

**T U G A S II**  
**( PENGOLAHAN CITRA DIGITAL )**

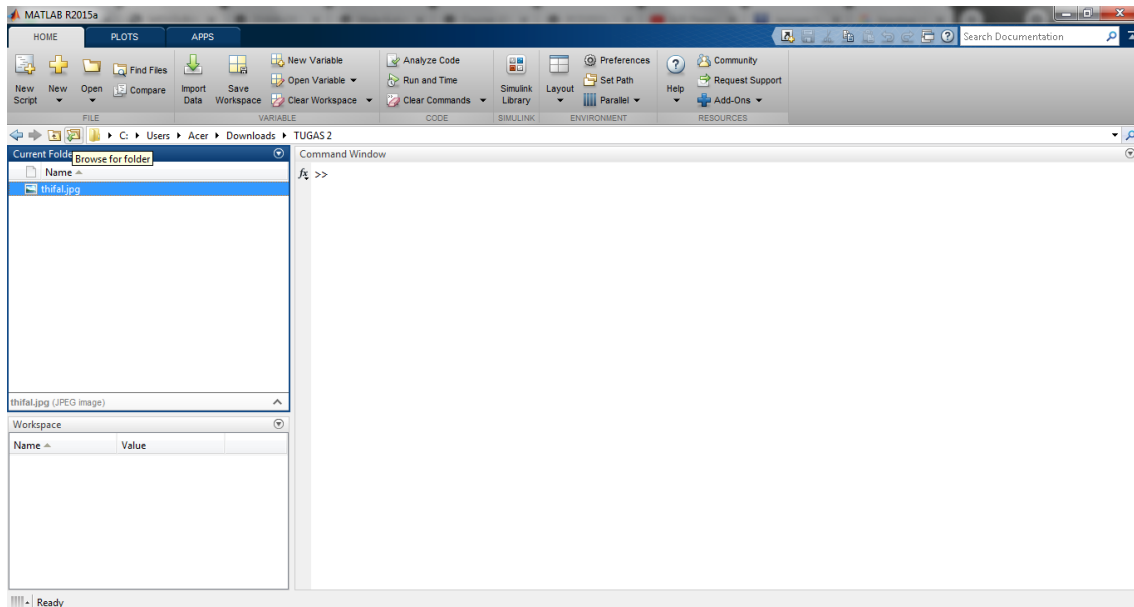


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**TAHUN AJARAN 2020 / 2021**

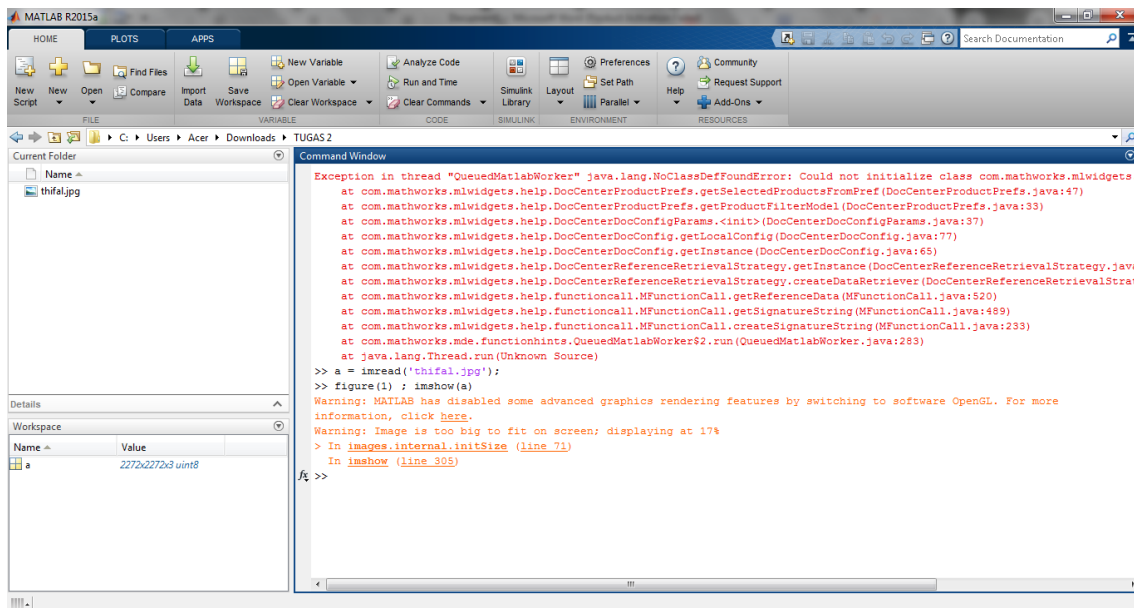
## AMBIL FOTO KALIAN KEMUDIAN UBAH KE CITRA KEABUAN , CITRA BINER, UBAH KONTRAKSNYA DAN BRIGHTNESNYA

