

Lab 10

CPS 563 – Data Visualization

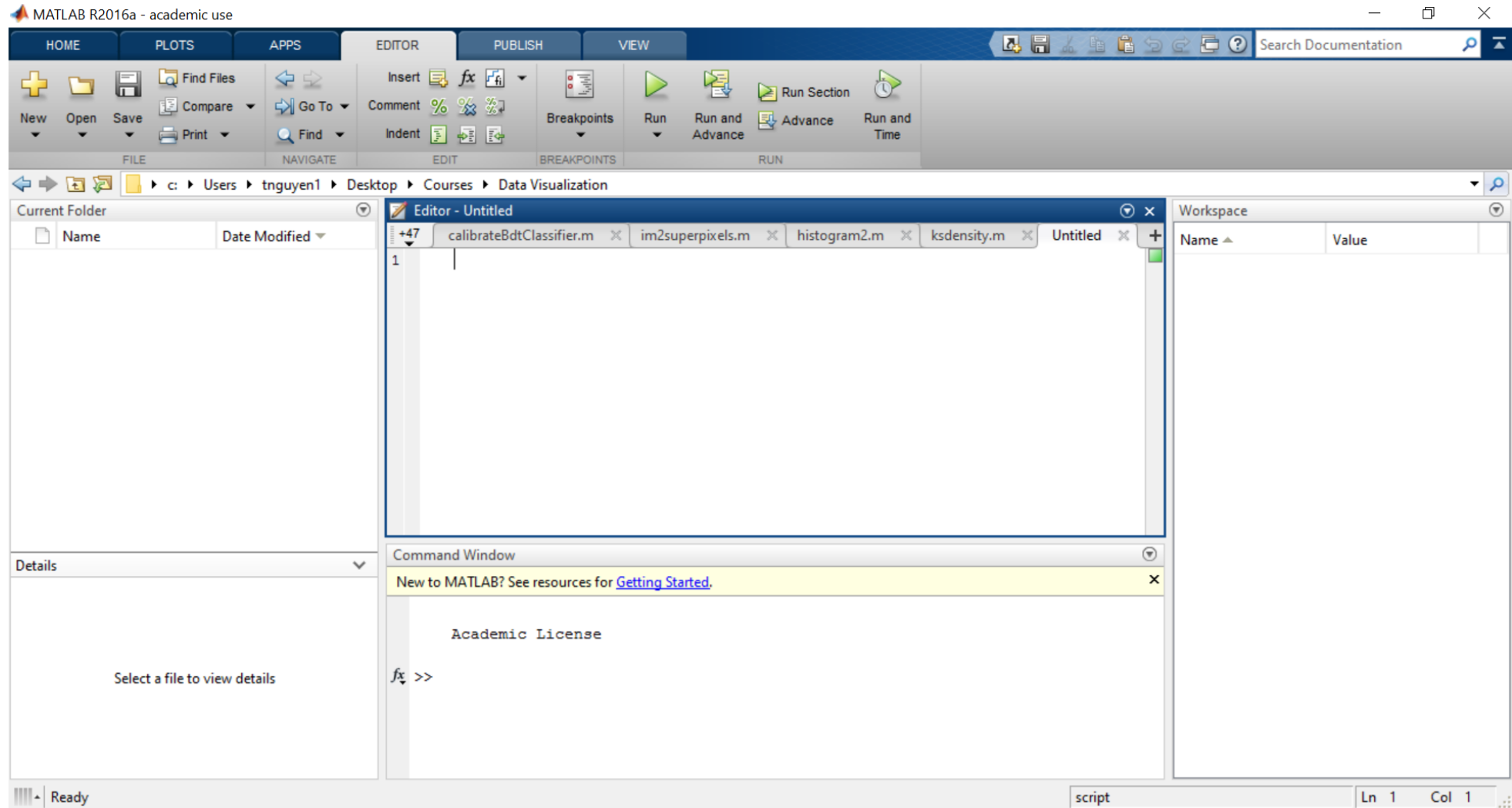
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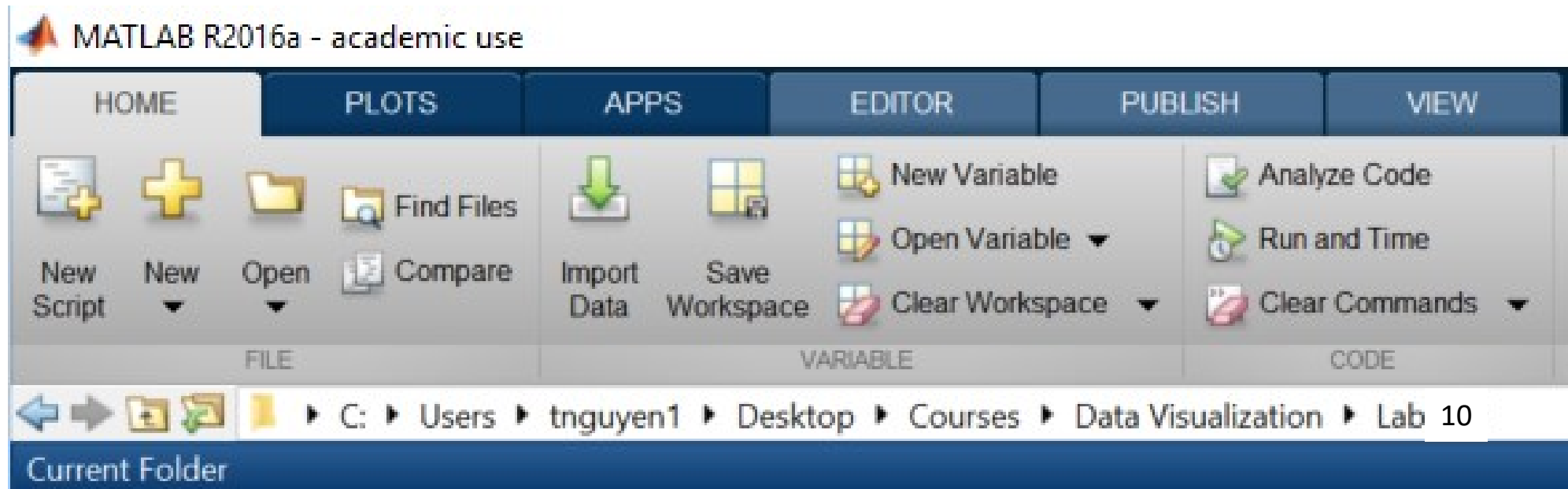
Outline

