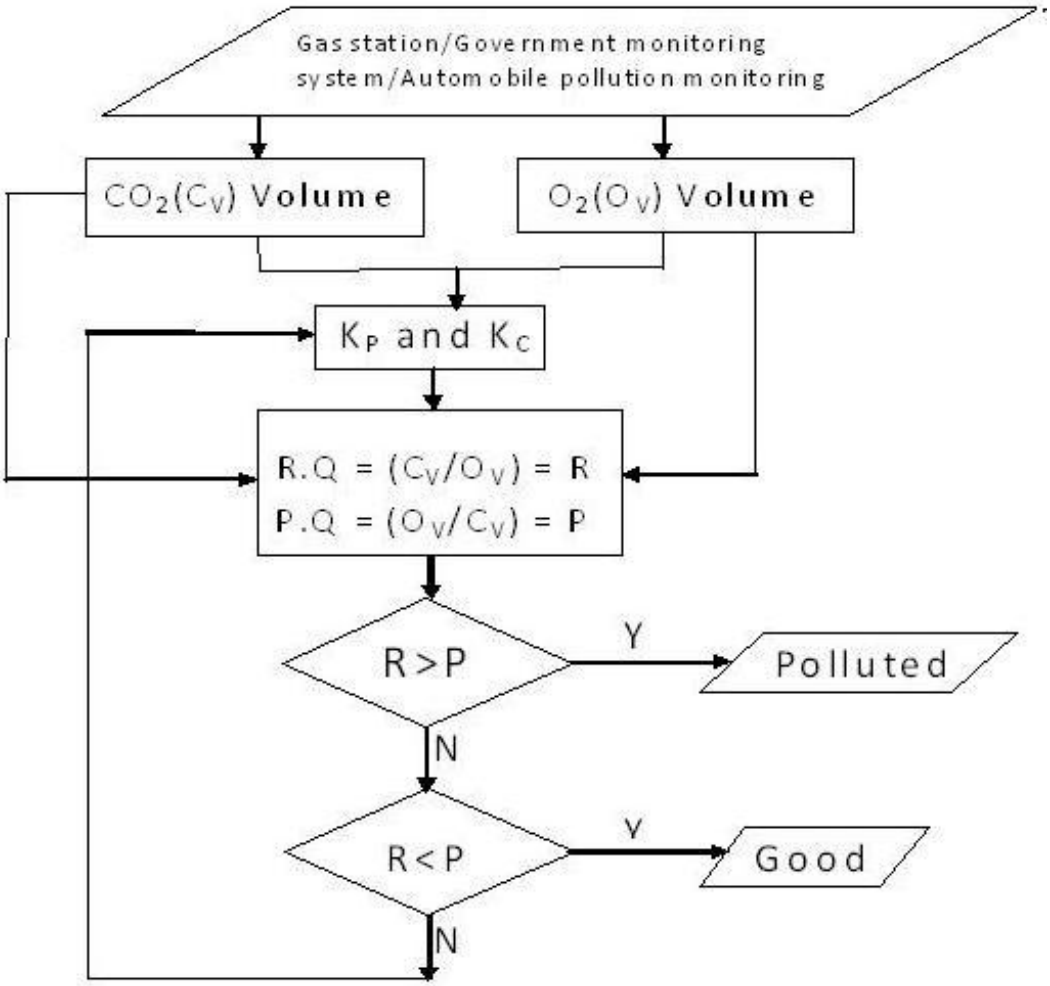
2.d



2.e

Proposed scheme :

If a particular place in process of photosynthesis the value of is inadequate in crated value of K_C in respiratory system. So this place environmental pollution ability have increase. We are contribution to bring out in biological process we can speak that, this particular place to different time notice the pollution metrical measure and to bring out the accurate quantity of $O_2$and CO_2in atmosphere. Contribution the chemistry equilibrium K_P ,K_C content and delta n we are exposed the accurate value of O_2 and CO_2 in atmosphere .this accurate value can to be act. Any places the correct value of O_2 and CO_2 in the air to bring out the different formula from the environment resource associate and the whole places bring out to the accurate contaminated air (CO_2) and pure air (O_2).



