

```
function [QQ]= rectrans(im_select,W,r1,r2,c1,c2)
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    if r1==r2&& c1==c2
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        W(r1,c1)=im_select(r1,c1);
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```
    elseif r1==r2
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        con=0;
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        r=r1;
```

```
        for c=c1:c2
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```
            if im_select(r,c)==1
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                con=con+1;
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```
            end
```

```
        end
```

```
        x=(c2-c1+1);
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        y=(con*100)/x;
```

```
        if y>=75
```

```
            r=r1;
```

```
            for c=c1:c2
```

```
                W(r,c)=1;
```

```
            end
```

```
        elseif y<25
```

```
            r=r1;
```

```
            for c=c1:c2
```

```
                W(r,c)=-1;
```

```
            end
```

```
        else
```

```

    r=r1;
    for c=c1:c2
        W(r,c)=im_select(r,c);
    end
end
elseif c1==c2
    con=0;
    c=c1;
    for r=r1:r2
        if im_select(r,c)==1
            con=con+1;
        end
    end
    x=(r2-r1+1);
    y=(con*100)/x;
    if y>=75
        c=c1;
        for r=r1:r2
            W(r,c)=1;
        end
    elseif y<25
        c=c1;
        for r=r1:r2
            W(r,c)=-1;

```

```

        end
    else
        c=c1;
        for r=r1:r2
            W(r,c)=im_select(r,c);
        end
    end
end
elseif r1==r2-1&& c1==c2-1
    co=0;
    if im_select(r1,c1)==1
        co=co+1;
    end
    if im_select(r1,c2)==1
        co=co+1;
    end
    if im_select(r2,c1)==1
        co=co+1;
    end
    if im_select(r2,c2)==1
        co=co+1;
    end
    if co>=3
        W(r1,c1)=1;
        W(r1,c2)=1;

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    W(r2,c1)=1;
    W(r2,c2)=1;
elseif co<=1
    W(r1,c1)=-1;
    W(r1,c2)=-1;
    W(r2,c1)=-1;
    W(r2,c2)=-1;
else
    W(r1,c1)=im_select(r1,c1);
    W(r1,c2)=im_select(r1,c2);
    W(r2,c1)=im_select(r2,c1);
    W(r2,c2)=im_select(r2,c2);
end
else
    con=0;
    for r=r1:r2
        for c=c1:c2
            if im_select(r,c)==1
                con=con+1;
            end
        end
    end
end
x=(r2-r1+1)*(c2-c1+1);
y=(con*100)/x;

```

```

if y>=75
    for r=r1:r2
        for c=c1:c2
            W(r,c)=1;
        end
    end
elseif y<25
    for r=r1:r2
        for c=c1:c2
            W(r,c)=-1;
        end
    end
else
    r12=floor((r1+r2)/2);
    c12=floor((c1+c2)/2);
    W=rectrans(im_select,W,r1,r12,c1,c12);
    W=rectrans(im_select,W,r12+1,r2,c1,c12);
    W=rectrans(im_select,W,r1,r12,c12+1,c2);
    W=rectrans(im_select,W,r12+1,r2,c12+1,c2);
end
end
QQ=W;
end

```