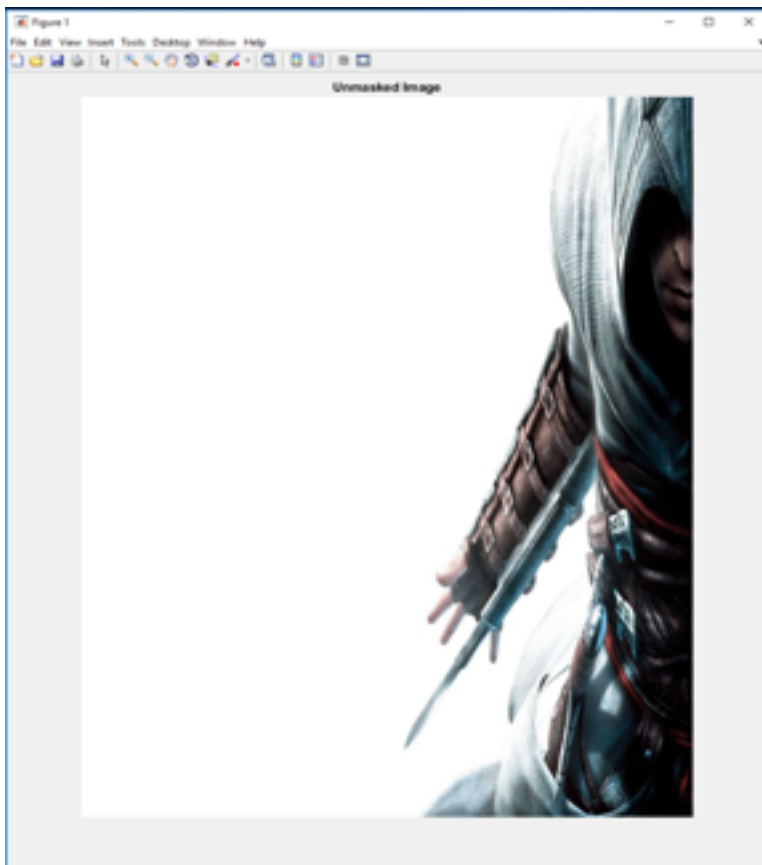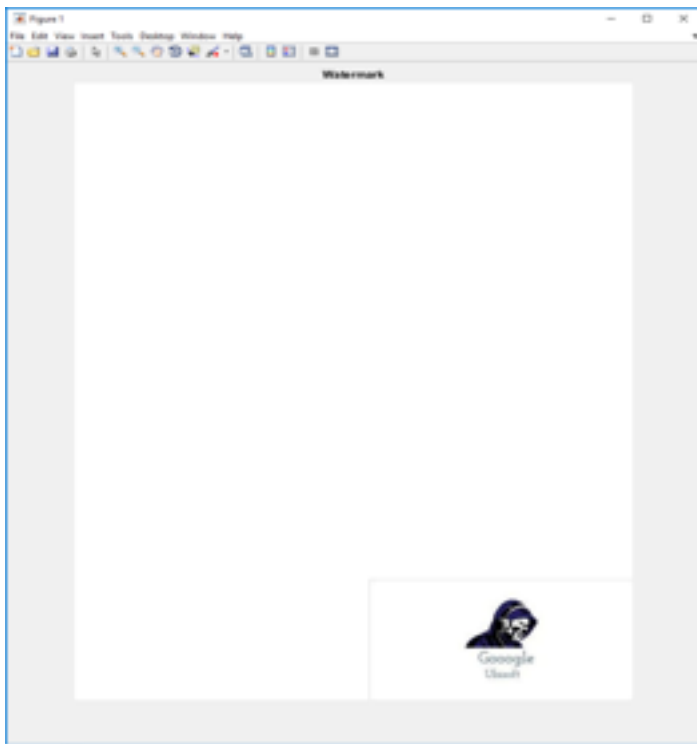# Digital Watermarking

Rahul Janardhanan_CSC481

Program Code

```
%Unmasked Image
q = imread('creed.jpg');
figure,imshow(q);title('Unmasked Image');
```
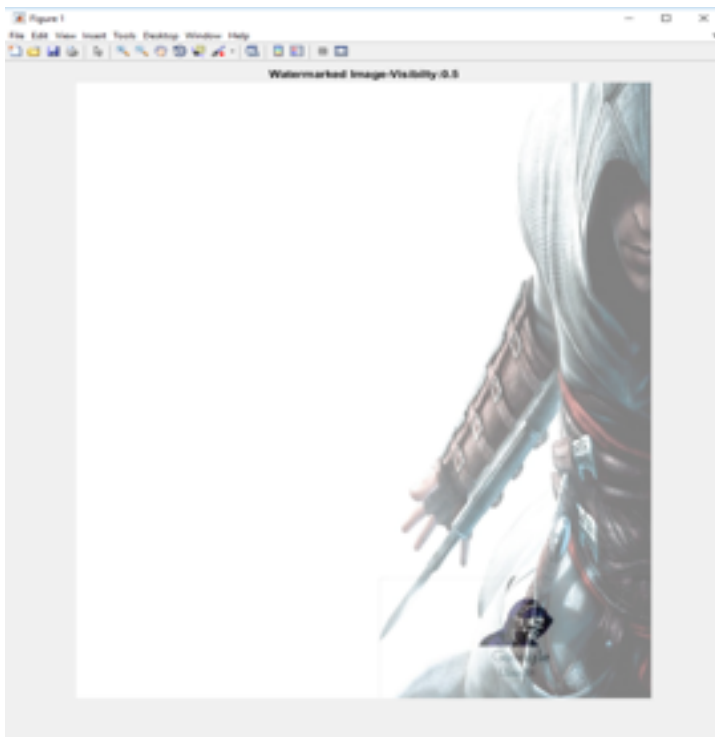


```
%Watermark
w = imread('plain1.jpg');
figure,imshow(w);title('Watermark');
```
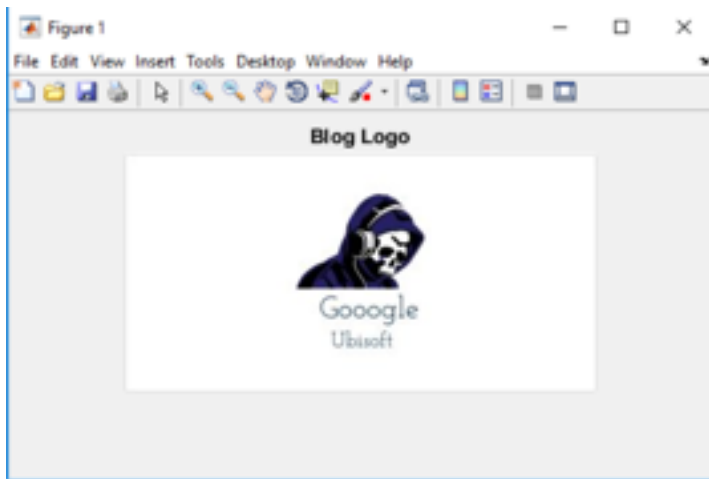
```matlab
%Visibility of the watermark
viscon=0.5;

Fw = (1-viscon)*q + viscon.*w;