- Create average images

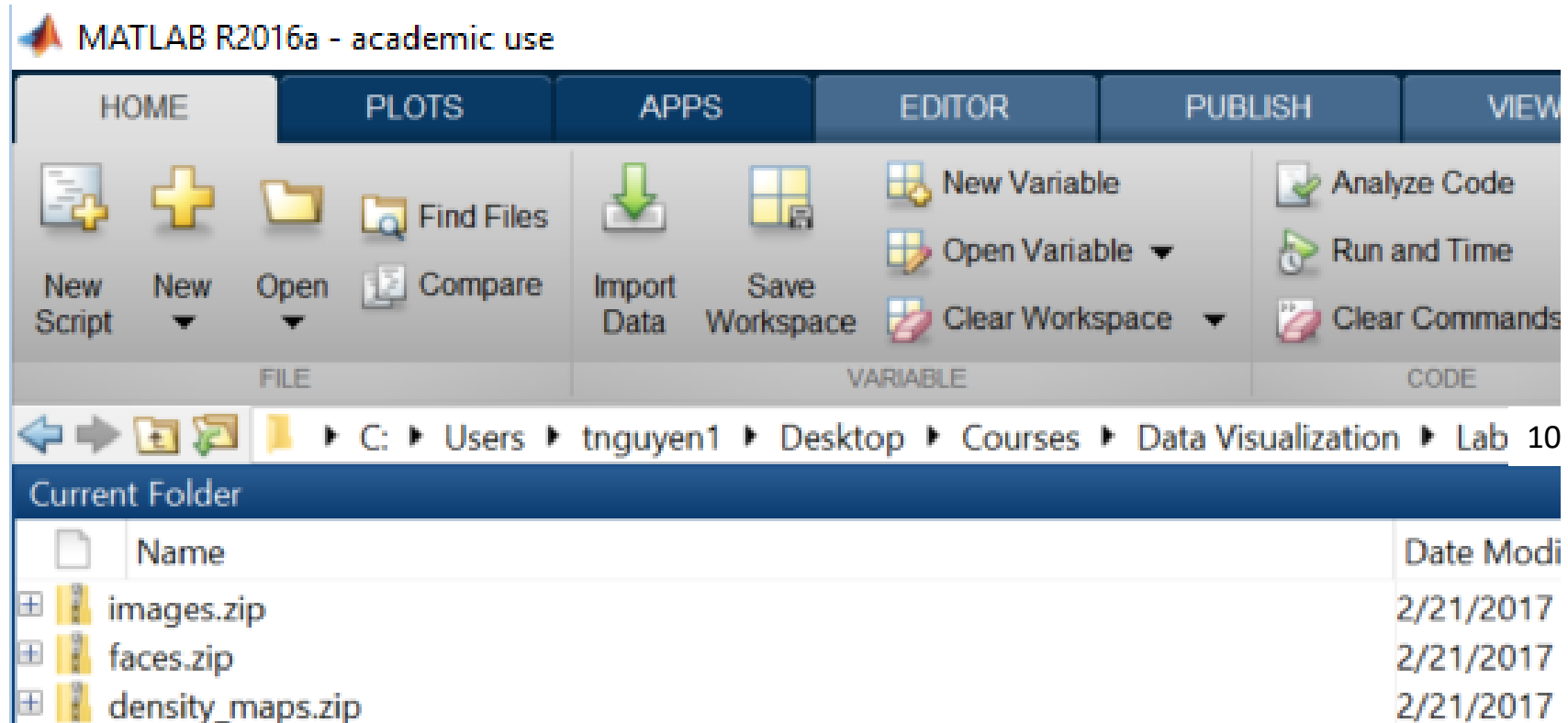
Start MATLAB



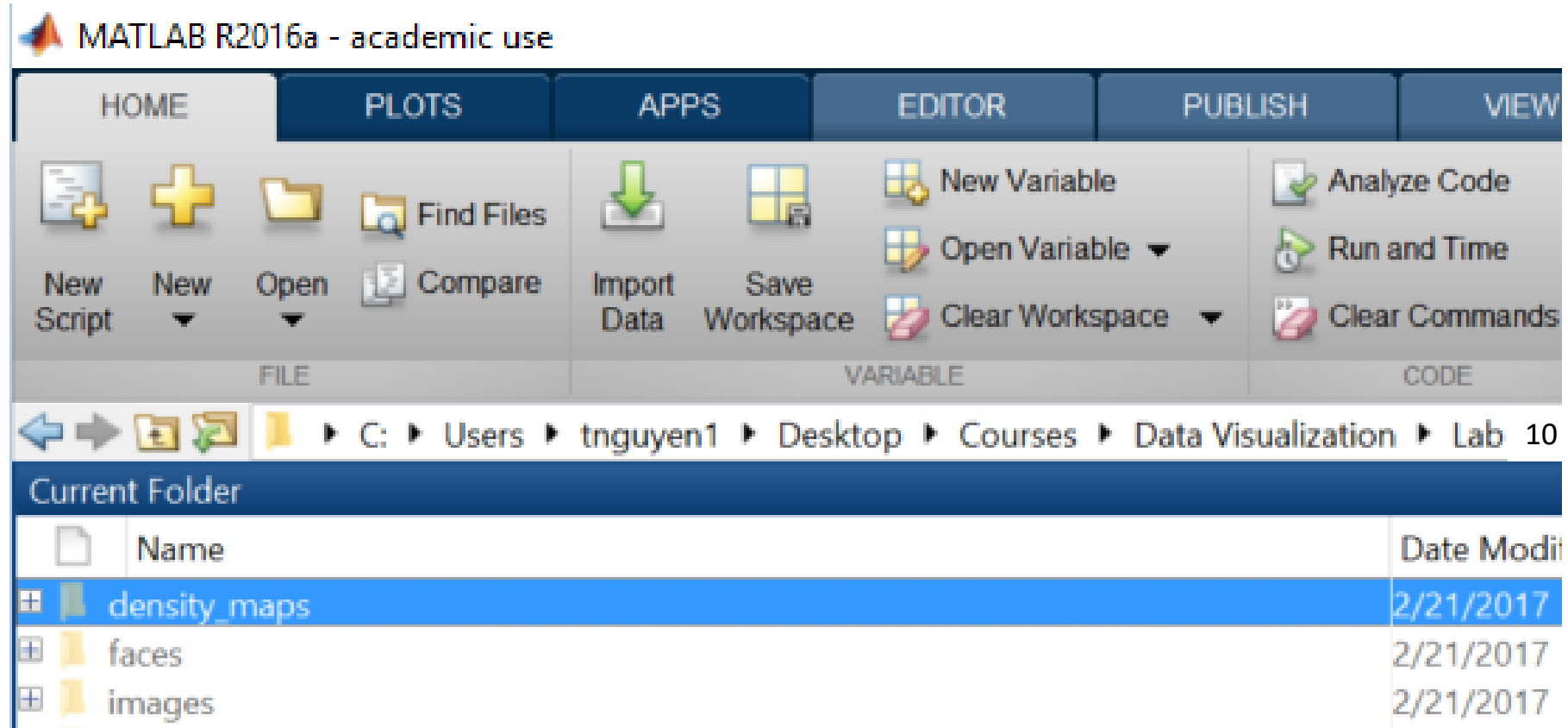
