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INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous) Dundigal, Hyderabad - 500 043

LABORATORY WORK SHEET

G) William	Date: 1810712022
Roll No: .21951A6754.Name:	P.JYOTHI PRASANNA
Exp No:	ne: POINTERS
DAY TO DAY EVALUATION:	fat.

No	400	Algorithm	Source Code	Program Execution	× 7.	Total
<u>-</u>	Preparation	Performance in the Lab		Results and Error Analysis		
Max. Marks	4	4	4	111111111111111111111111111111111111111	9114 4 3 4	20
Obtained	4	4	4	8 4 MM = 2 0 K	u	20

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START WRITING FROM HERE:

Develop a C program using pointers to compute the sum. mean & standard deviation of all elements storted in an array of n real numbers. (O THE STATE OF PROGRAM: # include < stdio.h> int arr[10], n,i, sum=o, mean; int*ptr=arr; 111313333 martin dans 2 21 print f ("Enter the number of elements (<=10):"); scanf (":1:d", &n);
printf("In Enter: 1:d elements: ",n); 101(1=0; 1<n; 1+1) } scanf (".j.d", aar[i]); Gor Ci=0; rd g ... a lang sum + = * ptr ; mean = sum In; printf ("In sum =-1.d\n mean =-1.d", sum, mean);

```
INPUT:
Enter the number of elements (<=10):5
                                          sum= 178
Enter 5 elements: 34
                                          mean = 35
                                            1.61 9 ME-1-1
               21111 12 11 1111/1
                    6511111
Develop a c program to read a dist of integers and store it in an array. Then read the array elements using a
pointers and print the value along with the memory
iaddresses.
# include (Stallo.h)
int main () ?
int pit;
int val[7] = $11,22,33,44,55,66,773;
p=val;
printflyal [1.4]: value is 1.d and address of pin 38, " (p+1),
                             LI Mauric Light in (pti)) Bis i
return o;
                                       it include == taliani
OUTPUT:
val [0]: value is 11 and address 000000000024FE20() (11)111
val [1]: value is as and address 000000000000004 FED4 115
                                 000000000024FE28 114 111
val [2]: value is 33 and address
value is 55 and address
val:[4]:
         value is 66 and address 000000000000000004FE 841
val [5]:
                                00000000000004FE38
        value is 77 and address
                                   ( (11) m r, "10/1)
Design and develop non-viewsive functions input-matrix
(matrix, rows, cold) and print_matrix (matrix, rows; cols), that
stores integers into a two-dimensional array of display
the irtiger in matrix form. Write a c program to imput
and print elements of a 2D array using pointers of functions
```

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PROGRAM:
# include < statio.n>
# define rows 3
# define cols 3 .
void input Matrix (int matrix [][cols], int rows, int cols);
void print Matrix (int matrix [][cols]; int rows, int cols);
int main() {
int matrix [rows][cols];
int 1,15
Printi ("Enter element in the arted matrix. In", rows, cols);
input matrix (matrix, 10Ws, cols)
prints ("Enter element in-1-d x 1-d matrix. \n", rows, cols);
Printf (matrix (matrix, rows, cols)
return o;
void input matrix (int. matrix [7 lcols], introus, int cols) &
Int Ils
-lor (i=0; i<10Ws; i+1) {
-for (1=0; j<cols; j++) {
scanf ("1-d", (*(matrix +i)+5));
void printmatrix (int (*matrix)[cols], introws, int cols) &
int (,j;
-for (i=0; i<10Ws; i++) &
for (j=0; j<cols; j++) {
printf ("-1-d", * (* matrix +1)+j));
prinif ("\n");
INPUT:
Enter elements in 3x3 matrix Elements of 3x3 matrix
         123
        4 5 6
                                            7 8 9
         7 8 9
```

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47
```

```
Develop la c program to store la vist of lintegere in la vingle
dimensional aviay using dynamic memory allocation
(timit will be oun time) using mallec () function. Write a
e program to read the element and print the sum iof all
elements along with the entered elements. Also use free()
function to release the memory
#include <staio.h>
                                   at nother lines floris
# include < string . n>
int main() & we with me but it I have be noted it it in
int *ptr;
                             input undix aminizacko cek)
Part I Carte clouds in the sale of the country of the
int i;
                            toinst fourth's (mathic server cots)
int sum;
                                                 : Defilition
Prints ("Enter limit of the array:");
scanf ("ofd", of limit ) fil and (Isintement) x identiful trans
ptr = (int*) malloc (limit *size of (int));
printf ("Enter element 1 ad: ", i+1);
                                      141 (1-16) (4 (1) 1) F
scanf (".1.d", (ptr+i));
                           Same ("Att ("Linates ai) 1));
printf ("Enter array elements are: \n");
for (1=0; i climit; i++) {
sum=0; (its to it = soldiel = (s) (x) drad toil & tontantairy bise
for (i=0; i < limit; i++) {
                                     1 (1019:430); 1:1911
sum += * (ptr+i);
                                      FOL(1.0:1425):10-1) in
printf ("Sum of array elements: Hollin", sum)?
frec (ph);
                                             Tal'al' I ming
return 0;
INPUT: Enter limit of the anay:5
Enter element 01:100
Enter element 102: minute
Enter element 03 i
```