465	LAB -0 Date/ /
11)	Program to Multiply, Add, Subtract, Franspore, symmetry
	and diagonal sum.
	Contract there steen them below by
A)	Himchall astalians
	void multil int matilifica, matilifica, multillion, multillion, and m,
	int m, intp, inta);
	void add ( int mail ( Doo), mat = (300), int add ( ) (100), int m, into)
	void add (int matt()(100), mat = [](100), int sub()(100), int m, int m)
	void transpore (int mall I (60), int trans (I (60), int m, int m)
	void symmetry (int matter (100), int m, int m);
	void diagonal (int mail (() (100), int m, int m);
	Drawn Christs Barrett profession of Training 3
	int main()
	A MINISTER OF THE CONTRACT OF
	int matilios)[ios] (oo) [ios) (oo) (oo) (oo) (oo) (oo)
	transitioos(100), transactioos(100), int m, m, pay; i, j;
	mint ("In Enter the nows of first matrin: ");
	scand ("" "d " !d ", bm, km);
	mint/ ("In Enter the nows and columns of 2nd matrin");
-	Scent (" " 1.d 7.d", ap, ba);
	mint/("In Enter the first matria clements");
	for (1=0; 1< m; 1++)
1	(:-0:1 <m;)++)< th=""></m;)++)<>
1	scom((" 1.d", a moll[13[5]);
	the state of the s
	print/ ("In Enter the second matria clements");
	100 (1=0; i <p; i++)<="" th=""></p;>
	1 (20(1=0),1<9/2)++)
	scan (" 1.d", & matalia (5));
	}



	Date / / /	
		7
	mint(("In Mahain cannot be multiplied");	
	else	
	1 mulbi (mat 1, mat 2, mult, m, n, p, q)	
	mint ("In Mulhplication Result: In");	
The state of	for (1=0; 1 <m; 1++)<="" td=""><td></td></m;>	
	1 (0x (j=0; j <q; j++)<="" td=""><td></td></q;>	
	mint/ (" Yod", multidad);	
	mint(("In");	
A CONTRACTOR	1	
	m)	$\parallel$
	2 add (mat 1, mat 2, add, m, p)	
_	omint (" In Adelihon Result: \n");	
	for (1=0; i <m; i++)<="" td=""><td></td></m;>	
	f (on (j=0; j <p", (""="" a",="" add(i)(j);<="" j++)="" mint="" td=""><td>1 3</td></p",>	1 3
	print(("In");	
	q sub (mat1, mat2, sub, m, m)	5
	print/("In Subtraction Result: \n");	-1:
	for (ieu; ixm; i++)	1
	1 (on (3.0) j <m; j++)<="" td=""><td></td></m;>	
	mimi/(" "/.d", sub(i)(j));	1
	print(1"\n");	
	1	-
	of transpore (mat 1, trans 1, m, m)	-{
	print ("In Transpose Matria I In");	- 1
	(on (1=0, 1 <m; 1++)<="" td=""><td></td></m;>	
	{ for (3=0; 3 <m; 3++)<="" td=""><td>3</td></m;>	3
-	print(1 7.d", trans(363)	
	palm) (" (m ");	
A - I T T -		1



	Date/ /
	transpose (mate, trans2, p.g.)
	primly ("In Transpore Matria 21");
	(0x(1:0; i <p; i+1)<="" th=""></p;>
	( for (120; j < q , j ++)
	print/ ("1-d", transaciocio);
	print(("\n");
	4
	symmetry ( mat 1, m, n);
	symmetry (mata, p, q);
	diagonal (mat1, m, n);
	diagonal (mat2, p.g);
	G The state of the
	neturno;
	3
	Cili partici Con 2020 1 1 2 2 2 2
	void mulh' (int mat/[][100], int mat/[][100], int mull)
100	int m, int m, int p, inter)
	funt is i, k;
	for(iz0; icm; i++)
	( for (j 20; j < q); j++)
	multarist =0;
	1/9
-	(or (i=0; i < m; i++)
1	( for (j=0; j < q ; j++)
	1 / ( K = 0°, K < m°, K++)
	mult (i) (i) = mat (()(h) + mat 2(h)(i);
	4
	The state of the s



```
void add int mati [](100], int mat 2(](100], int subject
       int om, int a)
f intini
   for (1:0), 12 m; i++)
   for (1=0; j(m; )++)
   add CIDCIT: mat 1 CIDCIT + mat 2 CIDCIT;
world sub (int matt [][100], Int mate [][100], int substituti
    int m, int m)
a intilizi
    for (1=0; 1 cm; it+)
  1 (on (jeo; jem; j+1)
 sublicion = (i) [i) timm = [i) [i) due
 void transpose ( int mat [] (100], Int Irans [] (100], intm, into
 1 Intis;
   for (1:0; i < m; i++)
 ( for (1:0; j < m; j++)
   Enans EDCIDE mat (DCid ,
 void symmetry ( int mate) (100), int m, int m)
 a intinis
 int 6109 = 1;
   i/ (ml=m)
 1 paint ("In Matrin is unsymmetric")
    noturn; 4
   for (1=0; icm; 1+1)
 1 /on (j=0; j=m; j++)
```

