

Subject :

APPLICATION DEVELOPMENT USING PYTHON (18CS55)

Project Based Learning

Academic Year: 2021-22

- **Write a Python program to print the result of multiplication of 3 numbers.**
- **Write a Python program to print average of 4 semester SGPA.**
- **Write a Python program to take 2 strings and compare it is equal or not**
- **Write a Python program to print prime number between the range**
- **Write a Python program to perform arithmetic operations.**
- **Write a Python program to check prime number or not**
- **Write a Python program to print square root of a number.**
- **Write a Python program to print a factorial of a number.**
- **Write a Python program to print the names of students who scored more marks than the avg marks of the class.**

Instructions Student work

Return [envelope icon] 10 points

All students	
Sort by status	
<input type="checkbox"/> Turned in	
<input type="checkbox"/> 4JN19CS018 Basvesh	10/10
<input type="checkbox"/> Deeksha A H	10/10
<input type="checkbox"/> Manoj R Divakar	10/10
<input type="checkbox"/> Mehroosh Zama	10/10
<input type="checkbox"/> Anirudh d shastry 4JN19C...	10/10 Done late
<input type="checkbox"/> Kiran Jambur 4JN19CS043	10/10
<input type="checkbox"/> Kunal J B 4JN19CS045	10/10
<input type="checkbox"/> Megana N 4JN19CS053	10/10
<input type="checkbox"/> Neha A Gingade 4JN19CS...	10/10

All

4JN19CS018 Basvesh Python assignment.pdf Turned in	Deeksha A H python assignment 4J... Turned in	Manoj R Divakar 4JN19CS052_MANOJ... Turned in	Mehroosh Zama 4JN18CS047 Mehroo... Turned in	Anirudh d shastry 4JN19CS009 ANIRUDH D-4JN19CS... Turned in late	Kiran Jambur 4JN19CS043 KIRAN_V_JAMBUR.pdf Turned in	Kunal J B 4JN19CS045 KUNAL Python Assign... Turned in
Megana N 4JN19CS053 2021-12-28 09:24:14... Turned in	Neha A Gingade 4JN19CS061 python assignment Turned in	Nesara MS 4JN19CS063 2 attachments Turned in	Anusha BV 4JN20CS400 Anusha BV 4JN20CS4... Turned in late	POOJA M R 4JN20CS407 4JN20CS407 POOJA ... Turned in late	4JN19CS005 Aishwarya B H 4JN19CS005 Aishwar... Turned in	Adithya Aithal HK 4JN19CS003_Adithya ... Turned in
4JN19CS010 ANIRUDH.G.E ANIRUDH GE 4JN19C... Turned in	4JN19CS014 Arpitha SV 4JN19CS014 Arpitha... Turned in	4JN19CS016 Atishay SG 4JN19CS016 Atishay ... Turned in	4JN19CS020 Bhavana Akki 4JN19CS020_BHAVA... Turned in	4JN19CS022 Boomika V 4JN19CS022 Boomik... Turned in	4JN18CS027 Chandan 4JN18CS027. G C CH... Turned in	Nanda DC python Assignment (N... Turned in
4JN19CS029 Dinu PD 4JN19CS032 Druva D	4JN19CS032 Druva D	Kiran G P	4JN19CS033 Ganesh Prasad M	MANJUSHREE GR	Hithesha H G	4JN19CS035 Harshini H B

Project based Learning



Kiran Jambur 4JN19CS043

Turned in



```
#Print the product of 3 numbers by taking input from the user
1
2
3 n1=int(input("Enter the first number : "))
4 n2=int(input("Enter the second number : "))
5 n3=int(input("Enter the third number : "))
6 product=n1*n2*n3
7 print("The product of 3 numbers is : ",product)
8
```

Run: main

```
C:\Users\dell\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/dell/
Enter the first number : 5
Enter the second number : 9
Enter the third number : 7
The product of 3 numbers is : 315

Process finished with exit code 0
```

Windows taskbar: Type here to search | 32°C Partly sunny | 15:27 01-09-2023

Project based Learning

Murali Venkat J

Turned in

Return

4JN19CS057
Murali venkat J

```
1 # write a program by taking 3 input by the user and print the multiplication
2 # result of that
3
4 num1 = int(input("Enter the first number : "))
5 num2 = int(input("Enter the second number : "))
6 num3 = int(input("Enter the third number : "))
7
8 product = num1 * num2 * num3
9
10 print("\nThe product of 3 numbers is : ", product)
```

Enter the first number : 5
Enter the second number : 2
Enter the third number : 3
The product of 3 numbers is : 30
Process finished with exit code 0

Team-01

DATA STRUCTURE

DR: Sankhya Nayak Mam
Dept of CSE



MEET OUR TEAM



MANISH S PATEL
4JN21CS079



KARTHIK B.K
4JN21CS066



KIRAN MORE S
4JN21CS068



With the help of a stack, show the given string is a palindrome or not.

WHAT IS STACK



- A Stack is a linear data structure that holds a linear, ordered sequence of elements.
- It is an abstract data type.
- A Stack works on the LIFO process (Last In First Out).



Basic Operations on Stack

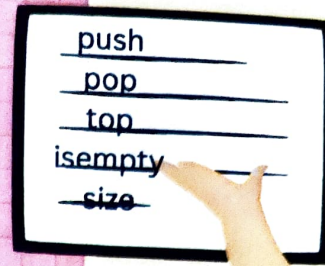
push: insert an element into the stack

pop: remove an element from the stack

top: returns the top element of the stack.

isEmpty(): returns true if stack is empty else false.

size(): returns the size of stack.



Application of the Stack

01

A STACK CAN BE USED FOR EVALUATING EXPRESSIONS CONSISTING OF OPERANDS AND OPERATORS.

02

STACKS CAN BE USED FOR BACKTRACKING, I.E., TO CHECK PARENTHESIS MATCHING IN AN EXPRESSION.

03

IT CAN ALSO BE USED TO CONVERT ONE FORM OF EXPRESSION TO ANOTHER FORM.

04

IT CAN BE USED FOR SYSTEMATIC MEMORY MANAGEMENT.



STACK

Palindrome

A palindrome number is a number that is same after reverse.