Proposed scheme :

If a particular place in process of photosynthesis the value of is inadequate in crated value of K_C in respiratory system. So this place environmental pollution ability have increase. We are contribution to bring out in biological process we can speak that, this particular place to different time notice the pollution metrical measure and to bring out the accurate quantity of $O_2$and CO_2in atmosphere. Contribution the chemistry equilibrium K_P ,K_C content and delta n we are exposed the accurate value of O_2 and CO_2 in atmosphere .this accurate value can to be act. Any places the correct value of O_2 and CO_2 in the air to bring out the different formula from the environment resource associate and the whole places bring out to the accurate contaminated air (CO_2) and pure air (O_2).

Developing a LAN Chat using TCP-IP Protocol

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S. Paul, *Academy of Technology*

Abstract

Here we are developing a LAN Chat system which is a real time messaging intranet system which allows you to exchange text messages. Chat server is a standalone application that is made up the combination of two application, server application (which runs on the server site) and client application (which runs on client side). Using a peer to peer architecture, this LAN chat can deliver text messages in real time. Here we are using the TCP IP protocol to establish the duplex communication. The main module of the system is log in and chats between server and client. Object oriented approach is applied to develop the interface with J2SE features like swing, collection, networking, I/O strings etc. It is a platform independent software because of JAVA which can run in Windows and as well as in LINUX platform.

Detail Architecture:

The framework we'll use in this tutorial has three elements. The elements are:

- Listener class,
- Socket Connection and Read/write loop,
- Client class,

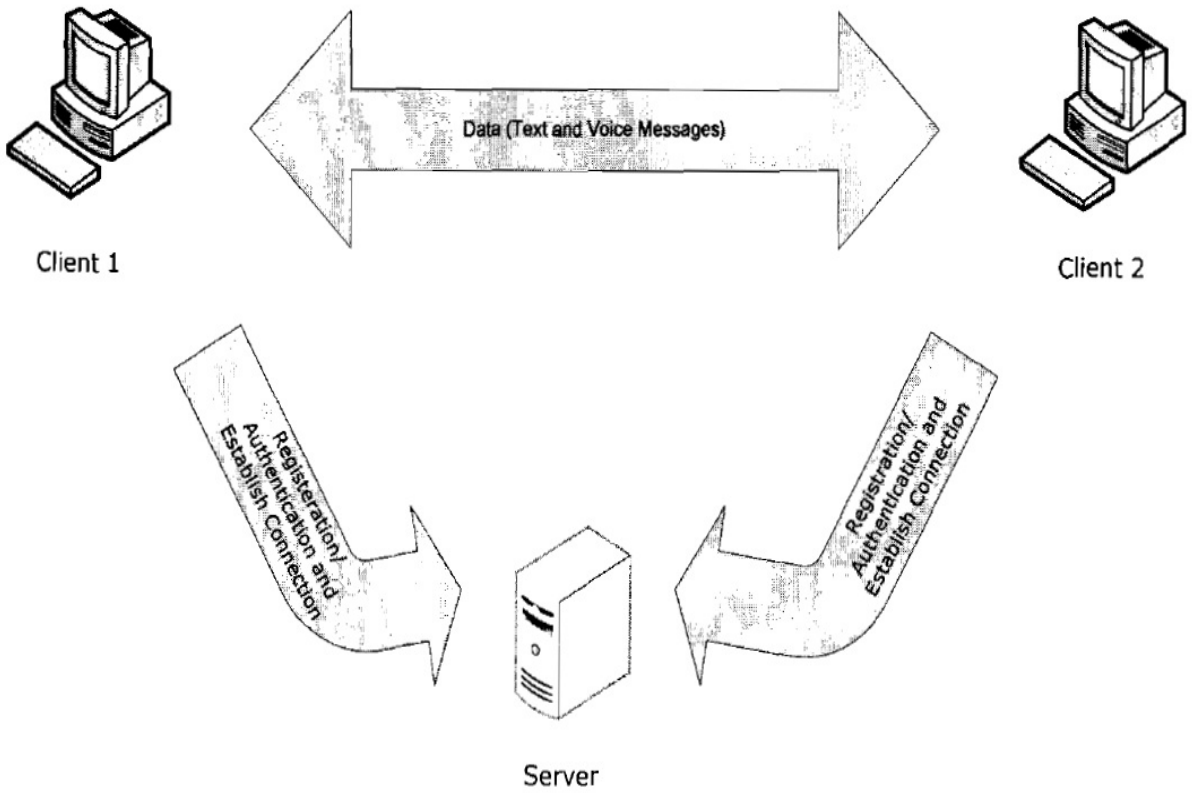

Fig1: LAN Chat Architecture

Listener Class:

Server:
Our server will be a stand-alone program -- a single Java process running on its own machine. It won't require any support software other than a Java virtual machine. And it won't require a Web server or application server, although a Web server or application server will likely be used to serve the client applet to the client.