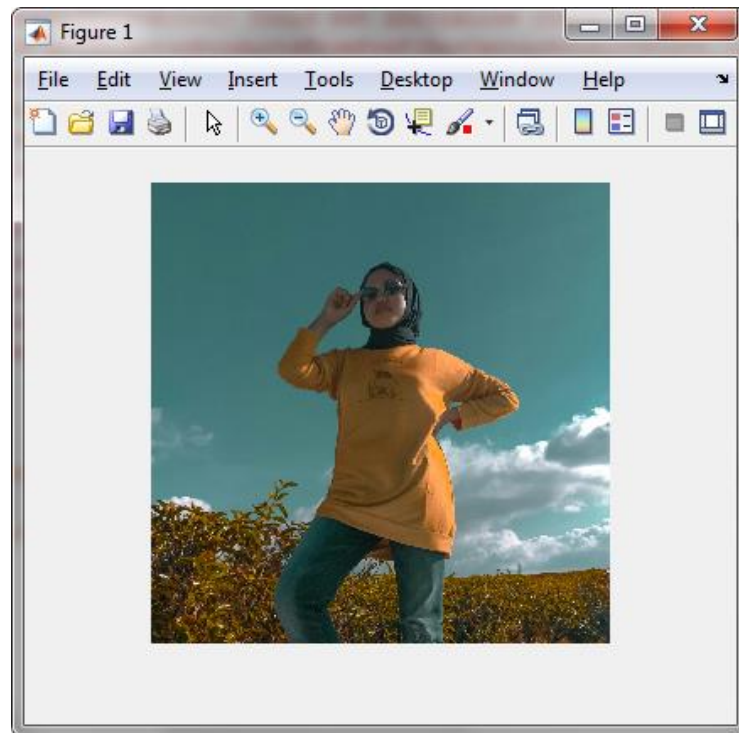
1. Tahap pertama tambahkan folder yang berisikan foto yang ingin anda ubah.  
Kemudian,



2. Tahap selanjutnya select gambar menggunakan perintah dibawah ini  
`a = imread('nama gambar');`

kemudian, tampilkan gambar menggunakan perintah `Figure()` ; `imshow ()`





3. Untuk mengubah citra menjadi warna keabuan dengan menggunakan perintah dibawah ini:

$$B = 0.4*a(:,1)+0.32*a(:,2)+0.28*a(:,3);$$

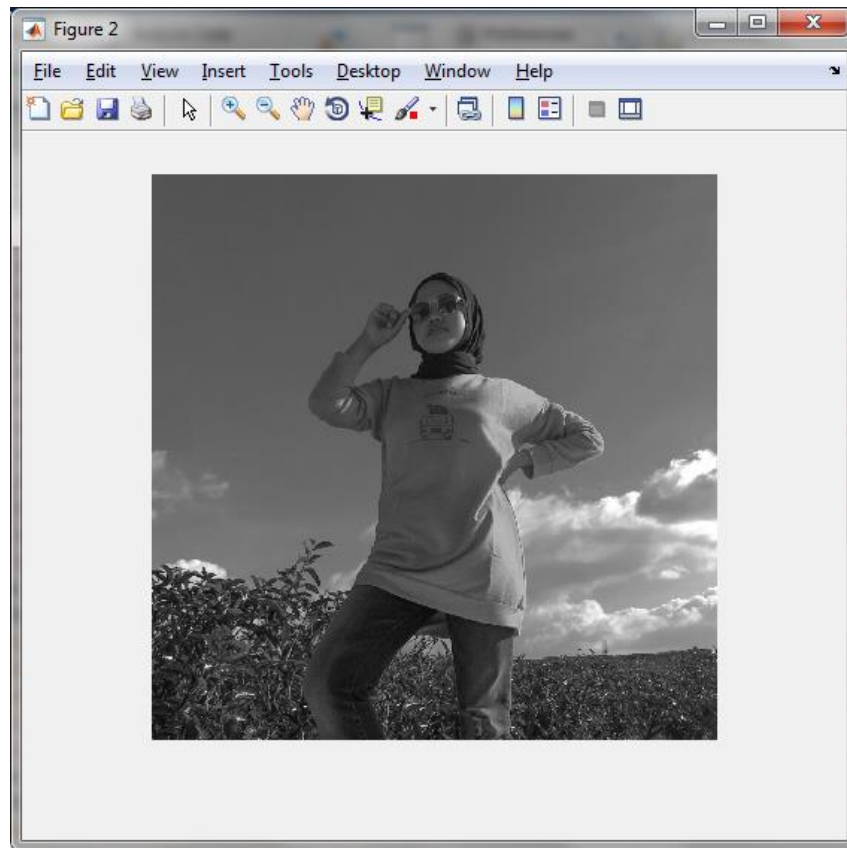
Kemudian, tampilkan gambar menggunakan perintah `figure () ; imshow ()`

```

Exception in thread "QueuedMatlabWorker" java.lang.NoClassDefFoundError: Could not initialize class com.mathworks.mlwidgets.
at com.mathworks.mlwidgets.help.DocCenterProductPrefs.getSelectedProductsFromPref(DocCenterProductPrefs.java:47)
at com.mathworks.mlwidgets.help.DocCenterProductPrefs.getProductFilterModel(DocCenterProductPrefs.java:33)
at com.mathworks.mlwidgets.help.DocCenterDocConfigParams.<init>(DocCenterDocConfigParams.java:37)
at com.mathworks.mlwidgets.help.DocCenterDocConfig.getLocalConfig(DocCenterDocConfig.java:77)
at com.mathworks.mlwidgets.help.DocCenterDocConfig.getInstance(DocCenterDocConfig.java:65)
at com.mathworks.mlwidgets.help.DocCenterReferenceRetrievalStrategy.getInstance(DocCenterReferenceRetrievalStrategy.java
at com.mathworks.mlwidgets.help.DocCenterReferenceRetrievalStrategy.createDataRetriever(DocCenterReferenceRetrievalStrat
at com.mathworks.mlwidgets.help.functioncall.MFunctionCall.getReferenceData(MFunctionCall.java:520)
at com.mathworks.mlwidgets.help.functioncall.MFunctionCall.getSignatureString(MFunctionCall.java:489)
at com.mathworks.mde.functionhints.QueuedMatlabWorker$2.run(QueuedMatlabWorker.java:233)
at java.lang.Thread.run(Unknown Source)

>> a = imread('thifal.jpg');
>> figure(1) ; imshow(a)
Warning: MATLAB has disabled some advanced graphics rendering features by switching to software OpenGL. For more
information, click here.
Warning: Image is too big to fit on screen; displaying at 17%
> In images.internal.initSize (line 71)
> In imshow (line 305)
>> b = 0.4*a(:,1)+0.32*a(:,2)+0.28*a(:,3);
>> figure(2) ; imshow(b)
Warning: Image is too big to fit on screen; displaying at 17%
> In images.internal.initSize (line 71)
> In imshow (line 305)
f1 >>

```



4. Mengubah Ke citra biner menggunakan perintah berikut  
 $c = \text{im2bw}(b, 0.5);$

Kemudian, tampilkan gambar menggunakan perintah `Figure()` ; `imshow()`

```

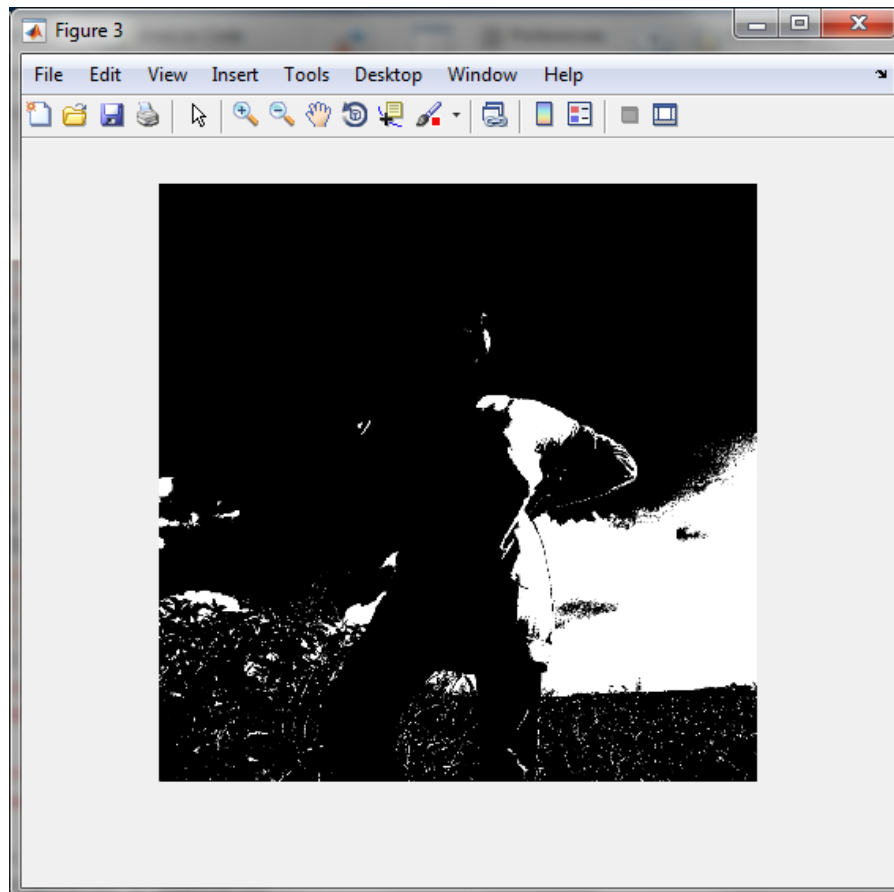
at com.mathworks.mlivegate.nsp.functioncall.mfunctioncall.createSignatureString(mfunctioncall.java:433)
at com.mathworks.mde.functionhints.QueuedMatlabWorker$2.run(QueuedMatlabWorker.java:283)
at java.lang.Thread.run(Unknown Source)

>> a = imread('thifai.jpg');
>> figure(1) ; imshow(a)
Warning: MATLAB has disabled some advanced graphics rendering features by switching to software OpenGL. For more
information, click here.
Warning: Image is too big to fit on screen; displaying at 17%
> In images.internal.initSize (line 71)
In imshow (line 305)
>> b = 0.4*a(:, :, 1)+0.32*a(:, :, 2)+0.28*a(:, :, 3);
>> figure(2) ; imshow(b)
Warning: Image is too big to fit on screen; displaying at 17%
> In images.internal.initSize (line 71)
In imshow (line 305)
>> c = im2bw(b, 0.5);
Error using im2bw>parse_inputs (line 107)
IM2BW: Input colormap has to be a 2D array with exactly 3 columns.

Error in im2bw (line 38)
[A,map,level] = parse_inputs(varargin{:});

>> c = im2bw(b, 0.5);
>> figure(3) ; imshow(c)
Warning: Image is too big to fit on screen; displaying at 17%
> In images.internal.initSize (line 71)
In imshow (line 305)
f1 >>
  