Create Lab 10 folder



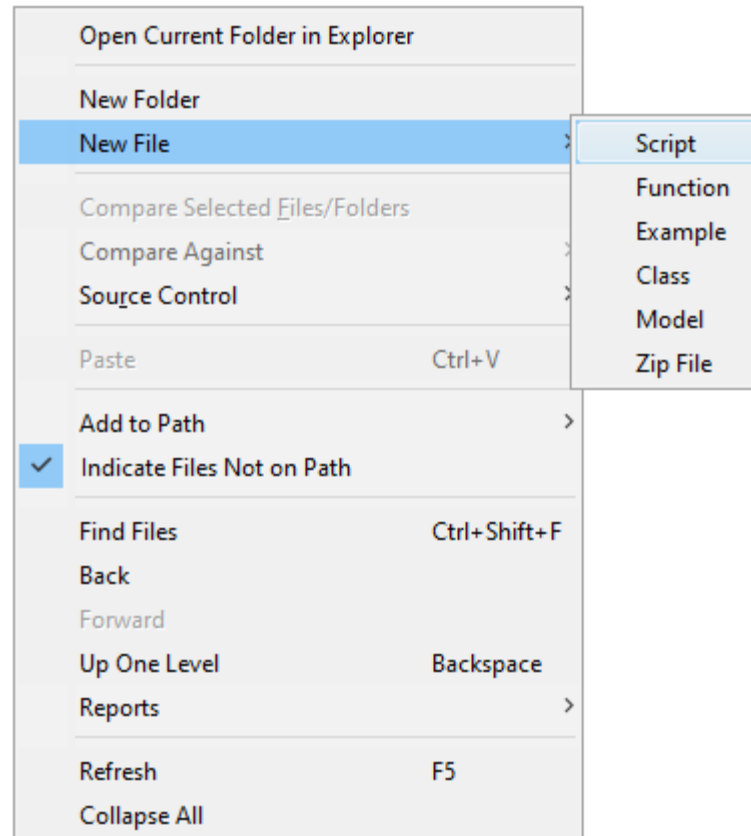
Copy faces.zip, density_maps.zip, images.zip
from isidore to Lab 10 folder