figure,imshow(Fw);title('Watermarked Image-Visibilty:0.5');
```

```matlab
%Read the Blog logo
Logo = imread('logo.jpg');
figure,imshow(Logo);title('Blog Logo');
```
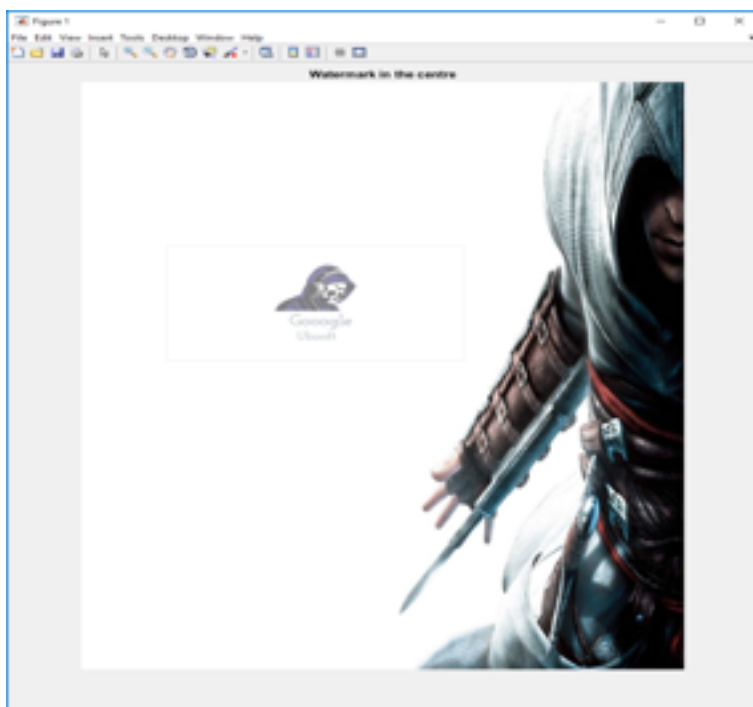


```matlab
OIm = q;
%Visibility control
viscon = 0.5;

[m, n,~]=size(Logo);

%choose a portion of the Image
Sz = [250 100];

%Apply watermark
OIm(Sz(1):Sz(1)+m-1,Sz(2):Sz(2)+n-1,:)=(1-
viscon)*OIm(Sz(1):Sz(1)+m-1,Sz(2):Sz(2)+n-1,:) + viscon.*Logo;
figure,imshow(OIm);title('Watermark in the centre');
```
