

Assignment (Computing Engineering)

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clear,clc
plus=[1 1 0 1 1;1 1 0 1 1;0 0 0 0 0;1 1 0 1 1;1 1 0 1 1;1 1 1 1 1];
equal=[1 1 1 1 1;0 0 0 0 0;1 1 1 1 1;0 0 0 0 0;1 1 1 1 1;1 1 1 1 1];
Tally0=[1 1 1 1 1 1 1 1 1;1 1 1 1 1 1 1 1 1;1 1 1 1 1 1 1 1 1;1 1 1 1 1 1 1 1 1;1 1 1 1 1 1 1 1 1];
Tally1=[1 1 1 1 0 1 1 1 1;1 1 1 1 0 1 1 1 1;1 1 1 1 0 1 1 1 1;1 1 1 1 0 1 1 1 1;1 1 1 1 0 1 1 1 1];
Tally2=[1 1 1 0 1 1 0 1 1;1 1 1 0 1 1 0 1 1;1 1 1 0 1 1 0 1 1;1 1 1 0 1 1 0 1 1;1 1 1 0 1 1 0 1 1];
Tally3=[1 0 1 1 0 1 1 0 1;1 0 1 1 0 1 1 0 1;1 0 1 1 0 1 1 0 1;1 0 1 1 0 1 1 0 1;1 0 1 1 0 1 1 0 1];
Tally4=[1 0 1 0 1 0 1 0 1;1 0 1 0 1 0 1 0 1;1 0 1 0 1 0 1 0 1;1 0 1 0 1 0 1 0 1;1 0 1 0 1 0 1 0 1];
Tally5=[1 0 1 0 1 0 1 0 0;1 0 1 0 1 0 0 0 1;1 0 1 0 0 0 1 0 1;1 0 0 0 1 0 1 0 1;0 1 0 1 0 1 0 1 1];
while 1
x=input('Please enter first number')
y=input('Please enter second number')
if x<0
    disp('Error First input!Please enter a positive number')
    continue
end
if y<0
    disp('Error Second Input!Please enter a positive number')
    continue
end
% Tally on X
if x~=0
a1=int8(fix(x/5));
b1=a1/5;
c1=rem(x,5);
d1=rem(a1,5);
switch c1
    case 1
        e1=Tally1;
    case 2
        e1=Tally2;
    case 3
        e1=Tally3;
    case 4
        e1=Tally4;
    case 0
        e1=Tally5;
end
if a1>=5
    f1=4-d1;
    A1=[repmat(Tally5,b1,5)];
    B1=[repmat(Tally5,1,d1),repmat(e1,1,1),repmat(Tally0,1,f1)];
    C1=vertcat(A1,B1);

elseif d1~=0
    C1=[repmat(Tally5,1,d1),repmat(e1,1,1)];
else
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        C1=[repmat(Tally0,1,1),repmat(e1,1,1),repmat(Tally0,1,1)];
end
else
    C1=[repmat(Tally0,1,3)];
end
subplot(1,5,1)
imshow(C1)
title(num2str(x))
% Plus sign
subplot(1,5,2)
A5=[repmat(Tally0,1,1),repmat(plus,1,1),repmat(Tally0,1,1)];
imshow(A5)
title('+')
% Tally on Y
if y~=0
    a2=int8(fix(y/5));
    b2=a2/5;
    c2=rem(y,5);
    d2=rem(a2,5);
    switch c2
        case 1
            e2=Tally1;
        case 2
            e2=Tally2;
        case 3
            e2=Tally3;
        case 4
            e2=Tally4;
        case 0
            e2=Tally5;
    end
    if a2>=5
        f2=4-d2
        A2=[repmat(Tally5,b2,5)];
        B2=[repmat(Tally5,1,d2),repmat(e2,1,1),repmat(Tally0,1,f2)];
        C2=vertcat(A2,B2);
    elseif d2~=0
        C2=[repmat(Tally5,1,d2),repmat(e2,1,1)];
    else
        C2=[repmat(Tally0,1,1),repmat(e2,1,1),repmat(Tally0,1,1)];
    end
else
    C2=[repmat(Tally0,1,3)];
end
subplot(1,5,3)
imshow(C2)
title(y)
% Equal sign
subplot(1,5,4)
A4=[repmat(Tally0,1,1),repmat(equal,1,1),repmat(Tally0,1,1)];
imshow(A4)
title('=')
% Tally on Z
z=x+y;
a3=int8(fix(z/5));
b3=a3/5;
c3=rem(z,5);
d3=rem(a3,5);
switch c3
    case 1
        e3=Tally1;

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        case 2
            e3=Tally2;
        case 3
            e3=Tally3;
        case 4
            e3=Tally4;
        case 0
            e3=Tally0;
    end

    if a3>=5
        f3=4-d3;
        A3=[ repmat(Tally5,b3,5) ];
        B3=[ repmat(Tally5,1,d3), repmat(e3,1,1), repmat(Tally0,1,f3) ];
        C3=vertcat(A3,B3);

    elseif d3~=0
        C3=[ repmat(Tally5,1,d3), repmat(e3,1,1) ];
    else
        C3=[ repmat(Tally0,1,1), repmat(e3,1,1), repmat(Tally0,1,1) ];
    end
    subplot(1,5,5)
    imshow(C3)
    title(num2str(z))

    g=input('Enter any number to continue and Enter 0 to stop');
    if g==0
        break
    else
        continue
    end
end
end

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