```

Name	Value
a	227x227x3 uint8
b	227x227x3 uint8
c	227x227 logical



5. Menambah brightness Menggunakan Perintah  $b + \text{Nilai Perubahan Brightness}$  ;

kemudian, tampilkan gambar menggunakan perintah `Figure()` ; `imshow ()`

```

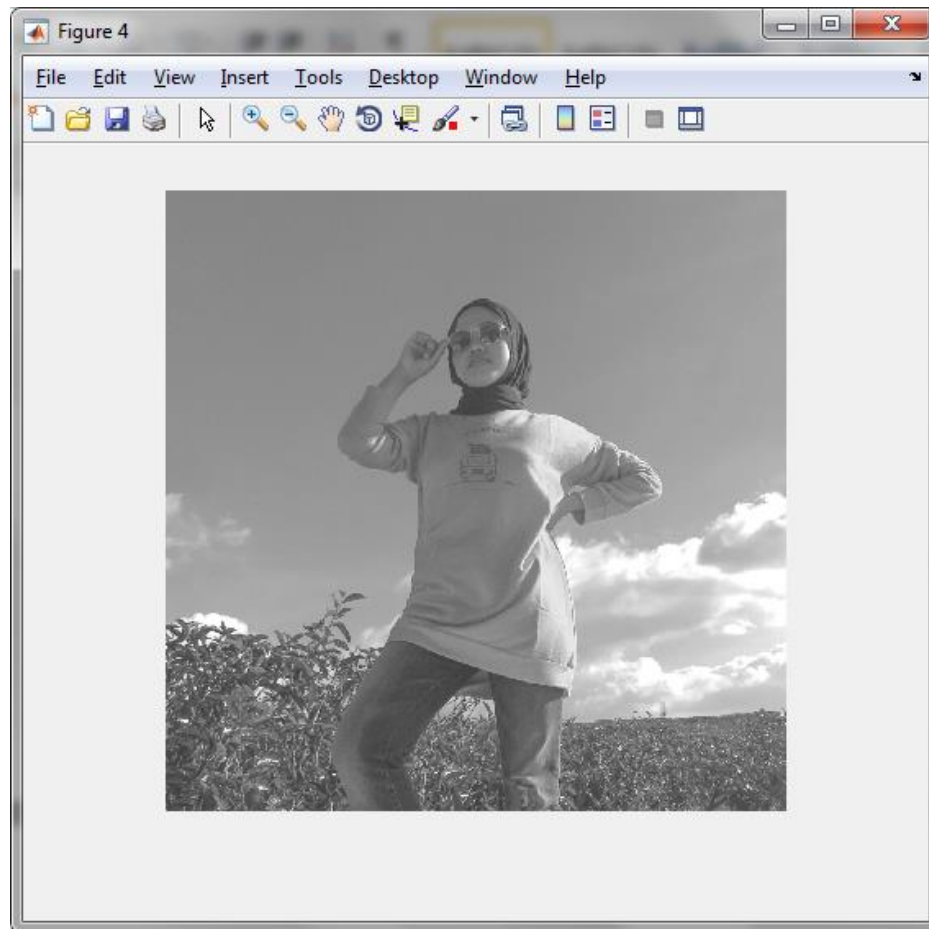
Warning: MATLAB has disabled some advanced graphics rendering features by switching to software OpenGL. For more
information, click here.
Warning: Image is too big to fit on screen; displaying at 17%
> In images.internal.initSize (line 71)
> In imshow (line 305)
>> b = 0.4*a(:,1)+0.32*a(:,2)+0.28*a(:,3);
>> figure(2); imshow(b)
Warning: Image is too big to fit on screen; displaying at 17%
> In images.internal.initSize (line 71)
> In imshow (line 305)
>> c = im2bw (b,0.5);
Error using im2bw>parse_inputs (line 107)
IM2BW: Input colormap has to be a 2D array with exactly 3 columns.

Error in im2bw (line 38)
[A,map,level] = parse_inputs(varargin{:});

>> c = im2bw (b,0.5);
>> figure(3); imshow(c)
Warning: Image is too big to fit on screen; displaying at 17%
> In images.internal.initSize (line 71)
> In imshow (line 305)
>> d = b + 50 ;
>> figure(4); imshow(d)
Warning: Image is too big to fit on screen; displaying at 17%
> In images.internal.initSize (line 71)
> In imshow (line 305)
f> >>

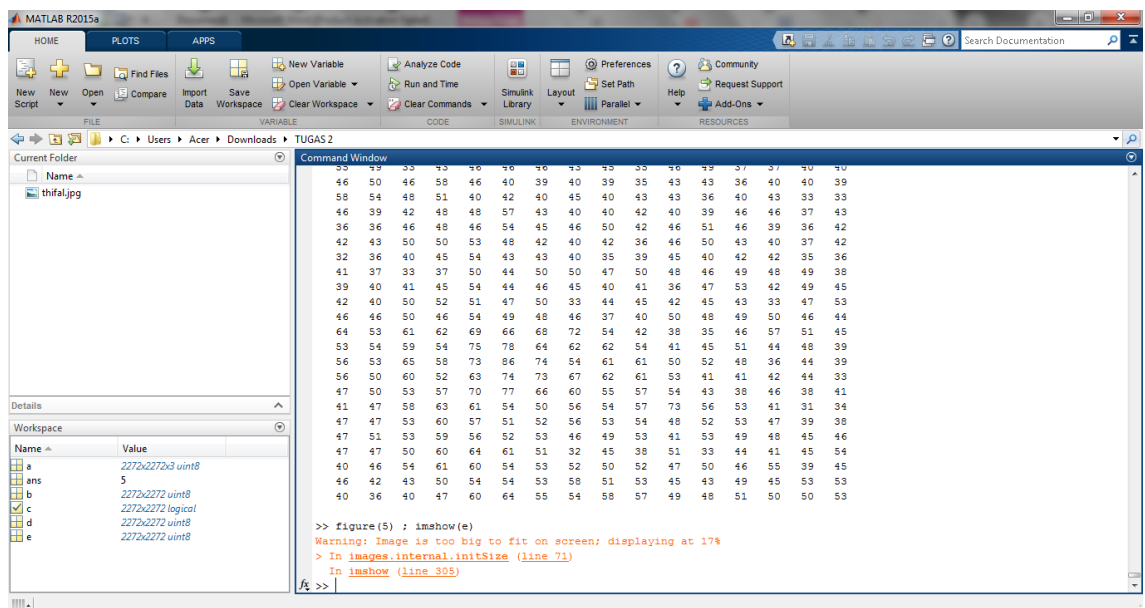
```

