

## PROGRAM NAME: - GUESS SEIDEL METHOD

### PROGRAM

```
n=input('enter the no.of equations:');
for i=1:n
for j=1:n
ar(i,j)=input('enter [A] matrix elements row wise:');
end
end
for i=1:n
ar1(i)=input('enter [D] matrices elements:');
end

n1=input('enter the no.of itterations:');
for i=1:n-1
for j=i+1:n
if(abs(ar(i,i))<abs(ar(j,i)))
for k=1:n
temp=ar(i,k);
ar(i,k)=ar(j,k);
ar(j,k)=temp;
temp=ar1(i);
ar1(i)=ar1(j);
ar1(j)=temp;
end
end
end
end

for i=1:n
x(i)=0;
end

for k=1:n1
for i=1:n
const=ar1(i);
for j=1:n
if(i~=j)
const=const-(x(j)*ar(i,j));
end
end
x(i)=const/ar(i,i);
fprintf('x%d=%f ',i,x(i));
```

```
end
fprintf('\n');
end
```

## OUTPUT

```
enter the no.of equations:3
enter [A] matrix elements row wise:4
enter [A] matrix elements row wise:1
enter [A] matrix elements row wise:1
enter [A] matrix elements row wise:1
enter [A] matrix elements row wise:6
enter [A] matrix elements row wise:2
enter [A] matrix elements row wise:-1
enter [A] matrix elements row wise:-2
enter [A] matrix elements row wise:-5
enter [D] matrices elements:5
enter [D] matrices elements:19
enter [D] matrices elements:10
enter the no.of iterations:6
```

```
x1=1.250000 x2=2.958333 x3=-3.433333
x1=1.368750 x2=4.082986 x3=-3.906944
x1=1.205990 x2=4.267983 x3=-3.948391
x1=1.170102 x2=4.287780 x3=-3.949132
x1=1.165338 x2=4.288821 x3=-3.948596
x1=1.164944 x2=4.288708 x3=-3.948472
```