

SCHOOL OF MECHANICAL & MANUFACTURING ENGINERRING

NUST

Department of Mechanical Engineering

CS-114 – Fundamentals of Programming

LAB MANUAL #09

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**Section**: B

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LAB #09 (HOME TASK)

TASK 1:

Write a C++ program to take inverse of a 3x3 matrix using its determinant and adjoint.

CODE:

#include<iostream>

#include<iomanip>

using namespace std;

void Inverse(int a,int b,int c,int d,int e,int f,int g,int h,int i){

double det = a \* (e \* i - f \* h) - b \* (d \* i - f \* g) + c \* (d \* h - e \* g);

if(det==0){

cout<<"Inverse not possible: ";

}

double inv[3][3] = {

{(e \* i - f \* h) / det, -(b \* i - c \* h) / det, (b \* f - c \* e) / det},

{-(d \* i - f \* g) / det, (a \* i - c \* g) / det, -(a \* f - c \* d) / det},

{(d \* h - e \* g) / det, -(a \* h - b \* g) / det, (a \* e - b \* d) / det}

};

for (int i = 0; i < 3; i++) {

for (int j = 0; j < 3; j++) {

cout<<setw(3) << inv[i][j] << " ";

}

cout<<endl;

}

}

int main(){

Inverse(1,2,3,0,1,4,5,6,0);

return 0;

}

OUTPUT:

