MAT2003 (Optimization Techniques) Lab-4

KHAN MOHD OWAIS RAZA (20BCD7138)

Topic : Transportation method

<mark>Incorrect Code and errors</mark> :-

```
clc;
clearall;
closeall;
x=[10 11 12 15;21 23 17 25;15 25 35 20;10 20 30 0];
[m n]=size(x);
x1=zeros(m,n);
sumc=0;
sumr=0;
For i=1:m-1
 sumc=sumc+x(i,n);
End
For j=1:n-1
 sumr=sumr+x(m,j);
End
If(sumc == sumr)
 For i=1:m
 For j=1:n
 x11=min(x(i,n),x(m,j));
 x1(i,j)=x11;
 x(i,n)=x(i,n)-x11;
 x(m,j)=x(m,j)-x11;
 End
 End
Else disp('unbalanced transportation');
End
xre=0;
For i=1:m-1
 For j=1:n-1
 xre=xre+(x(i,j).*x1(i,j));
 End
End
disp(['the transportation cost is ',num2str(xre)]);clc;
clearall;
closeall;
x=[10 11 12 15;21 23 17 25;15 25 35 20;10 20 30 0];
[m n]=size(x);
x1=zeros(m,n);
sumc=0;
sumr=0;
For i=1:m-1
 sumc=sumc+x(i,n);
End
For j=1:n-1
 sumr=sumr+x(m,j);
End
If(sumc == sumr)
 For i=1:m
 For j=1:n
 x11=min(x(i,n),x(m,j));
 x1(i,j)=x11;
```

```
 x(i,n)=x(i,n)-x11;
 x(m,j)=x(m,j)-x11;
  End
  End
Else disp('unbalanced transportation');
End
xre=0;
For i=1:m-1
 For j=1:n-1
 xre=xre+(x(i,j).*x1(i,j));
  End
End
disp(['the transportation cost is ',num2str(xre)]);
```

Corrected code and output :-

```
%% KHAN MOHD OWAIS RAZA (20BCD7138)
%% Optimization Techniques (MAT2003)
%% Topic: Transportation method
%***** Corrected code *****%
clc;
clear all;
close all;
x=[10 11 12 15;21 23 17 25;15 25 35 20;10 20 30 0];
[m n]=size(x);
x1=zeros(m,n);
sumc=0;
sumr=0;
for i=1:m-1
sumc=sumc+x(i,n);
end
for j=1:n-1
sumr=sumr+x(m,j);
end
if(sumc == sumr)
for i=1:m
for j=1:n
x11=min(x(i,n),x(m,j));
x1(i,j)=x11;
x(i,n)=x(i,n)-x11;
x(m,j)=x(m,j)-x11;
end
end
else disp('unbalanced transportation');
end
xre=0;
for i=1:m-1
for j=1:n-1
```

```matlab
xre=xre+(x(i,j).*x1(i,j));
end
end
disp(['the transportation cost is ',num2str(xre)]);
```

Command Window

```
the transportation cost is 1370
>>
```