Port listening:
The first thing we have to do is to get ready to receive incoming connections. To do this, we must listen on a port. A port can be thought of as an address within a single computer. Remember that often a single machine might serve as a Web server, a chat server, an FTP server, and several other kinds of servers at the same time. Because of this, a connection to a server needs to specify not only the address of the machine itself, but also the particular service within the machine. This internal address is a port and is represented by a single integer between 1 and 65535. Many standard services have a dedicated port number. For example, telnet uses port 23, FTP uses ports 20 and 21, and Web servers, by default, use port 80. We're going to have to use one of the port numbers allocated for general use. We'll use port 5000. This means that our server is going to *listen* for connections on port 5000.

Socket:
Our communications between client and server will pass through a Java object called a Socket. Sockets are not at all Java-specific; the term is taken directly from the terminology of general IP (Internet Protocol) network programming combination of IP address and port address.

Socket Connection and Read, Write:

We're ready to start accepting network connections from our clients. Here's how the chat is going to work. We mentioned above that the Java language provides an object called a Socket, which represents a connection to a program somewhere else and through which data can pass. Initially a client, almost by definition, initiates the connection to a server. Therefore, the first job of a server is to wait for a connection to come in. Now if any client wants to communicate they can establish a active communication.

Accepting Sockets:
Remember that your program will potentially be serving many clients from all over the Intranet. And these clients will be connecting to your server without regard to each other. That is, there's no way to control the order, or the timing, with which the connections are arriving. Multithreading is an excellent way to deal with these connections once they have come in. When accept method of Server Socket is called, it returns a new Socket object that represents a new connection that has come in from client. After completion of the task with the connected client we can establish the new connection. Like that the concept of multithreading also runs time to time to accepting the new connection from various clients and as well as its deal with the all clients want to communicate with the server alternatively.

Communication Protocol:
We will be using TCP/IP protocol for communication between user client and server. Because TCP having the feature of both way communication. The Java language has a pair of extremely useful classes called DataInputStream and DataOutputStream to send and receive message. These classes allow you to read and write low-level data objects (like integers and strings) as a stream.
So our protocol will be this:

- When a user types something into their chat window, their message will be sent as a string through a DataOutputStream.

- When the server receives a message, through a DataInputStream, it can send the return message to the client again as a string through a DataOutputStream.
- When both users will type "**bye"** (not case sensitive) the connection will broken.

Client Class:

The client could just as easily be a stand-alone application, running in its own process just like the server is.

Set up the interface:

The whole point of the client and server side is all about user interaction. Our chat window contains a text entry field, for typing new messages, and a text display window, for showing messages from other users. Each time the user types something into the input field, it transfer to the server.

Connect to the server:

In the next step client initiate a connection to the server and send the message to the server. Like that server receives the same message and sends some message to the client. So it is a continuous process until both of them send "Bye" to terminate the connection.

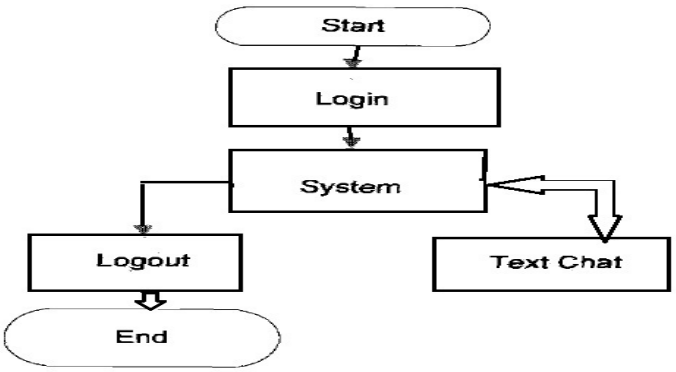

Fig2: LAN Chat System

Limitations:

Simplistic connection model: The chat system we've created has only one chat room. Remember that every message that came into the server was sent out to every single client. This is not satisfactory in the real world, not only because real-world users want separate chat rooms, but because it's a terrible waste of bandwidth.