For example :121, 34543, 343, 131, 48984 are the palindrome numbers



STRINGS

Commonly Used String Functions:

- strlen() - calculates the length of a string
- strcpy() - copies a string to another
- strcmp() - compares two strings
- strcat() - concatenates two strings



PROBLEM STATEMENT SOLUTION

```
#include<stdio.h>
#include<string.h>
char stack[50];
int top=-1;
void push(char arg){
    top=top+1;
    stack[top]=arg;
```

push
function

```
char pop()
```

pop
function

```
char c;
c=stack[top];
top=top-1;
return c;
```



```
int main()
```

```
{
    char string[30];
    int i,count=0,len;
```

```
    printf("enter string\n");
    scanf("%s",string);
```

```
    len=strlen(string);
```

```
    for(i=0;i<len;i++)
```

```
    {
        push(string[i]);
    }
```

```
    for(i=0;i<len;i++)
```

```
    {
        if(string[i]==pop())
        {
            count++;
        }
    }
```

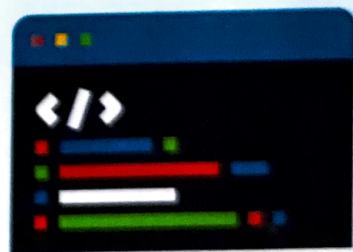
```
    if(len==count)
```

```
        printf("Given string is palindrome");
```

```
    else
        printf("Given string is not palindrome");
```

```
}
```

Main
Function







Department of Information Science and Engineering

Data Structures and Applications – 21CS32 – Assignment 2 – Coding Activity

28-03-2023

Report

As a part of Data structure and applications course, Assignment 2 was done using coding activity in which students were given specific questions which they had to implement in code. The activity was performed in a group of 7 members. Students had to implement the given problem using C language. The program should contain input validation and the program had to be checked with all possible inputs. A video presentation of 20 minutes duration was submitted by each group in which students explained the theoretical concepts, code implementation and output of the program. And each group submitted a hard copy of the report on the given question.

Outcome: The activity focused on team work and coordination among the members while implementing the code. The video presentation improved the communication skills. The coding activity improved their coding as well as logical thinking capabilities.

Questions

<i>Implement a program to</i>	
1.	Read a sparse matrix in a 2-dimension array and store in triples and linked list representation
2.	Create a dynamic queue to store names
3.	Show the working of an ascending priority queue of names where each name is associated with a priority number. The insertion takes place at the rear end as usual whereas the name associated with highest priority is deleted first
4.	Create two stacks in a single array and perform the stack operations. First stack starts from index 0 and the second stack starts from the last index of the array
5.	Create a single linked list with header node which stores integer information. Rearrange the nodes in ascending order. Delete all occurrences of the key element in the list
6.	Convert a given infix expression to prefix expression
7.	Store polynomial and perform addition and subtraction on 2 polynomials
8.	Represent a given binary tree using arrays and traverse the tree using inorder, preorder and postorder traversal methods
9.	Create a threaded binary tree and traverse the tree using inorder traversal
10.	Represent a given graph using list representation

Coding questions allotment

#	Teams	Question #
1.	Stacks	3
2.	Stacky Seven	1
3.	Data Developers	9
4.	Data Techness	2
5.	Linked Lists	7
6.	Structure Squad	10
7.	Stackers	5
8.	Codesync	8
9.	Stimelo	4
10.	Lateral Batch	6

Coding teams

1	<i>Stacks</i> 4JN21IS070 - Pradeepa A J 4JN21IS067 - Pavan Kumar 4JN21IS065 - Nithish A S 4JN21IS080 - Rithish K R 4JN21IS096 - Shreyas G K 4JN21IS124 - Varun S 4JN21IS108 - Suchin N H	2	<i>Stacky Seven</i> 4JN21IS086 - Sanjay.S 4JN21IS091 - Shashank.H 4JN21IS092 - Shashidhar.R.A 4JN21IS097 - Shreyas.N.Gatti 4JN21IS098 - Siddharth.A.K 4JN21IS110 - Surya.R 4JN21IS121 - Usman Ayan Suri
3	<i>Data Developers</i> 4JN21IS084 - Sanjana.N 4JN21IS085 - Sanjana.S.R 4JN21IS090 - Shambhavi.S.Gowda 4JN21IS126 - Vishishta Huggi.H.M 4JN21IS113 - Swarna.B.O 4JN21IS105 - Spoorthi.M.kotian 4JN21IS087 - Seema.M.D	4	<i>Data Techness</i> 4JN21IS088 - Seema T S 4JN21IS095 - Shreya K V 4JN21IS100 - Sinchana G Adiga 4JN21IS102 - Sindhu M R 4JN21IS107 - Sri Gowri 4JN21IS118 - Thanuja G R 4JN21IS119 - Thanuja R
5	<i>Linked lists</i> 4JN21IS072 - Pranav K N 4JN21IS075 - Pravith A P 4JN21IS103 - Skanda V M 4JN21IS068 - Pavan L 4JN21IS076 - Preetham B 4JN21IS073 - Prashantha S 4JN21IS071 - Prajwal H	6	<i>Structure squad</i> 4JN21IS082 - Sandhya. B 4JN21IS074 - Pratheeksha. N. Hampole 4JN21IS111 - Sushmitha. H. S 4JN21IS064 - Nisarga. R 4JN21IS112 - Sushmitha. S. S 4JN21IS115 - T.P.keerthi 4JN21IS104 - Sowparnika. K. H

<p>7</p> <p>Stackers</p> <p>4JN21IS078 - Priyanka R 4JN21IS077 - Prerana Sadanand Bulbule 4JN21IS099 - Sinchana D 4JN21IS106 - Spoorthi S S 4JN21IS116 - Tasleema Banu 4JN21IS122 - Vaishnavi G P 4JN21IS123 - Varsha S M</p>	<p>8</p> <p>Codesync</p> <p>4JN21IS089 - Shalini p tengil 4JN21IS101 - Sinchana S 4JN21IS083 - Sanjana BJ 4JN21IS094 - Shreya AP 4JN21IS093 - Shreeraksha RB 4JN21IS114 - Swarnagowri NS 4JN21IS117 - Tejaswini NR</p>
<p>9</p> <p>Stimelo</p> <p>4JN21IS066 - Pannaga 4JN21IS125 - Vilasa 4JN21IS120 - Tharun.S 4JN21IS069 - Poornachandra 4JN21IS081 - Saad Faisal 4JN21IS079 - Ravishankar S 4JN21IS109 - Suhas</p>	<p>Lateral</p> <p>4JN22IS400 - Appu Sindya B 4JN22IS401 - Chandan B K 4JN22IS402 - Ekanthaiah C 4JN22IS403 - Madhu Siddappa B 4JN22IS408 - Supriya H B 4JN22IS410 - Ankitha B M</p>