Unzip all 3 files to 3 folders: faces, density_maps, images



Create new script file: Lab10.m



Lab10.m

```
close all;  
clear all;  
clc;
```


Lab10.m

```
close all;
```

```
clear all;
```

```
clc;
```

```
sum_image = zeros(300,400);
```

Lab10.m

```
close all;  
clear all;  
clc;
```

```
sum_image = zeros(300,400);
```

```
for i = 1:120
```

```
    im = imread(['./density_maps/d' num2str(i) '.jpg']);
```

```
    im = imresize(im,[300,400]);
```

```
    sum_image = sum_image + double(im);
```

```
end
```

Lab10.m

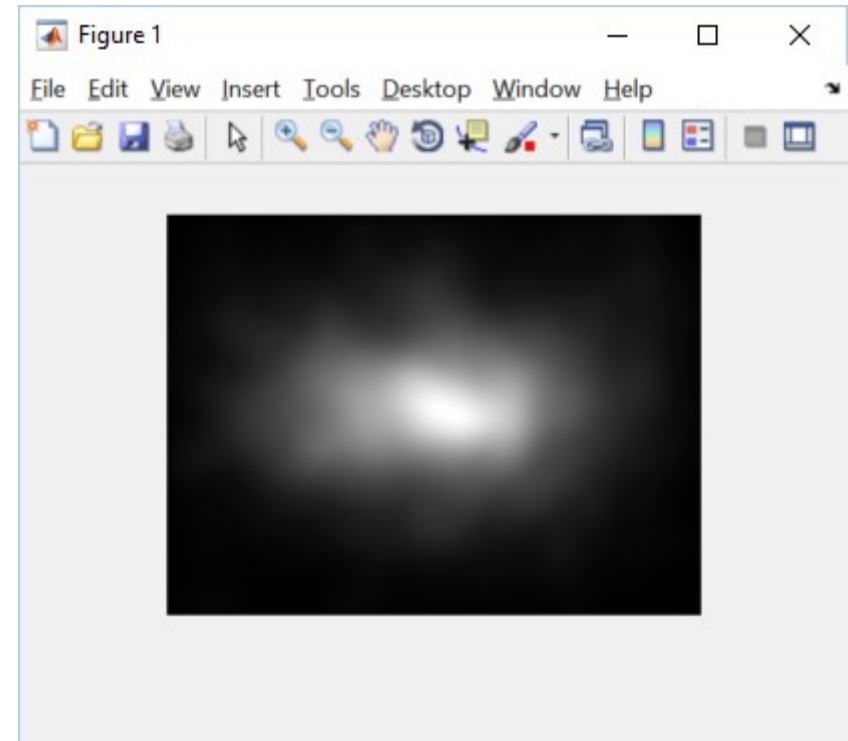
```
close all;  
clear all;  
clc;
```

```
sum_image = zeros(300,400);  
for i = 1:120  
    im = imread(['./density_maps/d' num2str(i) '.jpg']);  
    im = imresize(im,[300,400]);  
    sum_image = sum_image + double(im);  
end
```

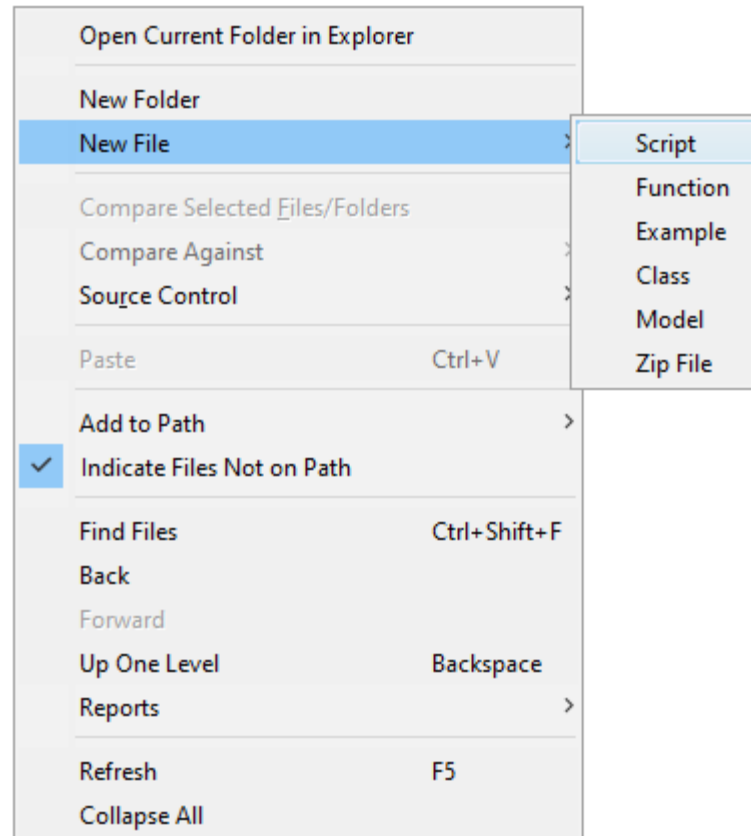
```
sum_image = sum_image/120;
```

Lab10.m

```
sum_image = zeros(300,400);  
for i = 1:120  
    im = imread(['./density_maps/d' num2str(i) '.jpg']);  
    im = imresize(im,[300,400]);  
    sum_image = sum_image + double(im);  
end  
  
sum_image = sum_image/120;  
figure,imshow(sum_image,[]);
```