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(4)(16)	(C:)(c))tom = (C:)(c) tom) fi f
	1 6 lag = 0;
	break; 4
	9
	if (flag = 20)
	break;
	if ( flag == 1)
	anint ("I'm matrix is symmetrical");
(00)2030	dse
	print/ ("In Matrin is unsymmetric");
	7
	void nowcolumsum (int mat(18100), int m, intm)
	f imt 1, 1, a, b;
	print (" In Sum of Each now");
	for (120; 12m; 1++)
	( a = 0;
t mainta)	(or (i=0; jem; j+t)
	a to matadil;
_	mint("1.d", a);
	gnint(("\n");
	paintf("In sum of each column");
	malmiff (in som of carries comment)
	(an (1=0; 1< mo; 1++)
	( (ixo : i < m : j + t)
	for (jz0; j < m; j+t)  b+= mat(j)[i];
	promit ("1.d", b);
	print(("\n");
	The state of the s

	( 80 )	
	INFINITY	
	ZAITE! / /	
	void diagonal (int mater (voi), intm, intm)	T
	void diagonal im	
	( int 1, 1, a=0,	
	1 (m!=n) 1 matria is not square matria! ");	
	1 paint/1" matria sis	
	returnit	1
		/
	for (1=0; icm; itt)	
	5 (or (jed) jem) ) (1)	0.2
	( i((izzj))  a 1 z mat[i](i];	.0
	ate materialis;	
	i( (itiz= A0w-1)	0
	b+= mat (i)(i);	
	1	
		M
	man francipal Diagonal Sum: "W", a);  minti ("Non-Principal Diagonal Sum; "lod", b);  man francipal Diagonal Sum; "lod", b);	
	minti ("Non-Principal Diagonal Sum; 1.d", b)	2
		Su
	firet lote	
	ange	S
	Output:	
	Enter number of nows and columns of makin 1: 3 3	Su
	Enter number of nows and coloners of motion 21 3 3	2
-		
	Enter clements of first matrin:	Tr
-	1 3 2	
_	8 4 3	-
-		
	E to 01 2 1 2 /	
	Enter clements of second madrin:	
	2 12 11	
	5 6 16	
	7 4 1	



	(CO INFINITY)
	Date/ / /
	Result of matria addition:
	3 15 13
	50 K 22
	15 & L
	Posult of matrix multiplication:
	31 38 61
	157 894 581
	221 251 72
	the board of the second second second second
	Checking if matrices are symmetric
	Matria I lamot symmetric
	Machine 2 is not symmetric.
", b);	Sum of principal diagonal of matria 1:9
	sum of mon-principal diagonal of matrix 1: 15
	Sum of nows of matrix 1:
	6 86 15
3 3	Sum of columns of mation 1:
11 3 3	Su 12 (1
	Transpore of metrin
	1 45 8
	2 6 3
	2 0 -

```
Enter the number of rows and columns for the first matrix: 3

Enter the elements of the first matrix:
1
3
2
45
5
6
8
4
3
Enter the number of rows and columns for the second matrix: 3

Enter the elements of the second matrix:
2
12
11
5
6
16
7
4
```

```
Sum of every row of matrix 1:
Row 1: 6
Row 2: 56
Row 3: 15

Sum of every column of matrix 1:
Column 1: 54
Column 2: 12
Column 3: 11

Transpose of matrix 1:
1 45 8
3 5 4
2 6 3

Process returned 0 (0x0) execution time : 38.285 s
Press any key to continue.
```

```
Result of matrix addition:
3 15 13
50 11 22
15 8 4

Result of matrix multiplication:
31 38 61
157 594 581
57 132 155

Checking if matrices are symmetric...

Matrix 1 is not symmetric.

Matrix 2 is not symmetric.

Sum of principal diagonal of matrix 1: 9

Sum of non-principal diagonal of matrix 1: 15
```