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COURSE: B.Sc(hons.)Physics

ROLL NO.: 81

**SOURSE CODE:**

clc;

i=0;

for i=1:3

for j=1:4

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

end

end

disp(A,"matrix form of coefficients is")

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

for k=1:4

B(1,k)=A(1,k)

A(1,k)=A(2,k)

A(2,k)=B(1,k)

end

disp(A,"matrix with changed order of equation")

end

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

for k=1:4

B(2,k)=A(2,k)

A(2,k)=A(3,k)

A(3,k)=B(2,k)

end

disp(A,"matrix with changed order of equation")

end

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

for k=1:4

B(3,k)=A(3,k)

A(3,k)=A(1,k)

A(1,k)=B(3,k)

end

disp(A,"matrix with changed order of equation")

end

for i=1:3

x(i)= input("enter estimated value of x["+string(i)+"]=")

end

p(1)=1;p(2)=1;p(3)=1;c=0;

while (abs(x(1)-p(1))>0.001 & abs(x(2)-p(2))>0.001 & abs(x(3)-p(3))>0.001 )

for i=1:3

p(i)=x(i)

end

for i=1:3

k=A(i,4)

for j=1:3

if(j~=i)

k=k-A(i,j)\*x(j)

end

j=j+1

end

x(i)=k/A(i,i)

end

c=c+1

disp("itration="+string(c))

for i=1:3

disp("x("+string(i)+")="+string(x(i)))

end

end

disp("RESULT is")

for i=1:3

disp("x("+string(i)+")="+string(x(i)))

end

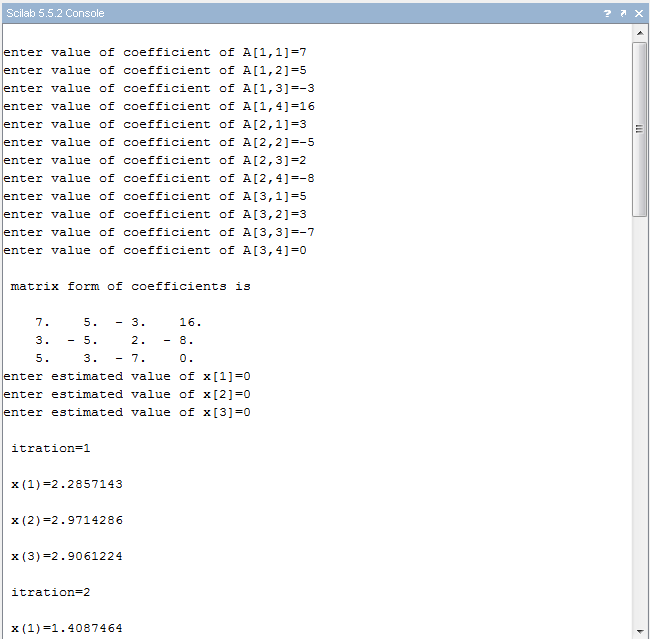
disp("round off result is")

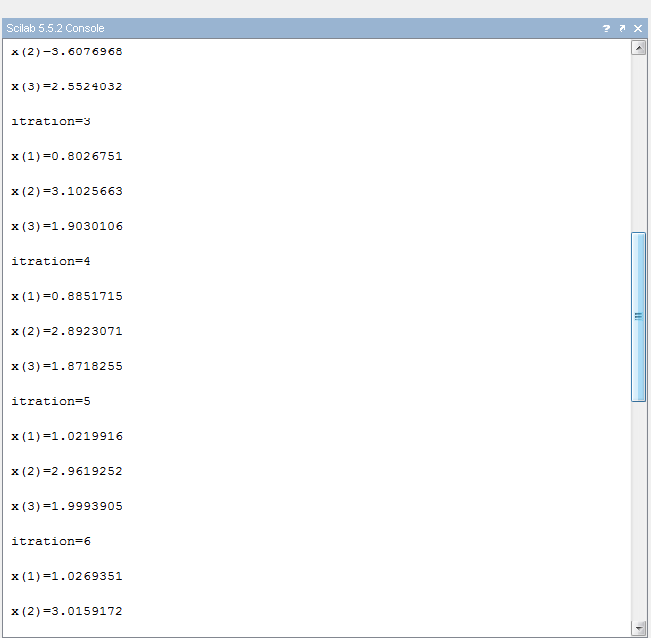
for i=1:3

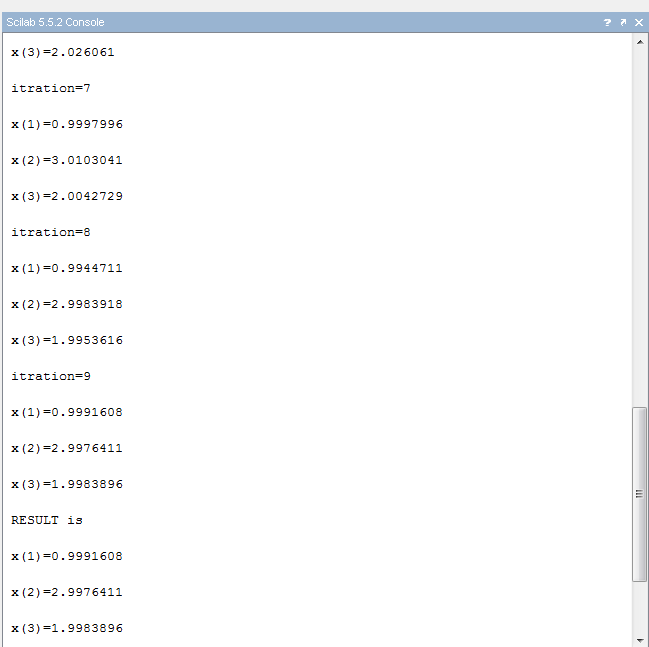
disp("x("+string(i)+")="+string(round(x(i))))

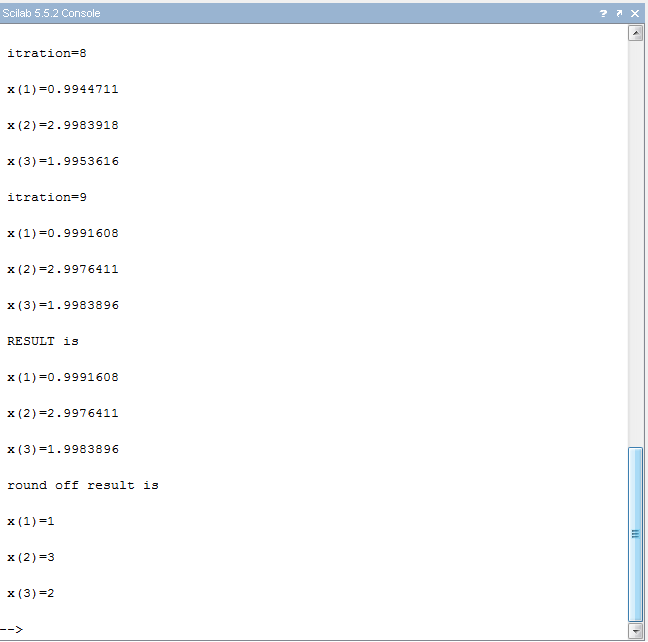
end

**OUTPUT:**

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