Create new script file: Lab10b.m



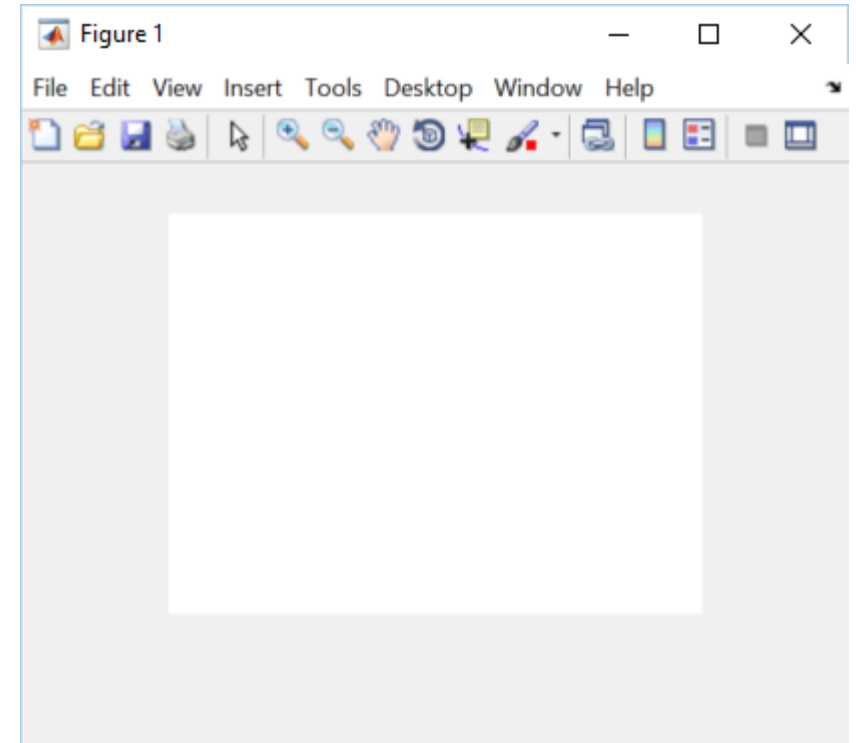
Lab10b.m

```
close all;  
clear all;  
clc;
```

Lab10b.m

```
close all;  
clear all;  
clc;
```

```
sum_image = zeros(300,400,3);  
for i = 1:120  
    im = imread(['./images/' num2str(i) '.jpg']);  
    im = imresize(im,[300,400]);  
    sum_image = sum_image + double(im);  
end  
  
sum_image = sum_image/120;  
figure,imshow(sum_image,[]);
```