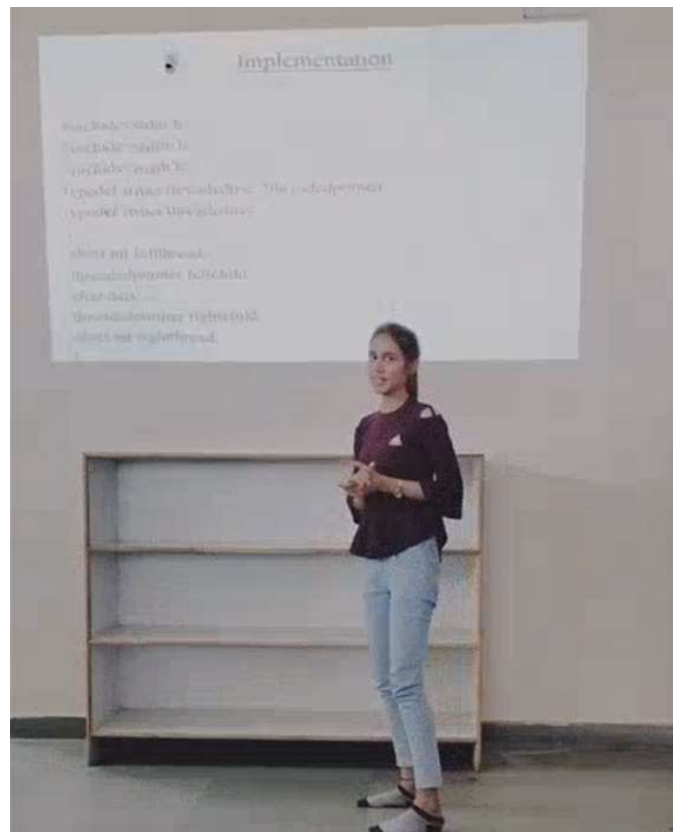
Snaps of presentation

JNN COLLEGE OF ENGINEERING , SHIVAMOGGA
Department of Information Science & Engineering
Shivamogga - 577 204
2022-23

Course : Data Structures
Assignment 2
Coding activity

Submitted By

Pradeepa A J	Shreyas G K
Pavan Kumar	Varun S
Nithish A S	Suchin N H
Rithish K R	



Sparse Matrix

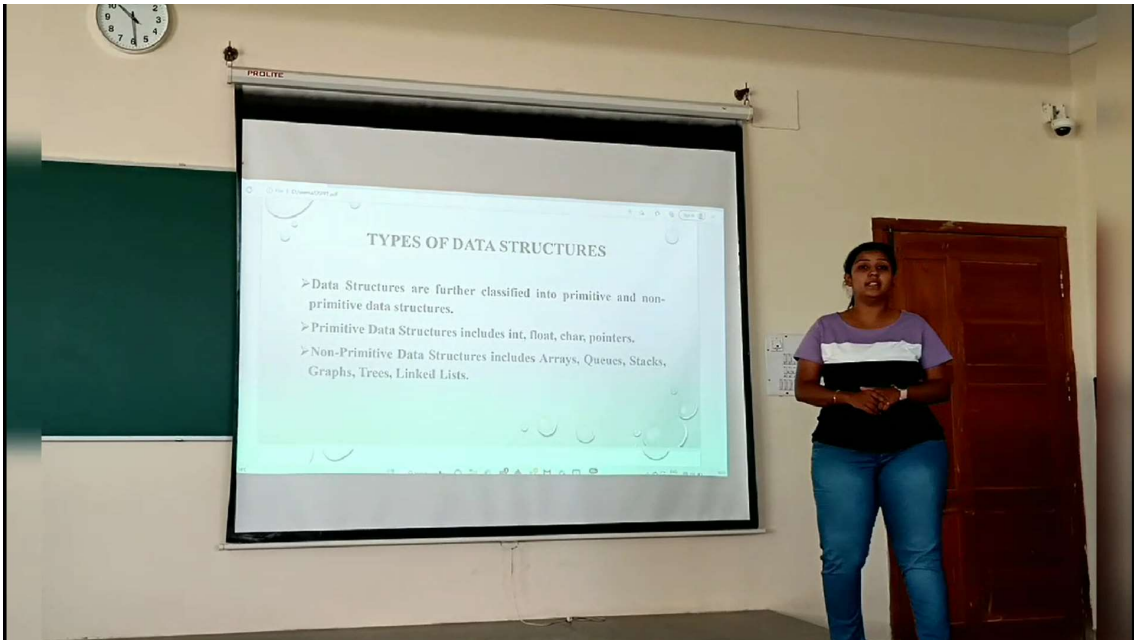
- Matrix with more zeroes is called a sparse matrix
- The 2D array representation for a sparse matrix is not suitable, because the space consumed by zeroes is of no use

4X4 Matrix

0	0	3	0
0	0	0	8
1	0	3	0
0	0	7	0

Sparse Matrix

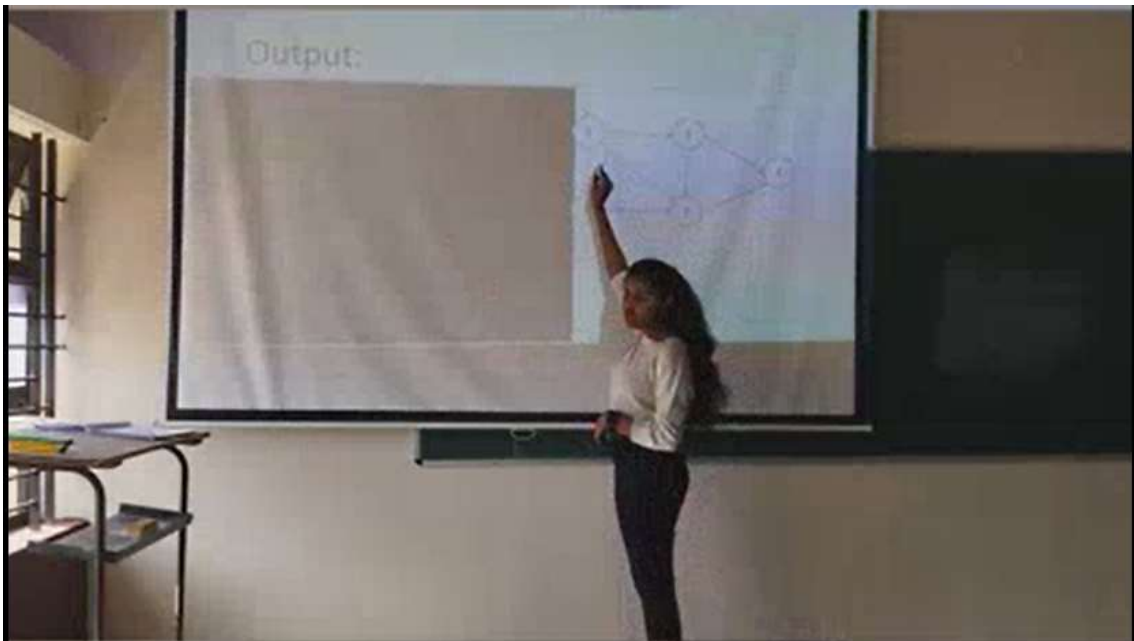




The image is a screenshot of the Code::Blocks IDE. The main window shows a C++ program for polynomial addition. The code is as follows:

```
1 #include<stdio.h>
2 #include<conio.h>
3 int main()
4 {
5     int a[10], b[10], c[10], m, n, k, kl, i, j, x;
6     printf("\n\tPolynomial Addition\n");
7     printf("\t===== \n");
8     printf("\n\tEnter the no. of terms of the polynomial:");
9     scanf("%d", &m);
10    printf("\n\tEnter the degrees and coefficients:\n");
11    for (i=0; i<2*m; i++)
12        scanf("%d", &a[i]);
13    printf("\n\tFirst polynomial is:");
14    kl=0;
15    // ... (code is partially obscured)
```

Below the code editor, there is a "Logs & others" panel with several tabs, including "Code::Blocks", "Search results", "Cccc", "Build log", "Build messages", "CppCheck/Ver++", "CppCheck/Ver++ messages", "Cscope", and "Debug". A small video inset in the bottom right corner shows a man's face.



