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\* OPL 22.1.1.0 Model

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int N = ...;

int X = ...;

range num=1..N;

dvar int+ x[1..N];

float Calories[1..N] = ...;

float Cholestrol[1..N] = ...;

float Fat[1..N] = ...;

float Sodium[1..N] = ...;

float Carbohydrate[1..N] = ...;

float Dietary\_Fiber[1..N] = ...;

float Protein[1..N] = ...;

float Vit\_A[1..N] = ...;

float Vit\_C[1..N] = ...;

float Calcium[1..N] = ...;

float Iron[1..N] = ...;

int CheckBox[1..N] = ...;

float cost[1..N] = ...;

float min\_serve[1..N] = ...;

float max\_serve[1..N] = ...;

float A[1..X] = ...;

float B[1..X] = ...;

string Names[1..N]=...;

minimize sum (i in 1..N)x[i]\*cost[i];

subject to {

forall(i in 1..N)if(CheckBox[i] == 0)

{

x[i] == 0;

}

forall(i in 1..N) x[i]>= min\_serve[i];

forall(i in 1..N) x[i] <= max\_serve[i];

sum(i in 1..N) Calories[i]\*x[i] >= A[1];

sum(i in 1..N) Calories[i]\*x[i] <=B[1];

sum(i in 1..N) Cholestrol[i]\*x[i] >=A[2];

sum(i in 1..N) Cholestrol[i]\*x[i] <=B[2];

sum(i in 1..N) Fat[i]\*x[i] >= A[3];

sum(i in 1..N) Fat[i]\*x[i] <=B[3];

sum(i in 1..N) Sodium[i]\*x[i] >= A[4];

sum(i in 1..N) Sodium[i]\*x[i] <= B[4];

sum(i in 1..N) Carbohydrate[i]\*x[i] >= A[5];

sum(i in 1..N) Carbohydrate[i]\*x[i] <=B[5];

sum(i in 1..N) Dietary\_Fiber[i]\*x[i] >= A[6];

sum(i in 1..N) Dietary\_Fiber[i]\*x[i] <=B[6];

sum(i in 1..N) Protein[i]\*x[i] >= A[7];

sum(i in 1..N) Protein[i]\*x[i] <= B[7];

sum(i in 1..N) Vit\_A[i]\*x[i] >= A[8];

sum(i in 1..N) Vit\_A[i]\*x[i] <= B[8];

sum(i in 1..N) Vit\_C[i]\*x[i] >= A[9];

sum(i in 1..N) Vit\_C[i]\*x[i] <= B[9];

sum(i in 1..N) Calcium[i]\*x[i] >= A[10];

sum(i in 1..N) Calcium[i]\*x[i] <=B[10];

sum(i in 1..N) Iron[i]\*x[i] >= A[11];

sum(i in 1..N) Iron[i]\*x[i] <=B[11];

}

execute {

for (var i in num) if (x[i]!=0) writeln(Names[i],"->",x[i]);

}

SheetConnection

projectdata("C:\\Users\\Dell\\Downloads\\DIET.xlsx");

N = 64;

Calories from

SheetRead(projectdata,"Calories");

Cholestrol from

SheetRead(projectdata,"Cholesterol");

Fat from

SheetRead(projectdata,"Total\_Fat");

Sodium from

SheetRead(projectdata,"Sodium");

Carbohydrate from

SheetRead(projectdata,"Carbohydrates");

Dietary\_Fiber from

SheetRead(projectdata,"Dietary\_Fiber");

Protein from

SheetRead(projectdata,"Protein");

Vit\_A from

SheetRead(projectdata,"Vit\_A");

Vit\_C from

SheetRead(projectdata,"Vit\_C");

Calcium from

SheetRead(projectdata,"Calcium");

Iron from

SheetRead(projectdata,"Iron");

cost from

SheetRead(projectdata,"Price\_Serving");

min\_serve from

SheetRead(projectdata,"Min");

max\_serve from

SheetRead(projectdata,"Max");

CheckBox from

SheetRead(projectdata,"CheckBox");

X = 11;

A from

SheetRead(projectdata,"Req\_min");

B from

SheetRead(projectdata,"req\_max");

Names from

SheetRead(projectdata,"Names");