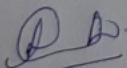


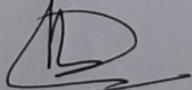
BLDE Association's
S B Arts and KCP Science College, Vijayapur
Re-accredited at 'A' by NAAC
Department of BCA


Date:12/08/2017

NOTICE

It is here by informed to all the BCA students to attend the "Ted Talk" 14/08/2017. All the students should be present on time.


Co-ordinator
BCA Programme
S.B.Arts & K.C.P.Science College,
Vijayapur.


IQAC, Co-ordinator
S.B.Arts & K.C.P.Science College,
Vijayapur.


Principal
S.B.Arts & K.C.P.Science College
Vijayapur.

contd..



B.L.D.E. Association's
S.B.ARTS & K.C.P SCIENCE COLLEGE
VIJAYAPUR

BCA Department

A REPORT ON

TED TALK

Topic

Working of Differential Engine Work
August 14, 2017

For
BCA First Year
2017-18

Presenter

Prof: Pavankumar Mahindrakar

Contd..

B.L.D.E. Association's
S.B. Arts and K.C.P. Science College, Vijayapur.
Attendance Sheet

Sub: ~~English~~ Sem: ~~IV~~ Date: August 4 | 2019

S.N	R.NO	NAME OF THE STUDENTS	SIGN
1	M1613802	APOORVA JAINAPUR	AP Jainapur
2	M1613804	ARATI K. BADIGER	Arati K. Badiger
3	M1613806	ASHWINI M. LAMANI	A.M. Lamani
4	M1613808	CHIKKALAGI SUDHA YASHVANT	Sudha
5	M1613809	DEEPA R. HOSATTI	Deepa
6	M1613810	DENGI OMKAR KAMGOND	Omkar
7	M1613811	GAGANDEEP M. BIRADAR	Gagan
8	M1613812	GURUDEVI V. HIREMATH	G. V. Hiremath
9	M1613813	HANAMANTRAY M. PATTAR	Hanama
10	M1613814	HARSHA V. HIREMATH	H. V. Hiremath
11	M1613815	JANAKI P. GOULI	J. P. Gouli
12	M1613818	LAXMI G. PATIL	Laxmi
13	M1613819	LOKESH RATHOD	Ab
14	M1613820	MADEVI M. BELAKOD	Madevi
15	M1613821	MANJUNATH B. BHALI	Manjunath
16	M1613822	MEGHA R. HOSPET	Megha
17	M1613823	MUJEEB C. SOUDAGAR	Ab
18	M1613824	PHUTANE AKSHATA BASAVARAJ	Phutane
19	M1613825	PRASAD B. KARIKABBI	Prasad
20	M1613827	PRAVEENKUMAR B. KORALLI	Praveen
21	M1613828	PREMA R. YECHHI	Prema
22	M1613829	RAHUL S. ADAKI	Rahul
23	M1613830	RAKESH S. AWAJI	Ab
24	M1613831	RUSHIKESH H. BHOSALE	Rushikesh
25	M1613832	SACHIN M. BAGEWADI	Sachin
26	M1613833	SACHIN S. WADED	Sachin
27	M1613834	SHARADA V. HAKKAPAKKI	Sharada
28	M1613835	SHARANABASAVA S. NANDAGOL	Sharan
29	M1613836	SHEETAL R. HONAWAD	S. R. Honawad
30	M1613837	SHILPA D. KORI	Shilpa
31	M1613839	SHRADDHA L. NAYAK	S. L. Nayak
32	M1613840	SOUMYA C. KODNI	Soumya
33	M1613841	SOUMYA S. SATALAGAON	Soumya
34	M1613842	SOUMYA A. YALAMELI	S. Yalamele
35	M1613843	SUHAS S. HIRASKAR	S. S. Hiraskar
36	M1613844	VIJAYALAKSHAMI R. DODDAMANI	V. R. Doddamani
37	M1613845	VIJAYALAXMI S. PATIL	V. S. Patil
38	M1613846	VIJAYLAXMI S. BIRADAR	V. S. Biradar
39	M1613847	VINAYAK V. GUDDAD	V. V. Guddad
40	M1613848	VINOD R. MINAJAGI	V. R. Minajagi
41	M1613849	VINOD S. GADDAGIMATH	V. S. Gaddagimath
42	M1613850	VIRESH P. BIRADAR	V. P. Biradar
43	M1614608	AKASH M. TORAVI	A. M. Toravi
44	M1614651	MAHESH S. NAGARAL	M. S. Nagaral
45	M1614718	YALAGURESH D. JAKKANAVAR	Ab
46	M1614659	NIKITA B. JYOTI	Ab
47	M1616404	AKASHATA S. CHARANTIMATH	Akshata

NAME: A. S. Hiremath

A. S. Hiremath
Signature

Contd..