JNN COLLEGE OF ENGINEERING

DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS (M.C.A)

Report on

One Day Hands on Workshop on React JS and Type script For 3rd semester MCA students

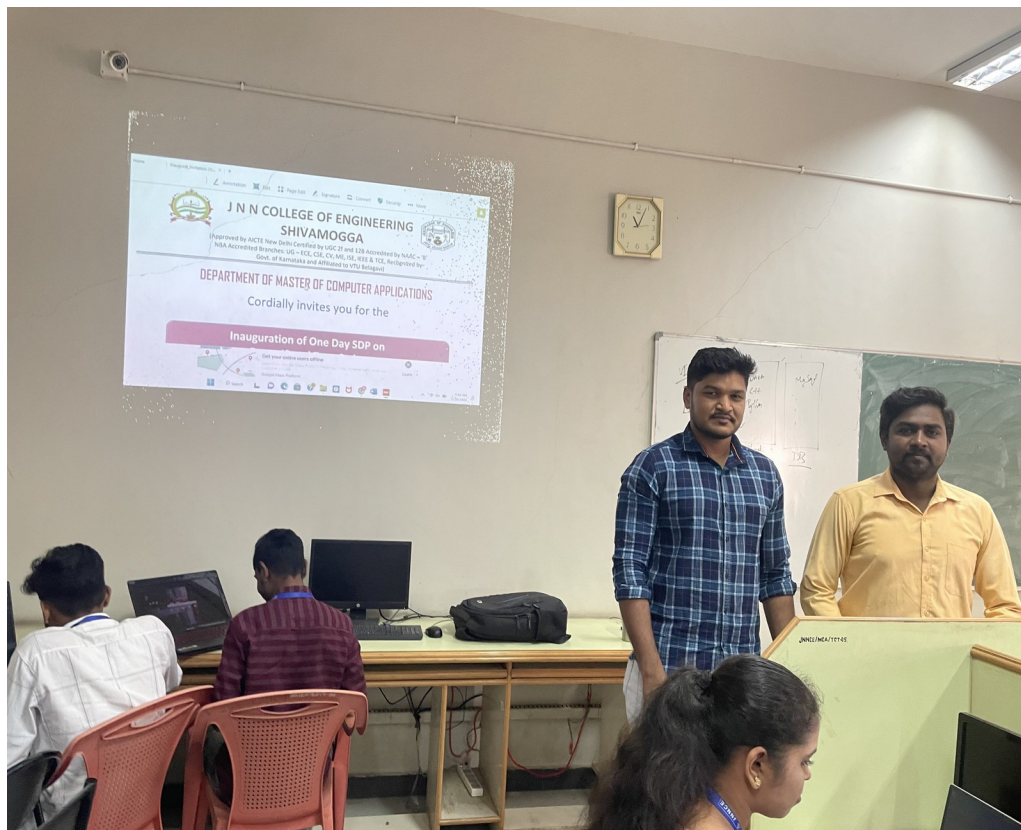
One day workshop was organised by the department of MCA for 3rd semester MCA students on React JS and Type script. Around 60 students and their staff coordinators have participated in the workshop and get benefitted

Anchoring was done by **Mr Arun Kumar KL**, Assistant Professor Department of MCA, JNNCE

Mr. Manjunatha H.T Assistant Professor Department of MCA, JNNCE, welcomed the resource persons and other dignitaries

Dr. K Nagendra Prasad, Principal, JNNCE, Shimoga, address the students and gave the guidelines to enhance the skill set by attending these kinds of workshop organise at JNNCE.

Dr Prabhudeva S, Director Department of MCA, JNNCE, advice the students to get prepare for interviews with proper skills and also the current trends in IT industries, the skill set they expect from the students, how to crack those interviews and importance of higher education the student career.



The resource persons are Mr. **Chandan, Software Engineer, Key Computer Application** and **Mr. Fairoz khan Software Developer, Kerv Digital** both are our proud alumnus of our department. They handled the two sessions (Morning and Post Lunch) from 10:45am to 5:15pm. Students have gained the knowledge regarding web technologies React JS and Typescript and gave the positive feedback.



Dr. K Nagendra Prasad, Principal, JNNCE, Shimoga, address the students



Students participated in the workshop

Dr Prabhudeva S, Director Department of MCA, JNNCE delivered the vote of thanks

Coordinators: Mr. Manjunatha H.T
Assistant Professor
Mr Arunkumar K. L
Assistant Professor



J N NL COLLEGE OF ENGINEERING, SHIVAMOGGA
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
**Flipped Class – Presentation on Data Structure Concepts
(Using Prezi and Canva Presentation Tool)**

Semester: 3 'A'

Subject: Data Structures and Its Applications (18CS32)

Date: 26/03/2022

All the students are hereby informed to Prepare the presentation using Prezi or Canva tool. Presentation will commence from 02/03/2022 in class room CS006 and all are informed to attend same without fail.

Staff In-charge


(Narendra Kumar S)



J N NL COLLEGE OF ENGINEERING, SHIVAMOGGA
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
**Flipped Class – Presentation on Data Structure Concepts
(Using Prezi and Canva Presentation Tool)**

Semester: 3 'A'

Subject: Data Structures and Its Applications (18CS32)

Google Class Room Link For Uploading Presentations:

<https://classroom.google.com/c/NDczODkzMDI5NDI2?cjc=e5hwkw5>

classroom.google.com/u/1/c/NDczODkzMDI5NDI2

JAMS Quiz coursera week... Reset password / Kite Can an ultrasonic s... Sign out of all acco... Waterproof Ultra... Kite - Zerodha's fas... esd4iot - Resources jnncac.in/admissi...