Internal synchronization: If more than one client is connected to the servers the clients must be synchronized for efficient communication.

Conclusion:

This Intranet LAN Chat application will be a cost effective alternative medium for communication with each other very easily. Furthermore, LAN Chat is a cost-effective way for educational institutions. The objectives, scope and project significance output had been identified from this in order to develop a good system which will be used by the target users.

❖ **Modern Trends (MT)**

Indian States, At a Glance on Eco-Natural Data Tree

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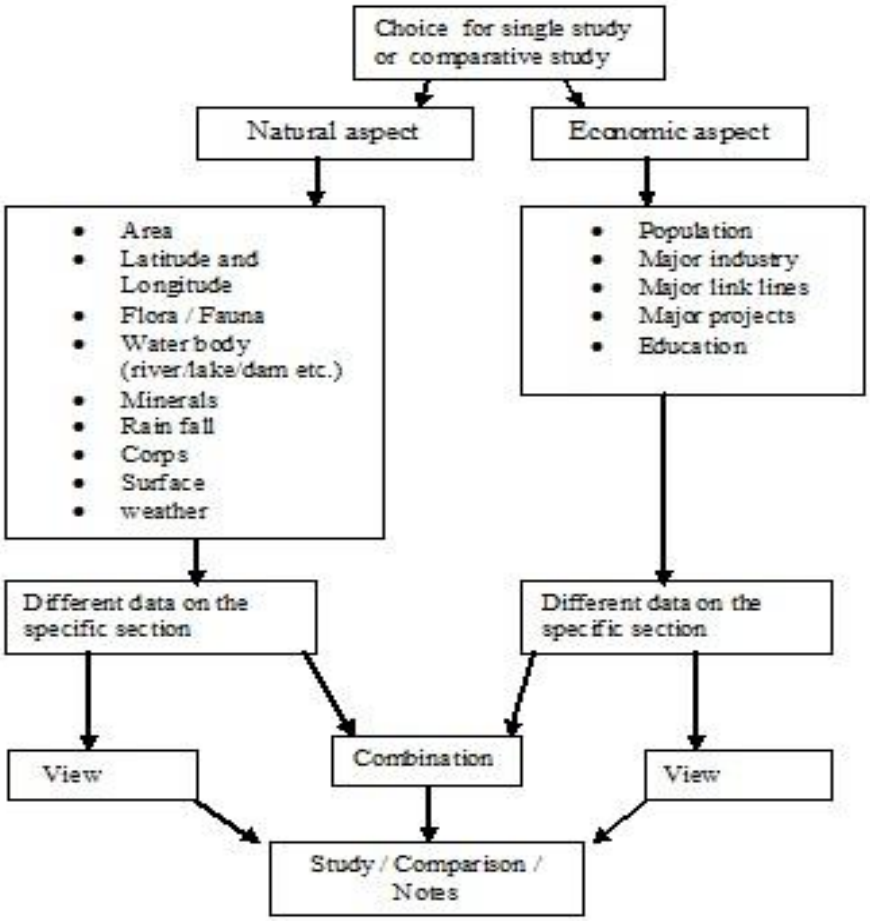
Abstract

It is evident that the finger tip detailing are very much effective and necessary for the respective concerns. It is quite eminent that the usefulness of such a tool to have the details of not only any statistical data base but also the comparative visions of the respective field of comparison for making the study complete. This sort of requirement can be fulfilled by developing an algorithm based programming tool for make the required data in a single click vision. The requirement can also be flourished by the statistical comparison and database depended work out. Through this project we have developed a tree or logistic structure to have the information of which states are shouted for and its comparative study or only its graphical representation on the basis of economic and natural heritage. In this process we have to the individual tree for specific sector of analysis hving individual branches and data. Then we recombined them each other and finally have the tree of logistic analysis and presentation.

Keyword : Resources , logistic branching, data tree, recombination, computation.



Proposed scheme: In the context of proposal we are going to follow up the following steps for making the visible computerized system for comparative or single informative study at a glance. This may took further modification for up gradation of data tree or the branches of tree or the compilation / analysis of information for future fore casting or suggestive work.

