Readme file:-

This project is about creating a generic library for 2 d matrices.
We have 3 files :-
i)mat.h:-the interface for the matrix
ii)mat.cpp:-the implementation of all the functions
iii)client.cpp:-the main function. Here we are calling all the functions
To run the project we need to run the following commands:-
g++ -c mat.cpp
g++ -c client.cpp
g++ mat.o client.o
./a.out
Code to call the functions:-

```
// Initialising
        matrix<int> a(3,3,1);
        cout<<"Matrix a\n"<<a<<endl;
//another way:-
        vector<vector<int>> v={{1,2,3},{4,5,6},{7,8,9}};
        matrix<int>b(v);
        cout<<"Matrix b\n"<<b<<endl
//all the operations:-
        matrix<int>sum=a+b;
        cout<<"a+b \n"<<sum<<endl;

        matrix<int>diff=a-b;
        cout<<"a-b \n"<<diff<<endl;

        matrix<int>prod=a*b;
        cout<<"Product of the matrices \n"<<prod<<endl;

        float r=a.Det();
        cout<<"Determinent of matrix : \n"<<r<<"\n";
        cout<<"inverse of the matrix:-";
        cout<<new_mat.Inv();
```