DS PRESENTATION A Stream Classwork People

DS PRESENTATION A

Upcoming

Nothing to show here

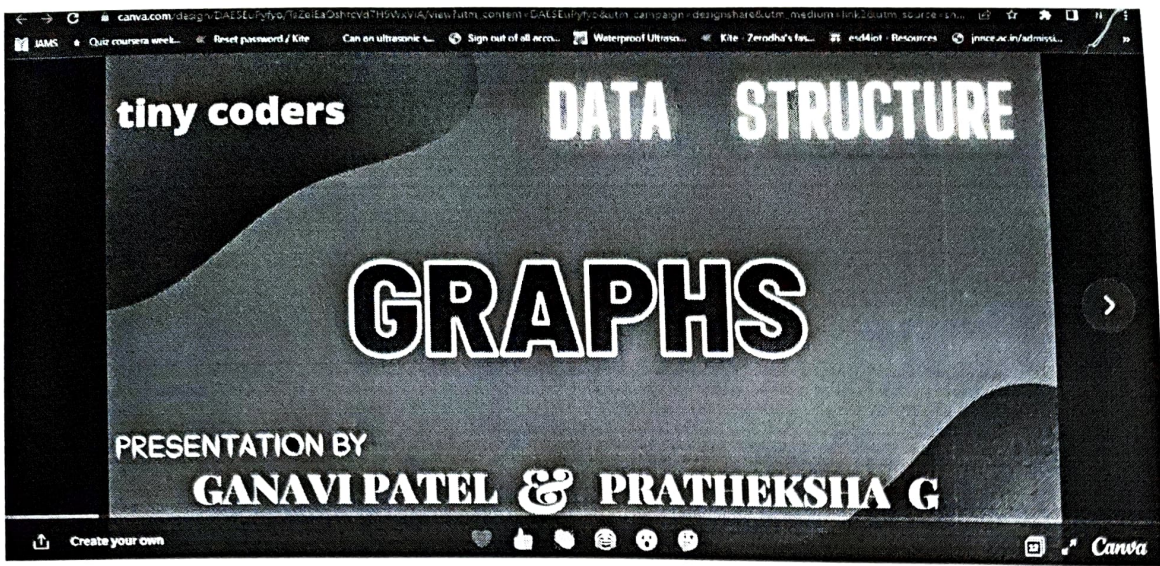
View all

Faisal Ahmed Khan Mar 9

https://www.canva.com/design/DAE6aa_K83c/g14uDtCWSYrikU2qRMOVdw/edit?utm_content=DAE6aa_K83c&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton

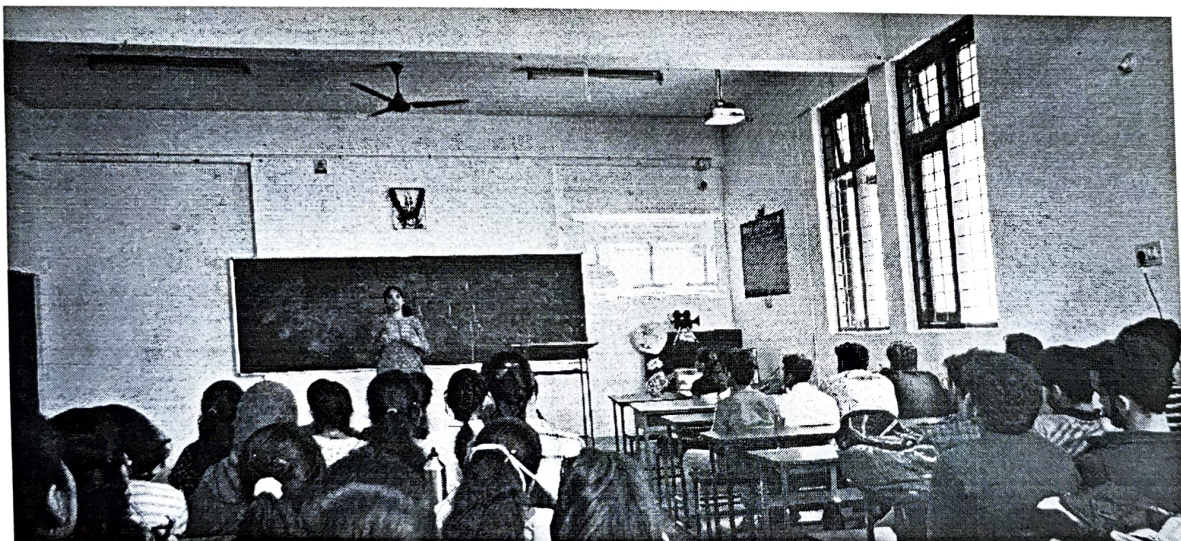
4JN20CS031 - Ganavi Patel Mar 9

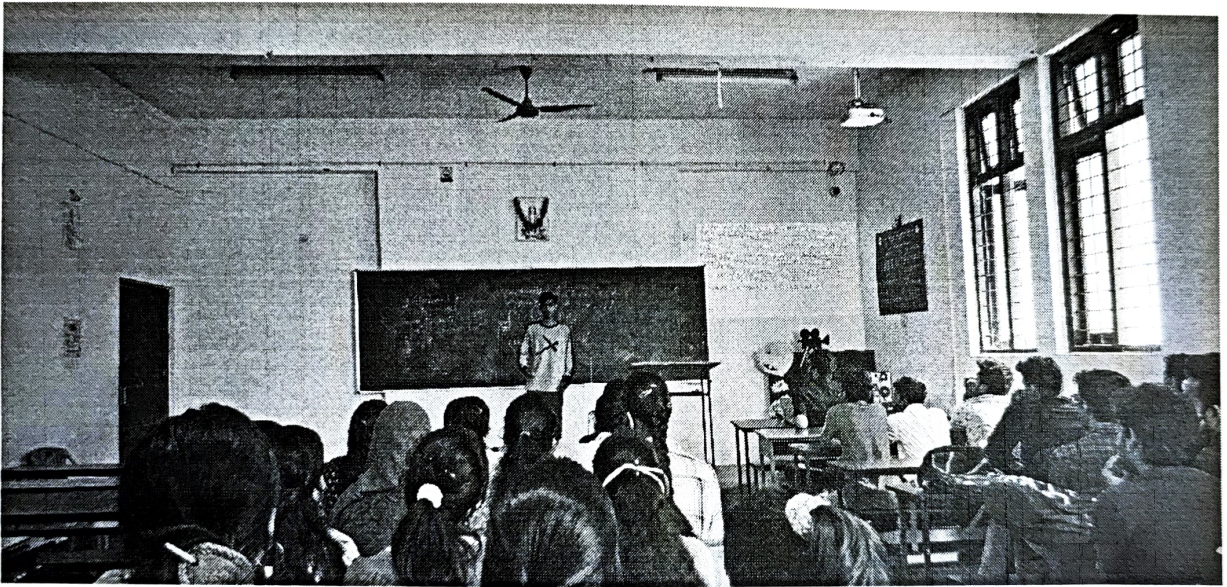
Google Classroom Presentation Submission Home Page