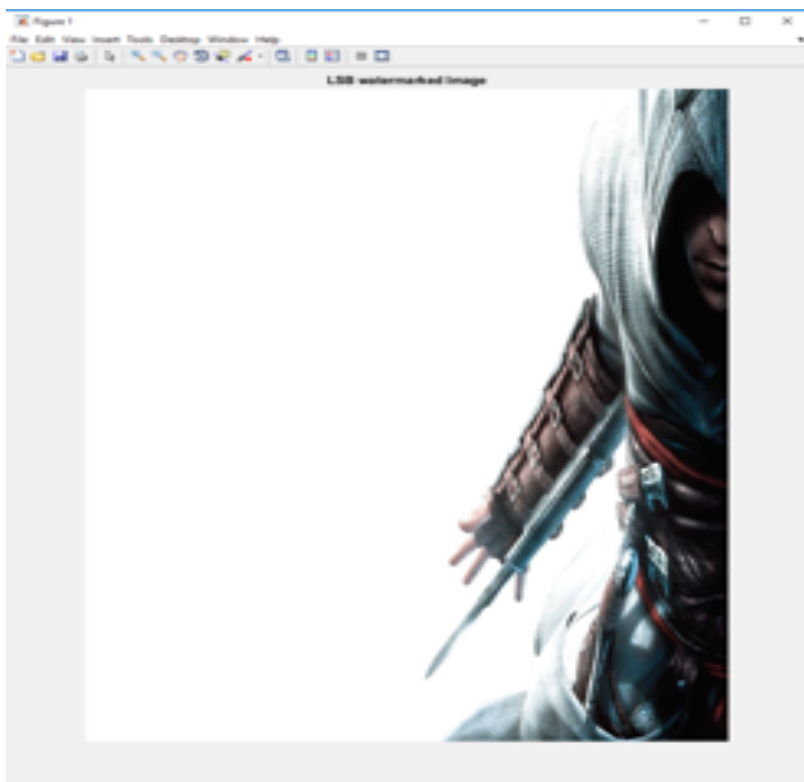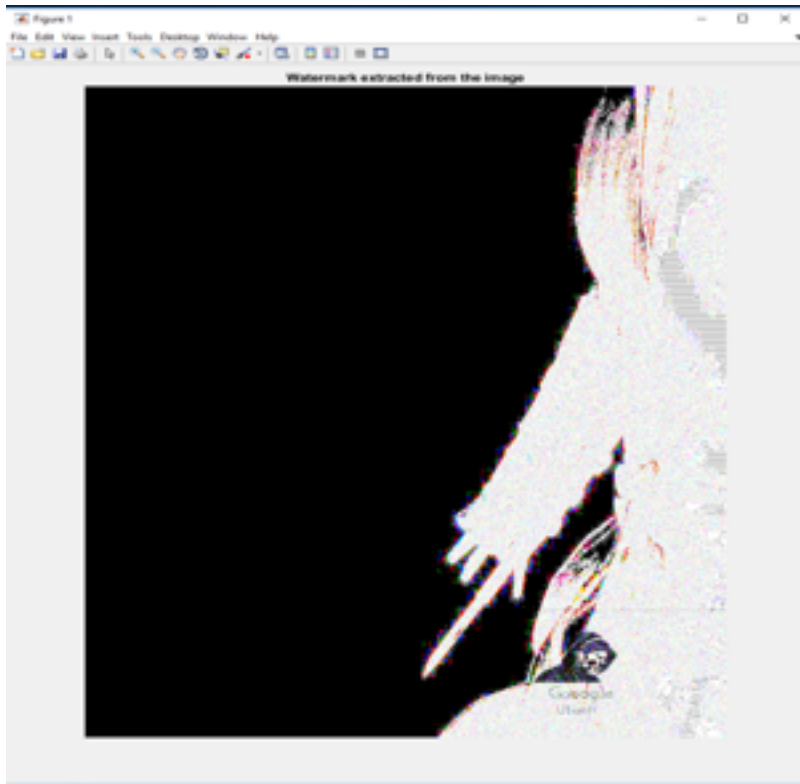
Watermark in the centre

```
%LSB watermarked Image
Fw1 = 4*(q/4) + w/64;
figure,imshow(Fw1);title('LSB watermarked Image');
```


LSB watermarked Image

```
%Retrieve the Watermark_1
DMark = (Fw1-q)*64;
figure,imshow(DMark);title('Watermark extracted from the
image');
```



```
%Retrieve the Watermark_2
DMark = rem(Fw1,4)*64;
figure,imshow(DMark);title('Watermark extracted from the
image');
```

Watermark extracted from the image