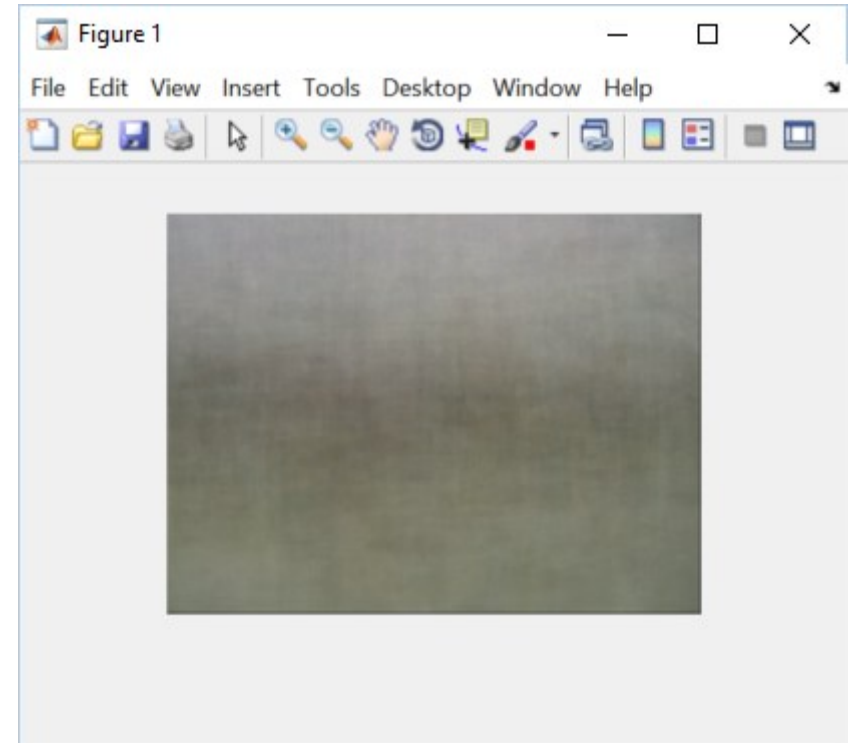


Lab10b.m

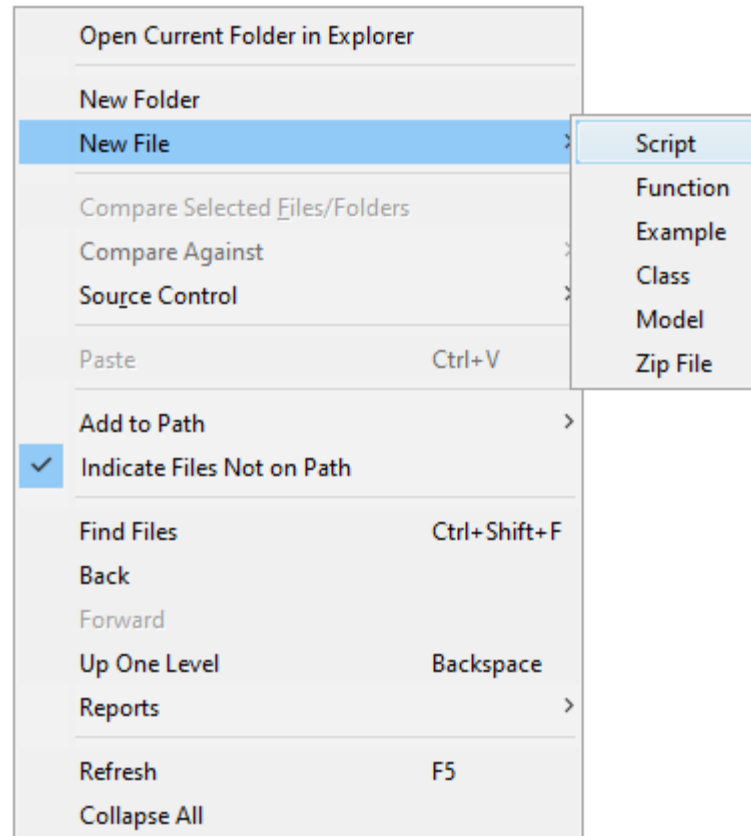
```
close all;  
clear all;  
clc;
```

```
sum_image = zeros(300,400,3);  
for i = 1:120  
    im = imread(['./images/' num2str(i) '.jpg']);  
    im = imresize(im,[300,400]);  
    sum_image = sum_image + double(im);  
end
```

```
sum_image = sum_image/(120*255);  
figure,imshow(sum_image,[]);
```



