



LAB MANUAL 09

Fundamental of programming



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LAB + HOME TASK:

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TASK:01

```
int a[3][3],sum1(0),sum2(0);
cout<<"Enter the values of array:";
for(int i=0;i<3;i++)
{
    for(int j=0;j<3;j++)
    {
        cin>>a[i][j];
    }
}
for(int i=0;i<3;i++)
{
    for(int j=0;j<3;j++)
    {
        if(i==j)
        {
            sum1=sum1+a[i][j];
        }
        if(i+j==2)
        {
            sum2=sum2+a[i][j];
        }
        else
        {
            continue;
        }
    }
}
cout<<"Sum of left diagonol is :"<<sum1<<endl;
cout<<"Sum of right diagonol is :"<<sum2;
```

TASK:02

```

    int add[3][3];
    for(int i=0;i<3;i++)
    {
        for(int j=0;j<3;j++)
        {
            add[i][j]=arr[i][j]+arr2[i][j];
            cout<<add[i][j];
        }
        cout<<endl;
    }
}

int main()
{
    int a[3][3],b[3][3],sum[3][3];
    cout<<"Enter the values for array a:";
    for(int i=0;i<3;i++)
    {
        for(int j=0;j<3;j++)
        {
            cin>>a[i][j];
        }
    }
    cout<<"Enter the values for array b:";
    for(int i=0;i<3;i++)
    {
        for(int j=0;j<3;j++)
        {
            cin>>b[i][j];
        }
    }
    cout<<" sum is "<<endl;
    add(a,b);
}

```

TASK:03

```

int dada;
for(int i=0;i<3;i++)
{
    for(int j=0;j<3;j++)
    {if(i<j)
    {
        temp=arr[i][j];
        arr[i][j]=arr[j][i];
        arr[j][i]=temp;
    }
    }
}
}

int main()
{
    int a[3][3],dada;
    cout<<"Enter the values of element of array:";
    for(int i=0;i<3;i++)
    {
        for(int j=0;j<3;j++)
        {
            cin>>a[i][j];
        }
    }
    transpose(a);
    cout<<"Transpose of matrix a is :"<<endl;
    for(int i=0;i<3;i++)
    {
        for(int j=0;j<3;j++)
        {
            cout<<a[i][j];
        }
        cout<<endl;
    }
}

```

TASK:04

```

int product,sum[3][3]={0,0,0},{0,0,0},{0,0,0}};
for(int i=0;i<3;i++)
{
    for(int j=0;j<3;j++)
    {
        product=arr[i][j]*arr2[j][0];
        sum[i][0]=sum[i][0]+product;
    }
    for(int i=0;i<3;i++)
    {
        for(int j=0;j<3;j++)
        {
            product=arr[i][j]*arr2[j][1];
            sum[i][1]=sum[i][1]+product;
        }
        for(int i=0;i<3;i++)
        {
            for(int j=0;j<3;j++)
            {
                product=arr[i][j]*arr2[j][2];
                sum[i][2]=sum[i][2]+product;
            }
        }
    }
    for(int i=0;i<3;i++)
    {
        for(int j=0;j<3;j++)
        {
            cout<<sum[i][j];
        }
        cout<<endl;
    }
}

```

```

int main()
{
    int a[3][3],b[3][3];
    cout<<"Enter the values for array a:";
    for(int i=0;i<3;i++)
    {
        for(int j=0;j<3;j++)
        {
            cin>>a[i][j];
        }
    }
    cout<<"Enter the values for array b:";
    for(int i=0;i<3;i++)
    {
        for(int j=0;j<3;j++)
        {
            cin>>b[i][j];
        }
    }
    multiplication(a,b);
}

```

TASK:05

```
if(n>=0)
{
    int product;
    product=n*a;
    cout<<a<<"*"<<n<<"="<<product<<endl;
    recursion(a,n-1);
}

int main()
{
    int num(15),times(10);
    recursion(15,10);
    return 0;
}
```