Story Line Development Using Layer Architecture

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Abstract

In this presentation we want to make flash 2D animation project with the help of Flash. We make a long story in this presentation, but we take a little part for showing. We make couple of wallpaper with the help of windows paint and 'coral draw'. Them we imported those wallpapers on the flash8 software. Them we put those image from the windows library to new page of flash .Then will do this flash project at several way. In this project we make a short story and have a attractive and amazing character, but in this story we wants to explain a little part of this story. We take some pieces of image and paste in different layer, then we complete our final image.
We want to make this project because we want to know the total overview of flash software. We can make make good looking and nice over view of various webpage to this flash project.

Proposal: Adobe Flash (formerly Macromedia Flash) is a multimedia platform used to add animation, video, and interactivity to web pages. Flash is frequently used for advertisements, games and flash animations for broadcast. More recently, Flash content may be displayed on various computer systems and devices, using Adobe Flash Player, which is available free of charge for common web browsers, some mobile phones and a few other electronic devices (using Flash Lite).

Some users foal that Flash enriches their web experience, while others find the extensive use of Flash animation, particularly in advertising, intrusive and annoying, giving rise to a cottage industry that specializes in blocking Flash content. Flash has also been criticized for adversely affecting the usability of web pages.

Basement logic: The project been developed on the basis of the following logic process algorithm.
This steps are followed to making of the story by " innovative project branch" .

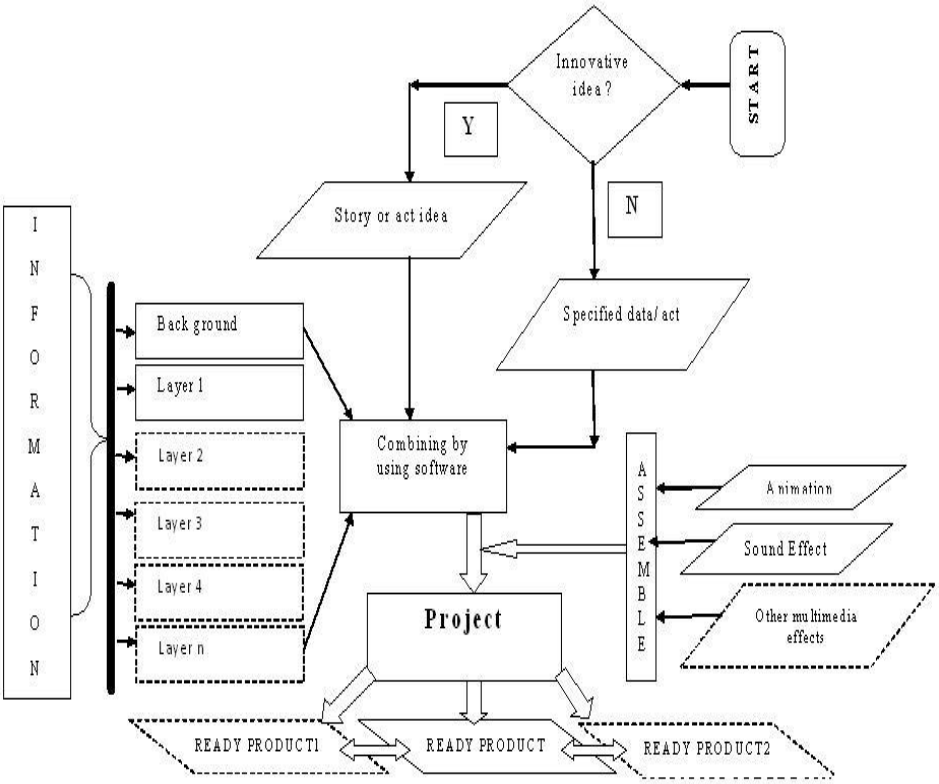

Fig. No.-03

The pictorial analogy of the project which has been animated as well by using animating software.

Fig. No.-04

Future scope:

1) Add animation
2) Using adobe Flash player
3) Particularly in
   1) E-Business, 2) Online Advertisement ,3) Filming and special effects.