Create new script file: Lab10c.m



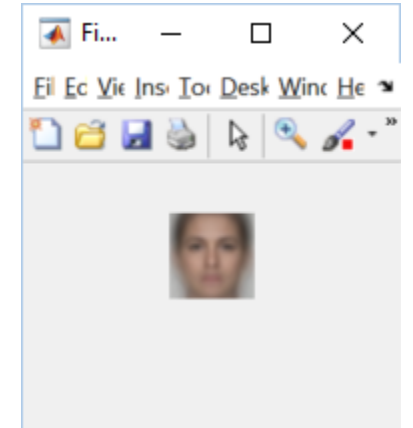
Lab10c.m

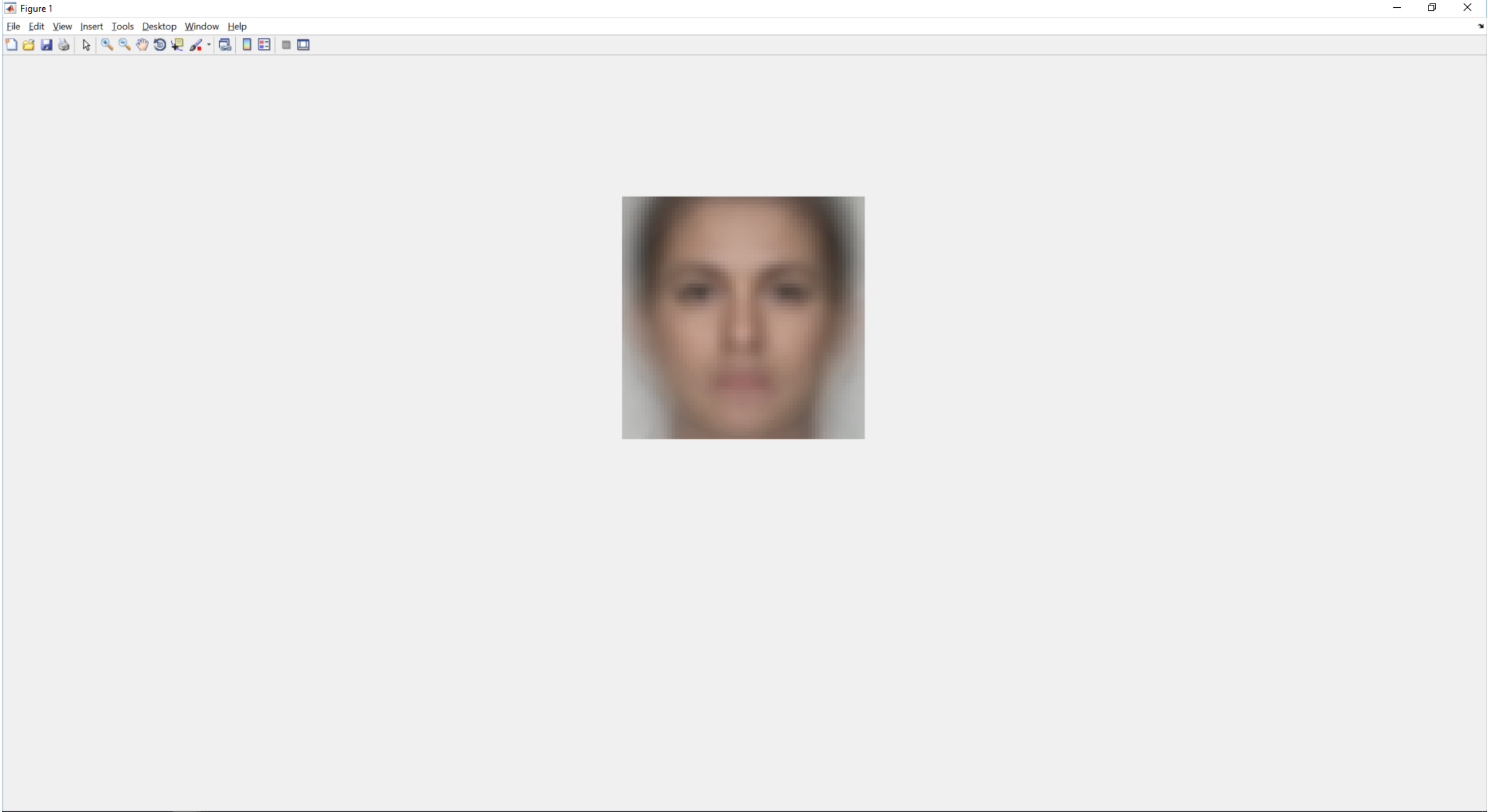
```
close all;  
clear all;  
clc;
```

Lab10c.m

```
close all;  
clear all;  
clc;
```

```
sum_image = zeros(64,64,3);  
for i = 1:135  
    im = imread(['./faces/face' num2str(i) '.png']);  
    im = imresize(im,[64,64]);  
    sum_image = sum_image + double(im);  
end  
  
sum_image = sum_image/(135*255);  
figure,imshow(sum_image,[]);
```

