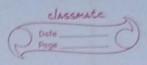
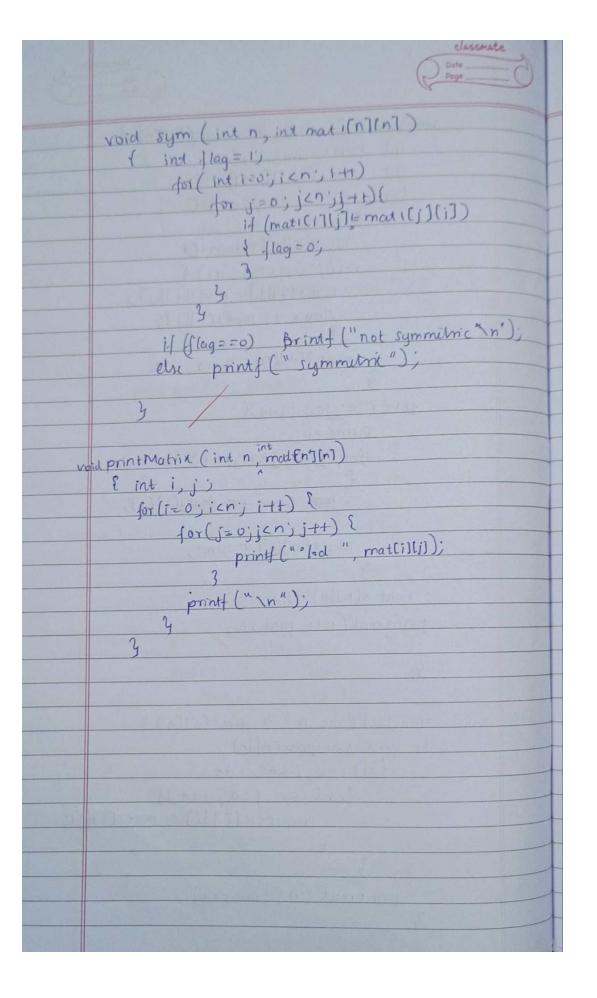
Q)Write a C program to do the following by passing matrix as parameter:

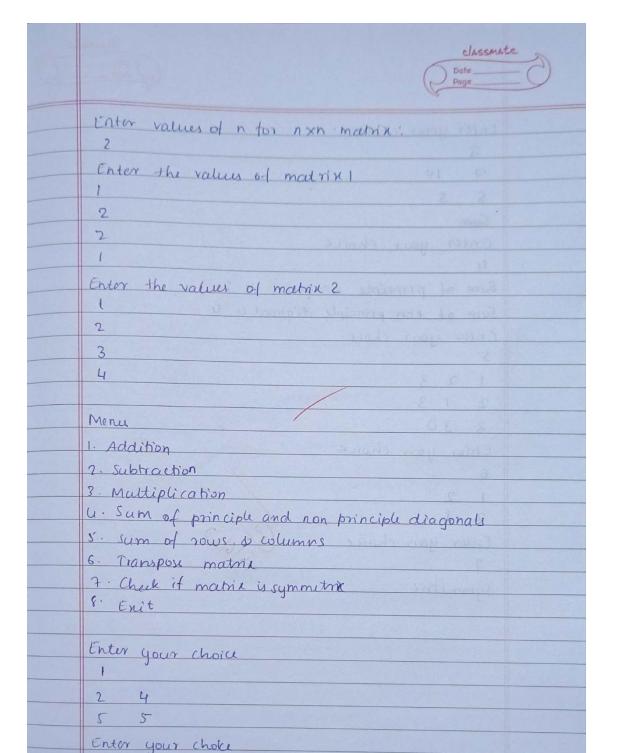
- 1) Matrix addition and subtraction.
- 2) Matrix multiplication.
- 3) Sum of principle and non principle diagonal of matrix.
- 4) Sum of rows and columns.
- 5) Print the transpose
- 6) Check if a given matrix is symmetric or not.

```
mulliply (int n, int mater)[n], int mate(n)[n])
 Int prod [n](n);
   for (iet i =0; i <n'; i++){
       for (j=0; j<n; j++) {
         prod [i][j]=o;
         for (int k=0; icn; k++) {
           prod[i][j]+=matl[i][i]+matl[i][j].
 printmet (n, prod);
  sop (int n, int mat I [n] [n] }
     sump=0, sumnp=0, i.j.k',
     for (i=0; i(n) i++){
      for (j=0') (n') j++) {
            if(i==i)
              sump += maticilli];
     for (1=0;1<0;1++){
        Sumap+=mat I(i)[n-1-i];
     printf (" principle diagonal sum . 1.d )4
       non principle diagonal sum old "n",
        smump, sumap);
```



```
void som summe (int h, int mati (n)(n)){
       int sumr, sumc, i,j;
       int mat 3[n+1][n+1];
      for (i=0; icn; i++) {
   Sum ~ =0;
       mat3[i][j] = mat1[)
           for (j=0;j(n) j++) {
             mat3 [i][j] = mat1[i][j]
             sum += mat (Ci)[j];
           mat 3(1)(n) = sum 7;
      for (i=0; jcn; j++){
           sum (=0',
           for (j=0', j<n',i++)
              mat Sume + = maticil(j),
    mads [n][j] = sume;
       mat 3[n][n] =0;
      point mat (n+1, mat 3);
void transpose (int n, int madi [n][n])
      { int panspose[n][n]:
        for(1=0;1 (n) 1++) {
             for (j:0) j(n) J++){
                hanspose(j)[i] = madi(i)[i];
        print mat (n, transpose);
```





-1 -3

		Classaute Page
	Enter your choice	
	3	
	7 10	
	5 8	
	Sum	
	Enter your choice	
	4	
	Sum of principle diagonal is ?	
	Sum of non principle digonal is 4	
	Enter your choice	
	5	
	1 2 3	
	3 30	The state of the s
	Enter your choice	
	6	Marketon of the
	1 2	Walder of the
	2 1	All Mich and All
	Enter your choice P	
	7	Maria Tarangay
-	Symmetric	ADVINE TO BE
_		
	Sta As	The william
-		
		7
		The same of the sa
		2-1-1-1-1

Output:

```
"C:\Users\Admin\Desktop\1BI × + ~
Enter the values of n for nxn and matrix
Enter the values for matrix 1
2
Enter the values for matrix 2
1
2
3
4
Menu
1.Addition
2.Subtraction
3.Multiplication
4.Sum of principle and non principle diagonals
5.Sum of rows and columns
6.Transpose matrix
7.Check if the matrix is symmetric
8.Exit
Enter your choice
2 4
5 5
Enter your choice
2
ΘΘ
-1 -3
Enter your choice
7 10
5 8
Enter your choice
sum of principle diagonal is 2
sum of non principle diagonal is 4
Enter your choice
1 2 3
2 1 3
3 3 0
Enter your choice
6
1 2
2 1
Enter your choice
Symmetric
```