```
void shadow()
    int i,j,r,count=0,avg,sum=0;
    int px,py,p1x,p1y;
    r=257;
    do
    {
        for(i=0; i<width; i++)</pre>
           for(j=0; j<height; j++)</pre>
               if(b[i][j]==r)
                    sum=sum+output[i][j];
                    count=count+1;}}}
        avg=sum/count;
        if(avg>= 245 && avg <=255) //black region</pre>
            px=i;
            py=j;
            for(i=0; i<width; i++)</pre>
                for(j=0; j<height; j++)</pre>
                    if(b[i][j]==r)
                        if (j<py)</pre>
                            px=i;
                            py=j;} //left most pixel
                        else break;}}}
            if(b[i-1][j]==0)
                p1x=i-1;
                                 ply=j;
                                                 flag[i-1][j]=1; }
            else if(b[i+1][j]==0)
                p1x=i+1;
                                 p1y=j;
                                                 flag[i+1][j]=1; }
            else if (b[i][j-1]==0)
                                                 flag[i][j-1]=1; }
               p1x=i;
                                 p1y=j-1;
            else if (b[i][j+1]==0)
               p1x=i;
                                 ply=j+1;
                                                 flag[i][j+1]=1; }
            dv=(((p1x-px)^2)+(p1y-py)^2))^1/2;
            do
                f=0;
                if(b[i-1][j]==0 && flag[i][j]==0)
                { pplx=i-1; pply=j; }
                else if(b[i+1][j]==0 && flag[i][j]==0)
                  pp1x=i+1; pp1y=j; }
                else if (b[i][j-1]==0 && flag[i][j]==0)
                                pp1y=j-1;}
                   pp1x=i;
                else if (b[i][j+1]==0 && flag[i][j]==0)
                  pp1x=i;
                                pp1y=j+1;}
                if(b[i-1][j]==0)
                    pp2x=i-1; pp2y=j; flag[i-1][j]=1; }
                else if(b[i+1][j]==0)
                    pp2x=i+1; pp2y=j; flag[i+1][j]=1; }
                else if (b[i][j-1]==0)
                                pp2y=j-1;
                                           flag[i][j-1]=1; }
                    pp2x=i;
                else if (b[i][j+1]==0)
                                 pp2y=j+1;
                                           flag[i][j+1]=1; }
                    pp2x=i;
                dv1=(((pp1x-ppx)^2)+(pp1y-ppy)^2))^1/2;
                if (dv1>dv)
                                //vertival length
                    dv=dv1;
                                             }
                                 f=1;
            }while(f=1);}
        sum=0;
        count=0;
        for(i=0; i<width; i++)</pre>
```

}

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for(j=0; j<height; j++)</pre>
           if(b[i][j]==r)
               sum=sum+output[i][j];
               count=count+1;
       }
   }
   avg=sum/count;
   if(avg>= 245 && avg <=255) //black region
       px=i; py=j;
       for(i=0; i<width; i++)</pre>
           for(j=0; j<height; j++)</pre>
              if(b[i][j]==r)
                   if (i<px)</pre>
                                  py=j;} //left most pixel }
                   { px=i;
                   else break;
                                  } }
       if(b[i-1][j]==0)
           p1x=i-1;
                      ply=j; flag[i-1][j]=1; }
       else if(b[i+1][j]==0)
                      ply=j; flag[i+1][j]=1; }
           p1x=i+1;
       else if (b[i][j-1]==0)
                      ply=j-1; flag[i][j-1]=1; }
       { p1x=i;
       else if (b[i][j+1]==0)
       { plx=i;
                      p1y=j+1;
                                  flag[i][j+1]=1; }
       dh=(((p1x-px)^2)+(p1y-py)^2))^1/2;
       do
       {
           f=0;
           if(b[i-1][j]==0 && flag[i][j]==0)
               pplx=i-1; pply=j; }
           else if(b[i+1][j]==0 && flag[i][j]==0)
           { pplx=i+1; pply=j; }
           else if (b[i][j-1]==0 && flag[i][j]==0)
                          pp1y=j-1;}
           { pplx=i;
           else if (b[i][j+1]==0 && flag[i][j]==0)
           { pplx=i;
                          pp1y=j+1;}
           if(b[i-1][j]==0)
                                           flag[i-1][j]=1; }
           { pp2x=i-1;
                               pp2y=j;
           else if(b[i+1][j]==0)
           { pp2x=i+1;
                               pp2y=j;
                                           flag[i+1][j]=1; }
           else if (b[i][j-1]==0)
                               pp2y=j-1; flag[i][j-1]=1; }
               pp2x=i;
           else if (b[i][j+1]==0)
               pp2x=i;
                               pp2y=j+1; flag[i][j+1]=1; }
           dh1=(((pp1x-ppx)^2)+(pp1y-ppy)^2))^1/2;
                          //vertival length
           if (dh1>dh)
               dh=dh1; f=1;
                               }
       }while(f=1);
   }
}while();
```