//Matrix Operations

```
#include <iostream>
using namespace std;
int main() {
int a[3][3];
int b[3][3];
int add[3][3];
int sub[3][3];
int multi[3][3];
int i,j,k;

cout<<"Enter first matrix";
for(i=0;i<3;i++){
   for(j=0;j<3;j++){
      cin>>a[i][j];
   }
}
cout<<"Enter second matrix";
for(i=0;i<3;i++){
   for(j=0;j<3;j++){
      cin>>b[i][j];
```

```
    }
}

//Additiond
for(i=0;i<3;i++){
    for(j=0;j<3;j++){
        add[i][j]=a[i][j]+b[i][j];
    }
}

//subsr=tron
for(i=0;i<3;i++){
    for(j=0;j<3;j++){
        sub[i][j]=a[i][j]-b[i][j];
    }
}
//garbage
for(i=0;i<3;i++){
    for(j=0;j<3;j++){
        multi[i][j]=0;
    }
}
//mult
```

```
for(i = 0; i < 3; ++i){
for(j = 0; j < 3; ++j){
for(k = 0; k < 3; ++k)
{
multi[i][j] += a[i][k] * b[k][j];
}

}

}



cout<<"Addition is";
for(i=0;i<3;i++){
cout<<"\n ";

   for(j=0;j<3;j++){
      cout<<add[i][j]<<" ";
   }
}
cout<<"\n ";
```

```
cout<<"Sub is";
for(i=0;i<3;i++){
            cout<<"\n ";

   for(j=0;j<3;j++){
      cout<<sub[i][j]<<" ";
   }
}
cout<<"\n ";


cout<<"mult is";
for(i=0;i<3;i++){
cout<<"\n ";

   for(j=0;j<3;j++){
      cout<<multi[i][j]<<" ";
   }
}

cout<<"transpose";
for(i=0;i<3;i++){
   for(j=0;j<3;j++){
      cout<<a[j][i]<<" ";
```

```
    }
    cout<<endl;
}


}
```