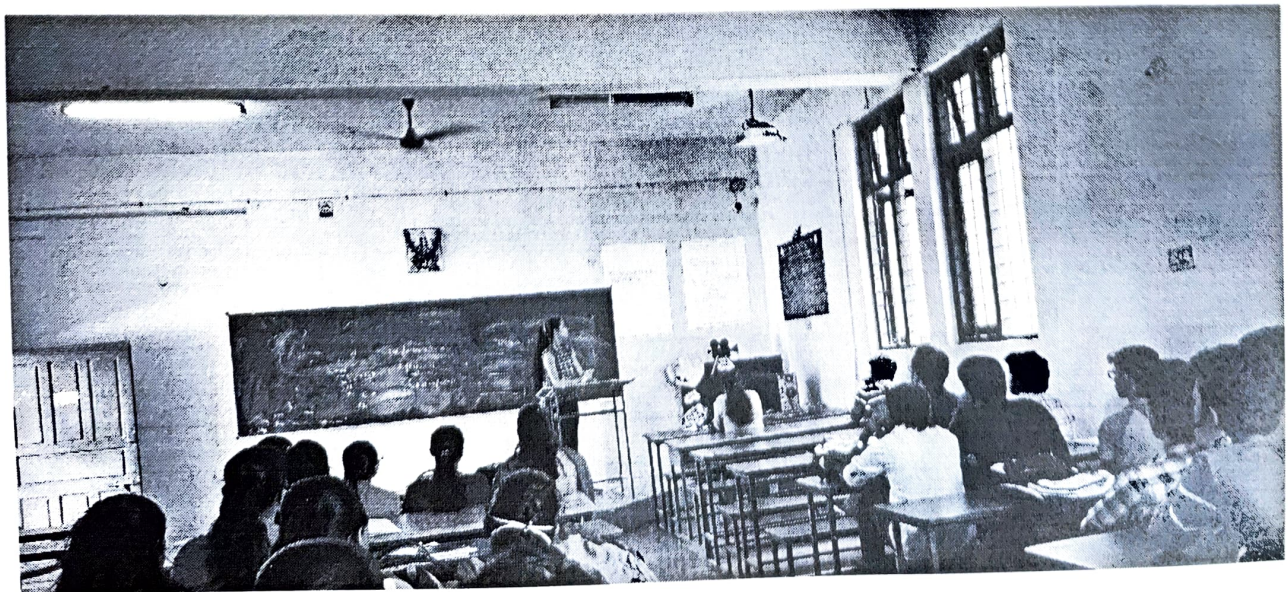
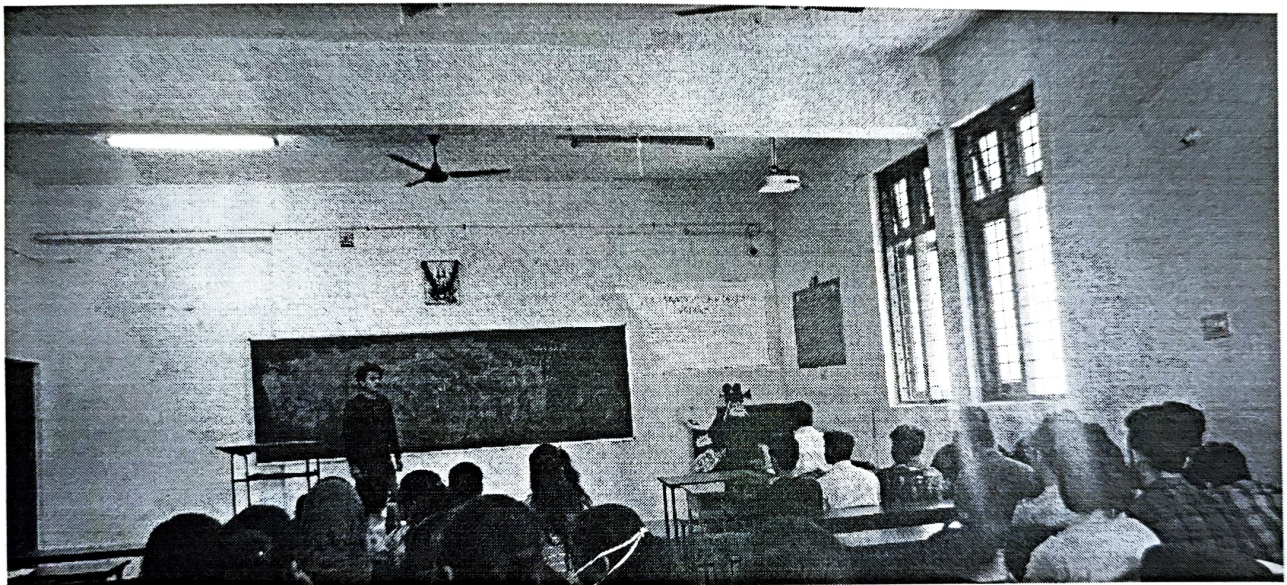


Sample Presentation Slide

Some Of The Presentation Images







Design and Analysis of Algorithms (4th Semester)

Assignment 1: Students implemented the Algorithms studied in theory using Java Language

Classroom > DAA Lab 2021
4 B

Home
Calendar
Teaching
To review
Web_4A
4 sem A
MES_ARM_4B_2023
4B
Presentation_2022
3 C
MS Office_2022
3 C
SWS-Mtech
2nd sem Mtech
DAA Lab 2021
4 B
SSCD Lab
6 A
DAA -2021
4 B
ML Lab
7 A
ML Mtech
3 CSE

Stream Classwork People Grades

Lab 06 a&b, 0/1 Knapsack using Dynamic pr...	Due Jul 26, 2021, 9:59 PM
Lab 06 a&b, 0/1 Knapsack using Dynamic pr...	Due Jul 26, 2021, 9:59 PM
Lab 10b Travelling Salesman Problem	Due Jul 21, 2021, 9:59 PM
Lab 12 detetct Hamiltonian cycles using Bac...	Due Jul 14, 2021, 9:59 PM
Lab 12 detetct Hamiltonian cycles using Bac...	Due Jul 14, 2021, 9:59 PM
Lab 07 Dijkstra's Algorithm (Source Code)	Due Jun 23, 2021, 9:59 PM
Lab 07 Dijkstra's Algorithm (Screenshot and...	Due Jun 23, 2021, 9:59 PM
Lab 10a Flyod's Algorithm (Source Code)	Due Jun 21, 2021, 9:59 PM
Lab 10a Flyod's Algorithm (Screenshot and ...	Due Jun 21, 2021, 10:00 PM
Lab 08 Kruskal's Algorithm (Source Code)	Due Jun 16, 2021, 8:30 PM

Classroom > DAA Lab 2021
4 B

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4 sem A
MES_ARM_4B_2023
4B
Presentation_2022
3 C
MS Office_2022
3 C
SWS-Mtech
2nd sem Mtech
DAA Lab 2021
4 B
SSCD Lab
6 A
DAA -2021
4 B
ML Lab
7 A
ML Mtech
3 CSE