❖ Advance Application (AC)

Computer Analyzing of Human Gene Linkage by Genetic Logarithm

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S. Chakraborti, *Raja Pearymohan College, Uttarpara (e-mail: sunanda2011santu@ymail.com)*
K. Mitra, *Ashutosh College, Kolkata (e-mail: callbubu@gmail.com)*

Abstract

For practical & ethical reasons, with humans it is not possible to do genetic mapping experiments of the kind performed on other organisms. A number of approaches are used to determine the linkage relationships between human gene, including analyzing pedigree data recobinationally & physically locating genes on chromosomes by molecularly aided methods. The many gene s have been localized to the X chromosome .However, pedigree analysis cannot show on which chromosome a particular autosomal gene is located. So we are analysis the method of LOD score used to map distance of human gene.

We are genetic, identical card &genetic data bank by this LOD sore method.

keyword: Gene mapping, Recombination, Crossing over, LOD score method, Pedigree

Chromosome number	**Dieases**
1) 11th & 16th	Thalassemia
2) 13th	Patau syndrome
3) 18th	Edward syndrome
4) 44th	Turner syndrome
5) 5th	Cri- du- chat
6) 7th	williumson
7) 21th	Down syndrome
8) 11 & 16th	Sickle cell aneamia
9) 17th	Breast & ovarian cancer.

Calculation :

LOD score method for estimating Recombination:

$$LOD = Z = \log_{10} \frac{\text{probability of birth sequence with a given linkage value}}{\text{probability of birth sequence with no linkage}}$$
$$= \log_{10} \frac{(1-\theta)^{NR} \times \theta^{R}}{0.5^{(NR+R)}}$$

NR = The number of non-recombinant offspring.

R= The number of recombinant offspring

The reason 0.5 is used to denominators that any alleles that are completely unlinked that 50% chance of Recombination due to independent assortment

An exam plenary analysis:
Genotypes at TC2 and HLA-A

```
TC2            1 3        1 3
HLA-A          a b        c d
                1          2
                |          |
                +----+----+
                     |

           +--------+--------+
           |        |        |
         1 1      1 1      1 3
         a c      a c      a c
          3        4        5
```

The likelihood for this family is:
L(c) = c(1-c)[1-3c(1-c)]/4.
This formula arises from the fact that both parents are phase unknown, as is the individual 5. Each of the eight possible arrangements is equally likely:

Person 1	Person 2	Person 5	Recombinants	Likelihood
1a/3b	1c/3d	1a/3c	NR,NR,NR,NR,NR,R	$c(1-c)^5$
1a/3b	1c/3d	1c/3a	NR,NR,R,NR,NR,NR	$c(1-c)^5$
1a/3b	1d/3c	1a/3c	NR,NR,NR,R,R,NR	$c^2(1-c)^4$
1a/3b	1d/3c	1c/3a	NR,NR,R,R,R,R	$c^4(1-c)^2$

Proposed Algorithm:

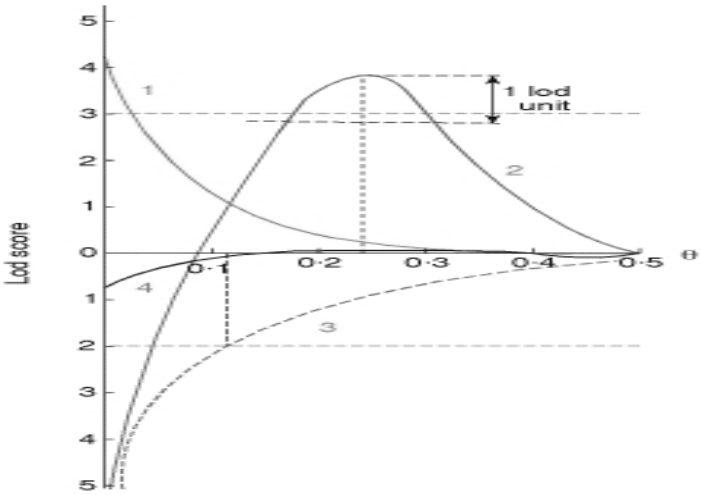

Fig. No.01 (LOD score curves (standard))

The algorithm been proposed for defining the specific chromosome no. (i.e. 23,27,29,31, etc. for different specices) by which it can easily be predicted to their probable diformations and related dieases.
The algorithm has been introduced to calculate or determine the probable dieses due to presence of certain deformities shown after the chromosomal data anlysis .

In this instant we choose n=23 (for concidering human genom) and by using the algorithm we can easily predict the probable diease due to their deformation for 11th , 16th , 21th and 7th nos chromosome (here for analysis). To avoid the

complication we hare neglected all the chromosomes and its combinations, only taking some of them for experimentation .The standard graph been provided for further guidence of that project been expected.