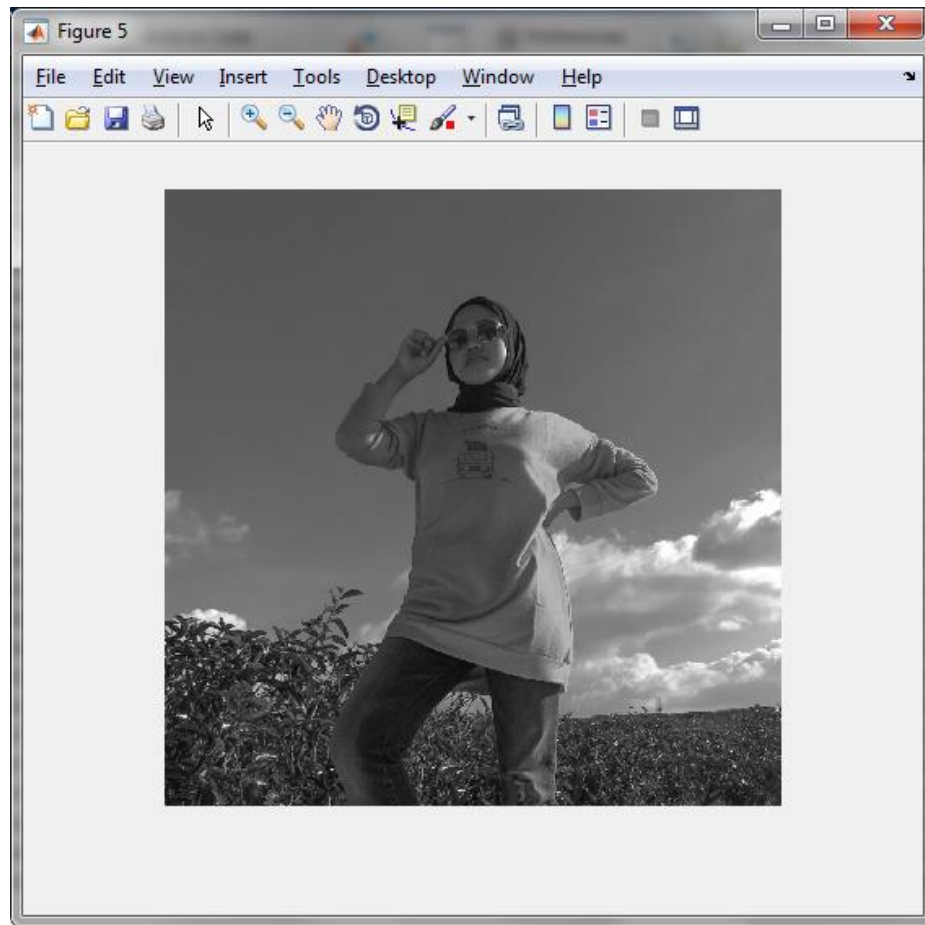
Name	Value
a	227x227x3 uint8
b	227x227x3 uint8
c	227x227x3 logical
d	227x227x3 uint8



6. Mengubah contrast menggunakan perintah berikut  
 $e = b * \text{nilai perubahan contrast};$

kemudian, tampilkan gambar menggunakan perintah `Figure()` ; `imshow ()`





Sekian, itulah tadi cara mengubah citra digital menggunakan matlab, mohon maaf jika banyak kesalahan. Terima kasih.