Stream Classwork People Grades

Lab 08 Kruskal's Algorithm (Source Code)	Due Jun 16, 2021, 8:30 PM
Lab 08 Kruskal's Algorithm (Screenshot and...	Due Jun 16, 2021, 8:30 PM
Lab 3B - Multithreading (Screenshot)	Due Jun 15, 2021, 10:00 PM
Lab 3B - Multithreading (Source Code)	Due Jun 15, 2021, 10:00 PM
Lab 09 Prim's Algorithm (Source Code)	Due Jun 9, 2021, 10:05 PM
Lab 09 Prim's Algorithm (Screenshot and tr...	Due Jun 9, 2021, 9:59 PM
Lab 04, Quick Sort (Graph)	Due Jun 2, 2021, 10:30 PM
Lab 04, Quick Sort (Screenshot)	Due Jun 2, 2021, 9:59 PM
Lab 04, Quick Sort (Source Code)	Due Jun 2, 2021, 9:59 PM
Lab 05 Merge sort (Graph)	Due May 26, 2021, 10:59 PM
Lab 05 Merge sort (screenshot)	Due May 26, 2021, 10:59 PM

Classroom > DAA Lab 2021
4 B

Home
Calendar

Teaching

- To review
- Web_4A
4 sem A
- MES_ARM_4B_2023
4B
- Presentation_2022
3 C
- MS Office_2022
3 C
- SWS-Mtech
2nd sem Mtech
- DAA Lab 2021
4 B**
- SSCD Lab
6 A
- DAA -2021
4 B
- ML Lab
7 A
- ML Mtech
3 CSE

Stream **Classwork** People Grades

Lab 05 Merge sort (screenshot)	Due May 26, 2021, 10:59 PM
Lab 05 Merge sort (source Code)	Due May 26, 2021, 10:59 PM
Lab 03a (source Code)	Due May 20, 2021, 10:30 PM
Lab 03a (screenshot of Ouput)	Due May 20, 2021, 10:30 PM
Lab 02b (source Code)	Due May 20, 2021, 10:30 PM
Lab 02b (screenshot of output)	Due May 20, 2021, 10:30 PM
Lab 02 (Screenshot of output)	Due May 12, 2021, 10:30 PM
Lab 02 (Source Code) 2	Due May 12, 2021, 10:30 PM
Lab 01b (Screenshot of output)	Due May 12, 2021, 10:00 PM
Lab 01b (source code)	Due May 12, 2021, 10:00 PM
Lab 01a (part-b) 3	Due May 5, 2021, 10:00 PM

Assignment 2: Students were asked to Implement an algorithm and upload their presentations to youtube.

Classroom > DAA Lab 2021
4 B

Teaching

- To review
- Web_4A
4 sem A
- MES_ARM_4B_2023
4B
- Presentation_2022
3 C
- MS Office_2022
3 C
- SWS-Mtech
2nd sem Mtech
- DAA Lab 2021
4 B**
- SSCD Lab
6 A
- DAA -2021
4 B
- ML Lab
7 A
- ML Mtech
3 CSE
- ML Theory
7 A
- test me

Instructions **Student work**

Return 50 points

<input type="checkbox"/>	4JN19CS069 Prajwal M Dixit "very good"	50	2 attachments Graded	zoom 0 Graded	Travelling Salesperso... Graded
<input type="checkbox"/>	4JN19CS070 Prashanth Pa... "good"	50	4JN19CS067 PAVANA R TSP Graded	4JN19CS069 Prajwal M Dixit Travelling salesman p... Graded	4JN19CS070 Prashanth Patel G P TSP part 1 Graded
<input type="checkbox"/>	4JN19CS075 Priyanka SR "very good"	50 Done late	4JN19CS075 Priyanka SR 2 attachments Graded	Priya R Travelling sales perso... Graded	4JN19CS077 Radhika J G 3 attachments Graded
<input type="checkbox"/>	Priya R "Thank you sir"	50	RACHANA G 4JN19CS082 Ruchitha.A.R. "Thank you sir."	4JN19CS082 Ruchitha.A.R. "Thank you sir."	Leelavathi S "very good"
<input type="checkbox"/>	4JN19CS077 Radhika J G "Done late"	50 Done late	Leelavathi S "very good"	4JN19CS083 S Shreegowri	
<input type="checkbox"/>	RACHANA G RAIKAR "very good"	50 Done late			
<input type="checkbox"/>	4JN19CS082 Ruchitha.A.R. "Thank you sir."	50			
<input type="checkbox"/>	Leelavathi S "very good"	50			
<input type="checkbox"/>	4JN19CS083 S Shreegowri	50			

```

4JN19CS074 - DAA program/sc/tspmain.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer x Problems Javadoc Declaration Console x Task List x
DAA programs
hello.java MyStudent.java MyStack.java MyStaff.java MyCustomer.java tspmain.java
<ctrl+mate> tspmain [Java Application] C:\Users\admin\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.15.0.2.v2021.02.01.0955\jre\bin\java.exe (ul)
65 static void read()
66 {
67     Scanner s=new Scanner(System.in);
68     System.out.print("Enter no. of vertices: ");
69     n=s.nextInt();
70     s = new int[n+1][n+1];
71     int size = (int) Math.pow(2, n);
72     path = new String[size];
73     System.out.println("Enter cost matrix:");
74     for(int i=1;i<=n;i++)
75     {
76         for(int j=1;j<=n;j++)
77         {
78             s[i][j]=s.nextInt();
79         }
80     }
81 }
82 public static void main(String s[])
83 {
84     read();
85     int set[] = new int [n+1];
86     for(int i=1;i<=n;i++)
87         set[i] = 1; set[1]=0;
88     System.out.println("TSP Result is " +solveTSP(1,set,"1"));
89     findpath();
90 }
91

```

Travelling sales person problem-DAA

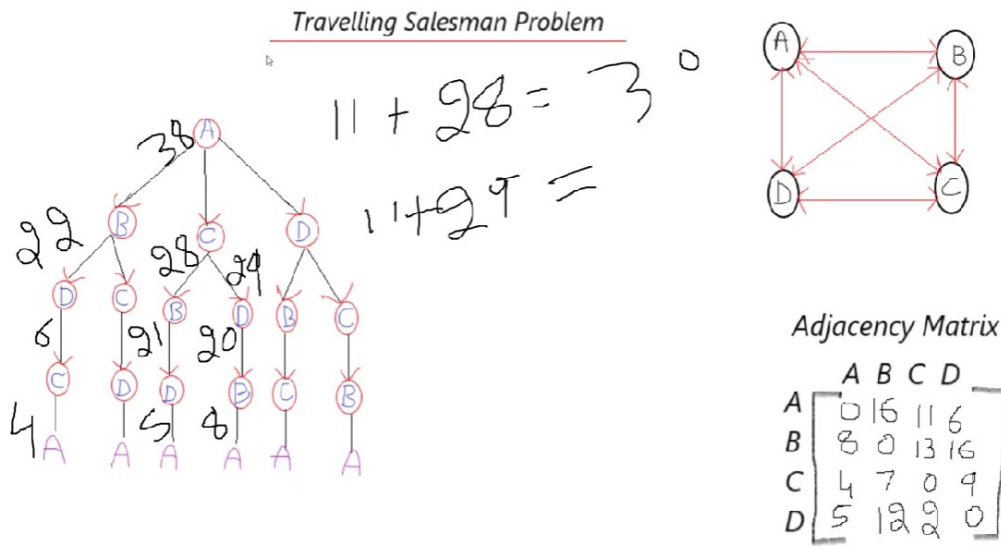
Priya R

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TSP Introduction and Example