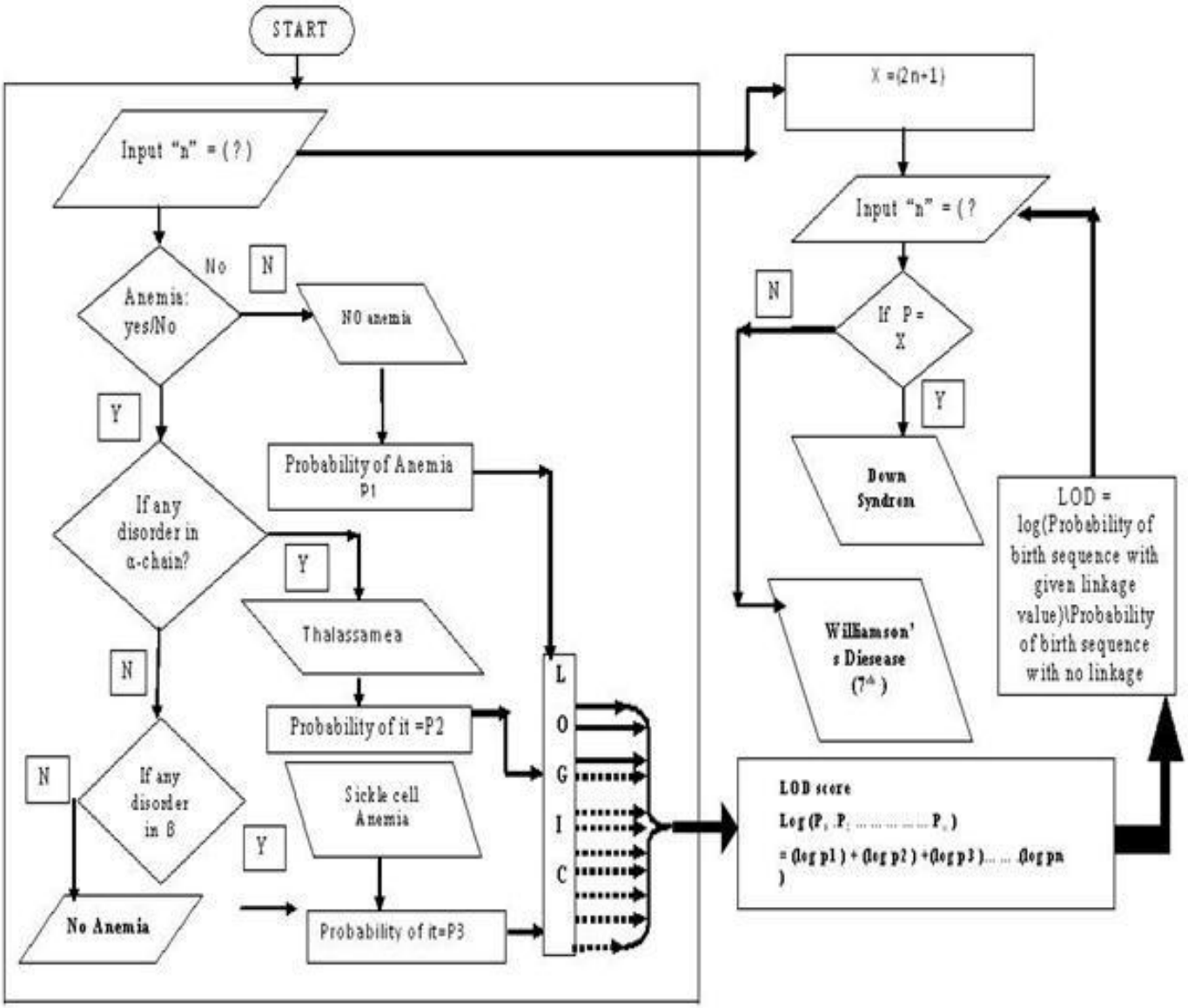

Fig. No.- 02

Future Scope:

1) From this project it can be easily predicted about the chromosomal disorder .
2) From the gathered data we can able to develop the "Genom card" for prediction of disorder probability of a selected mass.
3) It can be helpful to resist the disorder for further genom distribution through heidity.
4) It helps to counter the diseases preknowingly.