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COURSE: B.Sc(hons.)Physics

ROLL NO.: 81

**SOURCE CODE:**

clc;

for i=1:3

for j=1:3

A(i,j)=input("enter value of coefficient of A["+string(i)+","+string(j)+"]=")

end

end

if (A(1,1)==0) then

t=A(1,:)

A(1,:)=A(2,:)

A(2,:)=t

end

if (A(2,2)==0) then

t=A(2,:)

A(2,:)=A(3,:)

A(3,:)=t

end

if (A(3,3)==0) then

t=A(3,:)

A(3,:)=A(1,:)

A(1,:)=t

end

for i=1:3

B(i,1)=input("enter the value of constant of B["+string(i)+",1]=")

end

I=eye(3,3)

C=[A I]

disp(C,"matrix [A|I] =")

C(1,:)=C(1,:)/C(1,1)

C(2,:)=C(2,:)-C(2,1)\*C(1,:)

C(3,:)=C(3,:)-C(3,1)\*C(1,:)

C(2,:)=C(2,:)/C(2,2)

C(1,:)=C(1,:)-C(1,2)\*C(2,:)

C(3,:)=C(3,:)-C(3,2)\*C(2,:)

C(3,:)=C(3,:)/C(3,3)

C(1,:)=C(1,:)-C(1,3)\*C(3,:)

C(2,:)=C(2,:)-C(2,3)\*C(3,:)

disp(C,"inverted matrix [I|A^-1] =")

for i=1:3

k=1

for (j=4:6)

D(i,k)=C(i,j)

k=k+1

end

end

disp(D,"A inverse is =")

X = D\*B

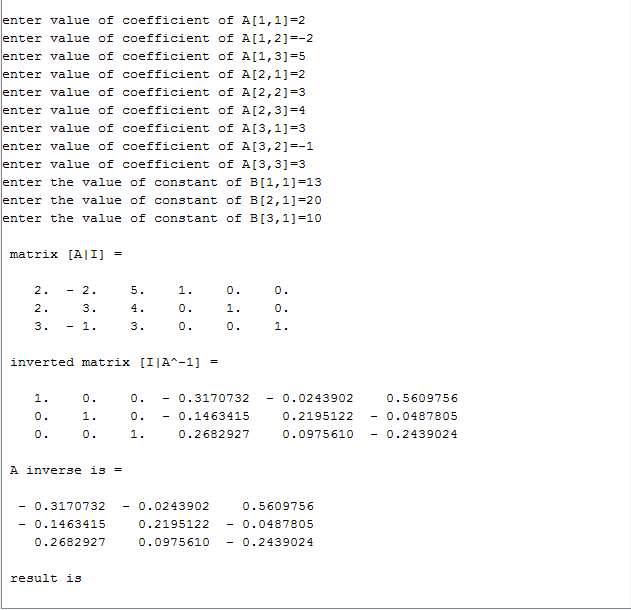
disp("result is")

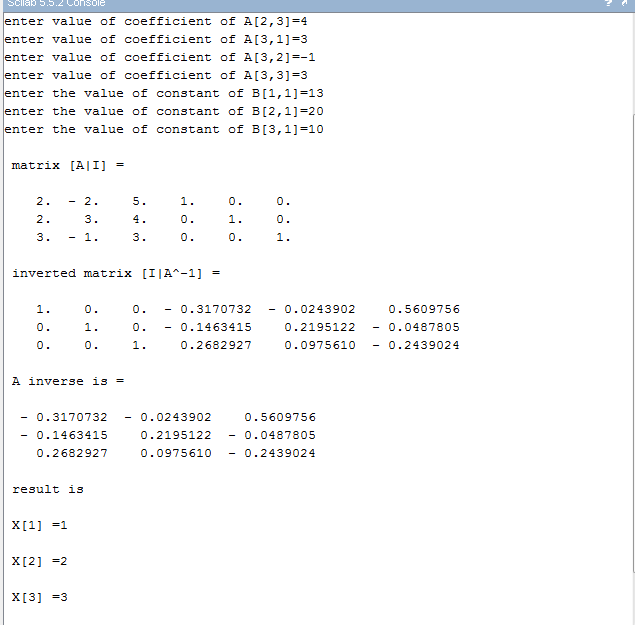
for i=1:3

disp("X["+string(i)+"] ="+string(X(i,1)))

end

**OUTPUT**

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