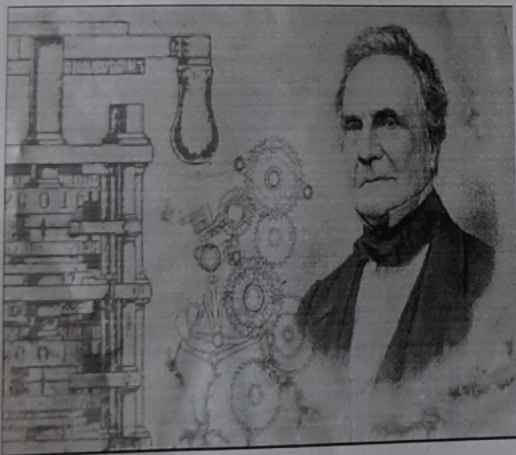
A Report on a Ted-Talk

Presenter : Prof. PavankumarMahindrakar_{M.Sc (C.S)}
Title : Working of Differential Engine Work
Date given : August 14, 2017

In brief:

I have demonstrated on Charles Babbage's Difference Engine which is commonly considered to be the world's first computer. As such it is an important part of any Computing teaching. Though much literature exists on Babbage, the construction of the engine and the algorithm it computes, little has been written about the actual operation of the machine. Constructionism is well known in the field of teaching and learning. This paper will attempt to identify the relative merits of constructionism in creating a model of the Difference Engine for educational purposes, describe the model and process and discuss this approach with regards to its relationship to Empirical Modeling

Finally, he concludes that **EDUCATION IS A SELF-ORGANIZING SYSTEM WHERE LEARNING IS AN EMERGENT PHENOMENON.**



Historical Context:

Before the invention of calculating engines, indeed up until the 1940s, calculations involving complex functions, such as trigonometric calculations, could only be done with the aid of a set of tables, which had been pre-computed by hand. This laborious task was often fraught with calculation errors. Such errors had grave consequences, such as the sinking of ships because of subsequent navigation errors. Babbage himself proclaimed in 1821: "I wish to God these calculations had been executed by steam"

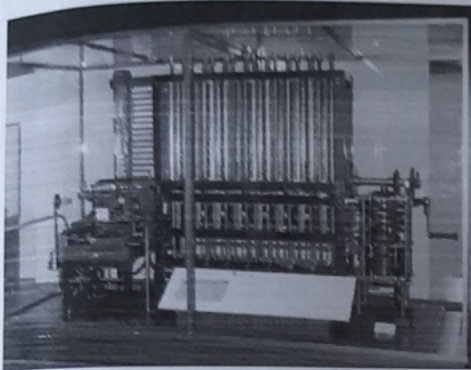
In 1812 Charles Babbage conceived the idea of the Difference Engine: "[a machine that uses] the fact that the n th order differences of a polynomial of degree n are constant in order to calculate successive values [of the polynomial]". Babbage never completed the Difference Engine, due to a number of intervening factors, his temper being not a small such factor.

The Method of Finite Differences:

This section will serve as a quick explanation of the idea behind the Difference Engine 2. Many calculations for tables, such as trigonometric functions can be approximated to a polynomial equation in one variable, of the form: $f(x) = a_n x^n + a_{n-1} x^{n-1} + \dots + a_2 x^2 + a_1 x + a_0$

Contd. .

These polynomials can then be computed by substituting a value for x . The idea behind the Method of Finite Differences is that when the difference between two successive values of $f(x)$ is taken, and then the difference between these differences is taken at some point the difference is constant. For an n th order polynomial this is the n th difference. As an example: let $f(x) = x^2$.



Operation:

A button at the bottom of the screen starts the calculation. Babbage's machine calculated one result every four cranks of its main drive shaft. This button simulates four such cranks. While in operation, the button goes black, once the result appears on the input/output wheels, the button resets to its default color. The calculation begins by counting down the second order difference onto the first order 5 difference; this happens even when the second order difference is 0, in which case the first order difference remains unchanged. The wheels on the second order difference wheels will count down to zero whilst simultaneously the wheels on the first order difference will count upwards by the same amount. Once this is done the first order difference wheels will repeat the same process onto the input/output wheels. Once this has been completed, the first order and second order difference wheels will reset to the previous value they had. The model is then ready to calculate the next result. Initially the speed of the wheels turning is set to 1000 milliseconds. This allows the operation of the calculation steps to be observed more easily. In order to get a feel for a more realistic speed it should be set to 100 milliseconds.

Conclusion:

Constructing the model has indeed been an iterative process, starting with two wheels and a carry mechanism between them; moving all the way on to being able to extend Babbage's Difference Engine far beyond the capabilities that Babbage himself had dreamt of. It is, of course, clear that the inner workings of the machine and the model are vastly different. The former is purely mechanical, whilst the latter pays very little tribute to the engineering principles present in the Difference Engine.

link youtube.com/watch?v=be2EM3gQkAY

Co-ordinator

BCA Programme
S.B.Arts & K.C.P.Science College,
Vijayapur.

TQAC, Co-ordinator

S.B.Arts & K.C.P.Science College,
Vijayapur.

Principal

S.B.Arts & K.C.P.Science College,
Vijayapur.