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4JN19CS092 Shubha.M.L

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```
DAA - DAALPROGRAM/tspjava - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
tspjava
1 import java.util.*;
2 class tspmain
3 {
4     static int n;
5     static int c[][];
6     static String path[];
7     static int numpath=0;
8     static void findpath()
9     {
10        int minval = 9999;
11        int minindex = 0;
12        for(int i=0;i<numpath;i++)
13        {
14            int pathcost = 0;
15            int pre = 1, k = 1;
16            StringTokenizer st= new StringTokenizer(path[i],"->");
17            while(st.hasMoreTokens())
18            {
19                k = Integer.parseInt(st.nextToken());
20                pathcost= pathcost + c[pre][k];
21                pre = k;
22            }
23            pathcost = pathcost+c[k][1];
24            if(pathcost<minval)
25            {
26                minval = pathcost;
27                minindex = i;
28            }
29        }
30    }
31 }
32 }
33 }
34 }
35 }
36 }
37 }
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44 }
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89 }
90 }
91 }
92 }
93 }
94 }
95 }
96 }
97 }
98 }
99 }
100 }
```

Travel salesman program

Unlisted



4JN19CS083 S Shreegowri

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Department of Computer Science & Engineering

Pedagogical Initiative

2020-2021 (ODD)

PROBLEM SOLVING THROUGH PROGRAMMING (21PSP13)

Activity 1: Students were asked to write a program to generate electricity bill to understand the application of programming in real world.

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

1. Real world problem solving using group discussion. E.g., Electricity bill generation. etc.,
2. Demonstration of solution to a problem through programming.
3. Demonstration of simple project and motivating the students to develop similar type of projects.

With reference to the above suggested activity by VTU, the following exercise is to be carried out by students.

Calculate Electricity bill using Mescom format for Domestic Users in City

How do I calculate my electricity meter reading? ^

1. UNIT CONSUMED = CURRENT MONTH UNIT(KWH) – PREVIOUS MONTH UNIT(KWH)
2. ENERGY CHARGE (EC)= UNIT CONSUMED x UNIT RATE.
3. FIXED CHARGE (FC)= SANCTION LOAD x FIXED CHARGE RATE.
4. ELECTRICITY DUTY (ED)= (ENERGY CHARGE + FIXED CHARGE)x TAX RATE/100.
5. TOTAL ELECTRICITY BILL= ENERGY CHARGE+ FIXED CHARGE+ ELECTRICITY DUTY.

Assume Fixed charge as Rs. 200

How is electricity bill calculated in Mangalore? ^

Karnataka electricity board single slaps for the domestic LT supply such as for 0 to 30 units the per-unit cost will be ₹ 3.75/-, from 31 to 100 the per-unit cost will be ₹ 5.20, from 101 to 200, the per-unit cost will be ₹ 6.75 and above 201 units you have to pay ₹ 7.8 per unit.

What is electricity levied tax?

Application of Electricity Duty or Tax

State	Domestic	Commercial
Karnataka	6%	6%
Kerala	10%	10%
Madhya Pradesh	9-15%	9-15%
Maharashtra	15%	17%

PROGRAM TO CALCULATE ELECTRICITY BILL

SAMARTH · B · R

G section

PROBLEM SOLVING
THROUGH PROGRAMMING
21PSP13

```
#include <stdio.h>
Void main ()
{
float nou, bill, total charge, fixed charge
= 200, cmu, pmu;
printf ("Enter current month unit and previous month
unit");
scanf ("%f %f", &pmu);
nou = cmu - pmu;
if (nou <= 30)
{
bill = 30 * 3.75;
}
else if (nou <= 100)
{
bill = (nou - 30) * 5.20 + 112.5;
}
else if (nou <= 200)
{
bill = (nou - 100) * 6.75 + 112.5 + 358.5476.5;
}
else
{
bill = (nou - 200) * 7.5 + 112.5 + 358.8476.5 + 668.25;
}
total charge = 0.06 * bill + fixed charge;
printf ("The total charge is %f", total charge);
}
```

PROBLEM SOLVING THROUGH

PROGRAMMING

Topic: String operations without using library functions

Presented by: Manasa. K
ISE
G1-Section
210702

Submitted to: Sankhya Mam

A red checkmark is drawn below the 'Submitted to' line. Below the checkmark is a red signature, which appears to be 'Sankhya'.

PSP - Assignment

Electricity Bill

Manasa K
G-section

```
include <stdio.h>
void main ()
```

```
float nou, EC, FC, ED, Tax, bill, PMU, CMU;
```

```
FC = 200;
```

```
printf("Enter PMU and CMU\n");
```

```
scanf("%f %f", &PMU, &CMU);
```

```
nou = CMU - PMU;
```

```
printf("Enter tax value\n");
```

```
scanf("%f", &Tax);
```

```
if (nou <= 30)
```

```
{
```

```
    EC = nou * 3.75;
```

```
}
```

```
else if (nou <= 100)
```

```
{
```

```
    EC = 112.5 + (nou - 30) * 5.20;
```

```
}
```

```
else if (nou <= 200)
```

```
{
```

```
    EC = 476.5 + (nou - 100) * 6.75
```

```
}
```

```
else
```

```
{
```

```
    EC = 1151.5 + (nou - 200) * 7.8
```

```
}
```

```
printf("The energy charge = %f", EC);
```

```
ED = (EC + FC) * (Tax / 100);
```

```
bill = EC + FC + ED;
```

```
printf("The total electricity bill = %f\n", bill);
```

ELECTRICITY BILL

1/c Program to calculate the electricity Bill.

```
#include <stdio.h>
```

```
void main()
```

```
{
    float PMU, CMU, EC, TR, ED, FC = 200, Bill; No;
    printf("Enter previous month units & current month\n");
    units \n");
```

```
scanf("%d %d", &PMU, &CMU);
```

```
NOU = CMU - PMU;
```

```
if (NOU <= 30)
```

```
{
    EC = NOU * 3.75;
```

```
else if (NOU <= 100)
```

```
{
    EC = 112.5 + (NOU - 30) * 5.20;
```

```
else if (NOU <= 200)
```

```
{
    EC = 476.5 + (NOU - 100) * 6.75;
```

```
else {
    EC = 1151.5 + (NOU - 200) * 7.8;
```

```
}
```

printf("The energy charge is %d of \n", EC);

printf("Enter tax rate: \n");

scanf("%d", &TR);

$$ED = (EC + FC) * TR / 100;$$

$$Bill = EC + FC + ED;$$

printf("The total electricity bill is Rs %d of \n", Bill);

};