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function [I,CCP_h,CTE_i,M,TH_hj,R_cj,CP_ic,TP_ij,L_i,TM_c,epsilon,D_ij,AP_ijh] =✓
PARAMETROS5()
    %Numero grande
    M = 1000;
    I=3;
    J=12;
    H=4;
    %Talento humano necesario para realizar una actividad
    TH_hj = [0 1 1 1 1 1 1 0 0 1 1 1
              0 0 1 0 0 0 0 0 0 1 0 0
              1 1 1 0 0 1 0 0 0 1 0 0
              0 1 1 0 0 0 1 0 1 0 0 1];
    %Disponibilidad de personal
    %Ruta de cada nivel
    R_cj = [1 1 1 1 0 0 0 1 1 1 1 1
            1 0 1 1 0 0 0 1 1 1 1 1
            1 0 0 1 0 1 1 1 1 1 1 1
            1 0 0 1 0 1 1 0 1 0 1 1
            1 0 0 1 1 0 0 0 0 0 0 0];
    %Clase de cada paciente para 5 pacientes
    pos = sort(randperm(25,I),2,"ascend");
    % pos = load("pos.mat");
    % pos= pos.pos;
    CP_ic = [ 0 0 0 1 0
              0 1 0 0 0
              0 0 0 0 1];
    %1 0 0 0 0
    %0 0 1 0 0];
    % CP_ic = CP_ic(pos,:);
    %Tiempos de atencion para 5 pacientes
    TP_ij = zeros([I,J]);
    TP_ij(:,1)=round(unifrnd(3,5,[I,1]),1);
    TP_ij(:,2)=round(exprnd(30,[I,1]),1);
    TP_ij(:,3)=round(exprnd(30,[I,1]),1);
    TP_ij(:,4)=round(exprnd(9,[I,1]),1);
    TP_ij(:,5)=round(exprnd(30,[I,1]),1);
    TP_ij(:,6)=round(exprnd(10,[I,1]),1);
    TP_ij(:,7)=round(exprnd(30,[I,1]),1);
    TP_ij(:,8)=round(unifrnd(5,10,[I,1]),1);
    TP_ij(:,9)=round(exprnd(5,[I,1]),1);
    a = 10; % Límite inferior
    b = 30; % Límite superior
    c = 15;
    tri = makedist('Triangular', 'A', a, 'B', c, 'C', b);
    TP_ij(:,10)=round(random(tri, I, 1),1);
    TP_ij(:,11)=round(exprnd(9,[I,1]),1);
    TP_ij(:,12)=round(exprnd(15,[I,1]),1);
    TP_ij;
    %Momento de llegada
    L_i = [1.9 7.3 15.0];% 20.4 32.9 35.9];
    %Numero pequeño
    epsilon = 1e-02;
    %Tiempo de triage
    TM_c = [0.01 15 60 120 240];
    %Parametro auxiliar calculado para definir si hace o no la actividad

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D_ij = zeros([size(TP_ij,1), size(TP_ij,2)]);
for i = 1:size(CP_ic,1)
    for j = 1:size(TH_hj,2)
        LD = 0;
        for c = 1:size(R_cj,1)
            LD = LD + R_cj(c,j) * CP_ic(i,c);
        end
        D_ij(i,j) = LD;
    end
end
%Consumo de recurso h por paciente i en cada actividad j
AP_ijh = zeros([size(TP_ij,1), size(R_cj,2),size(TH_hj,1)]);
for i = 1:size(CP_ic,1)
    for j = 1:size(TH_hj,2)
        for h = 1:size(TH_hj,1)
            for c = 1:size(CP_ic,2)
                AP_ijh(i,j,h) = D_ij(i,j) .* TH_hj(h,j);
            end
        end
    end
end
%Variables
% TP_ij = load("TP_ij.mat");
% TP_ij=TP_ij.TP_ij;
I_i = CP_ic;
I_i(:,1:2) = 0.06.*I_i(:,1:2);
I_i(:,3:5) = 0.03.*I_i(:,3:5);
CCP_h = [ 24.35 8 13.12 43.59]; %Costo De peronal por jornada
CTE_i = [34518 17259 34518];
CTE_i = I_i.*sum(CCP_h);
CTE_i = transpose(sum(CTE_i,2));
end

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