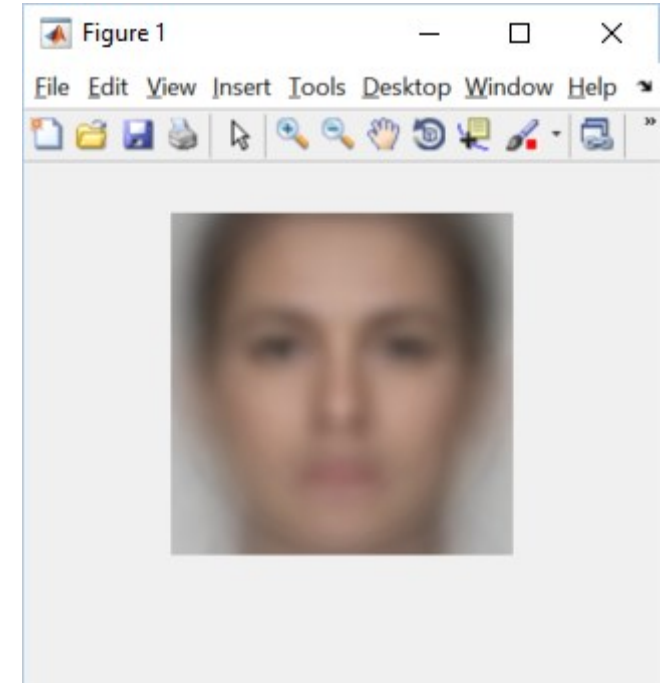


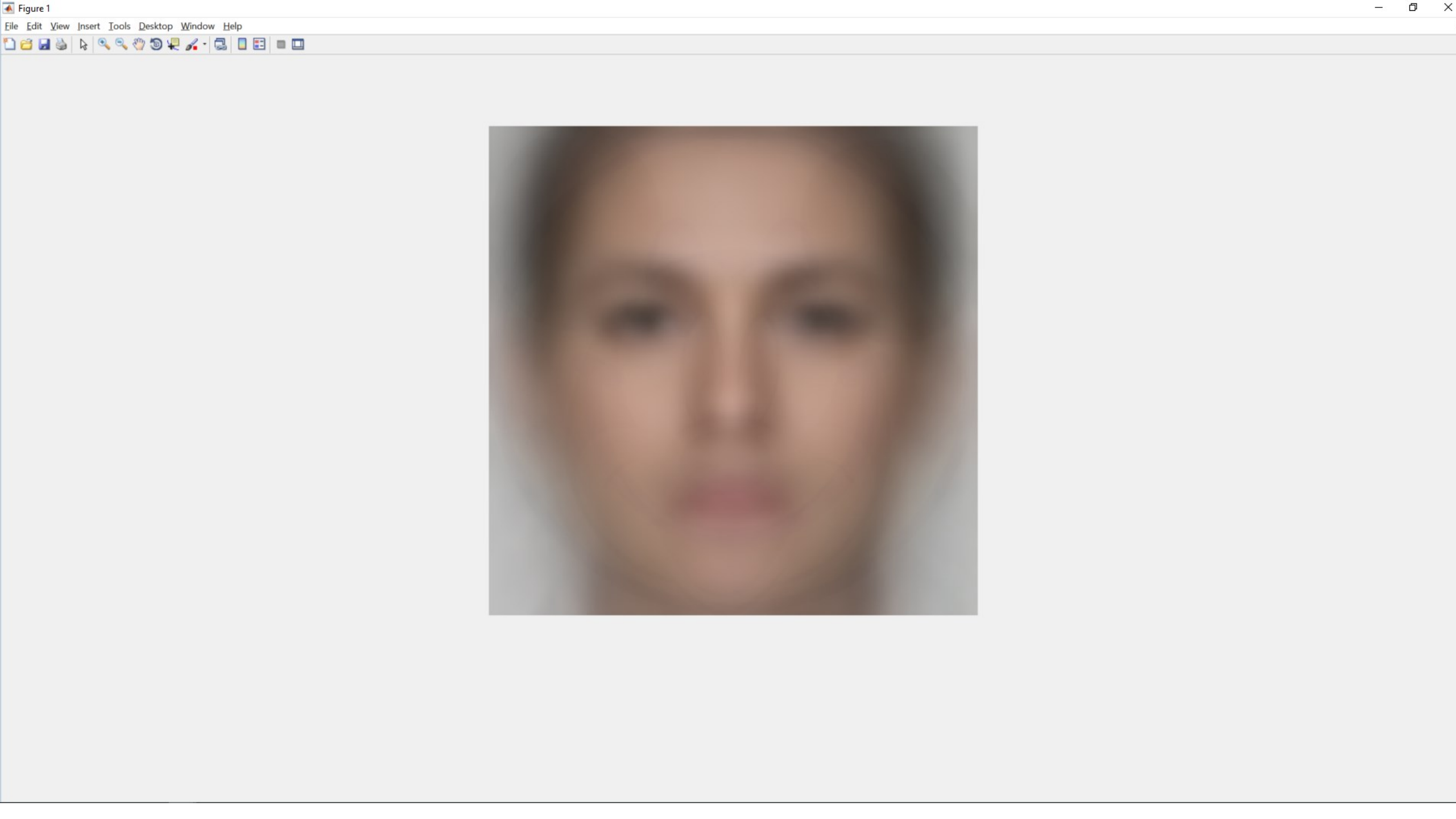


Lab10c.m

```
close all;  
clear all;  
clc;
```

```
sum_image = zeros(256,256,3);  
for i = 1:135  
    im = imread(['./faces/face' num2str(i) '.png']);  
    im = imresize(im,[256,256]);  
    sum_image = sum_image + double(im);  
end  
  
sum_image = sum_image/(135*255);  
figure,imshow(sum_image,[]);
```



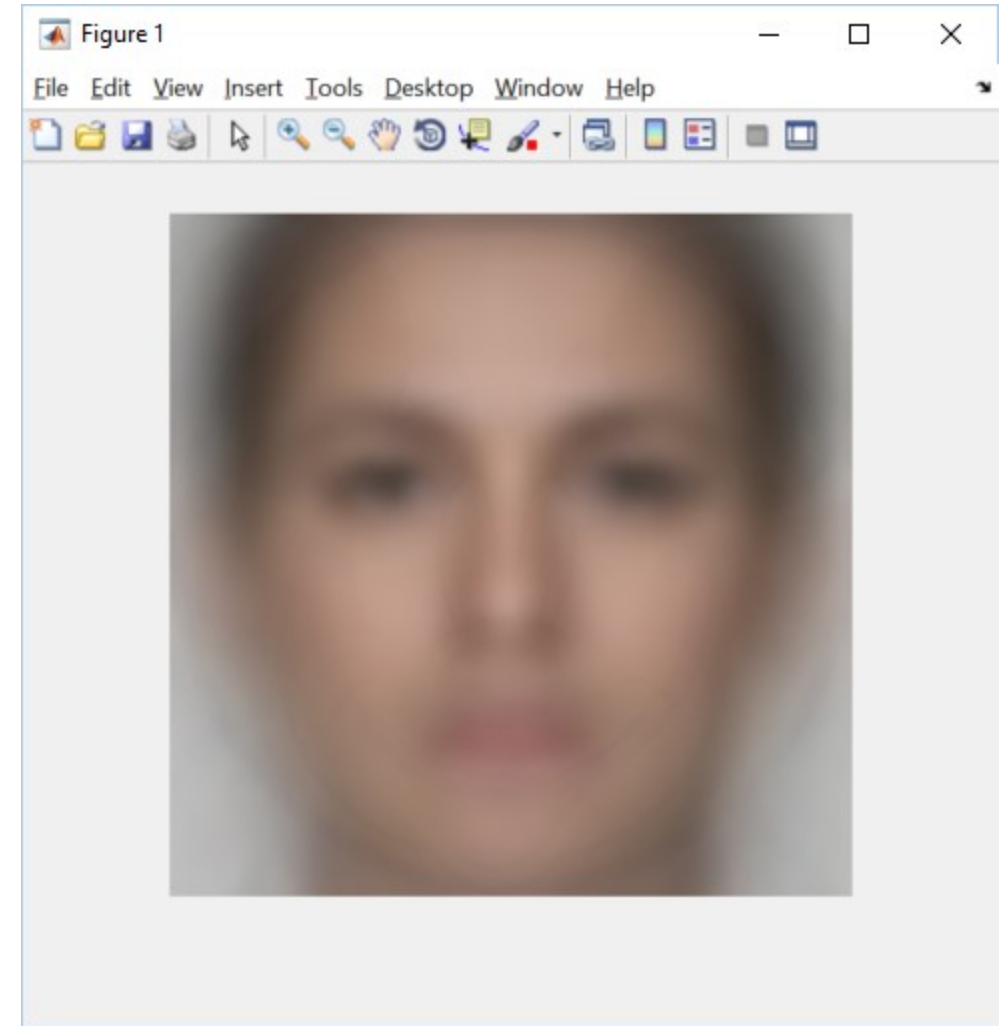


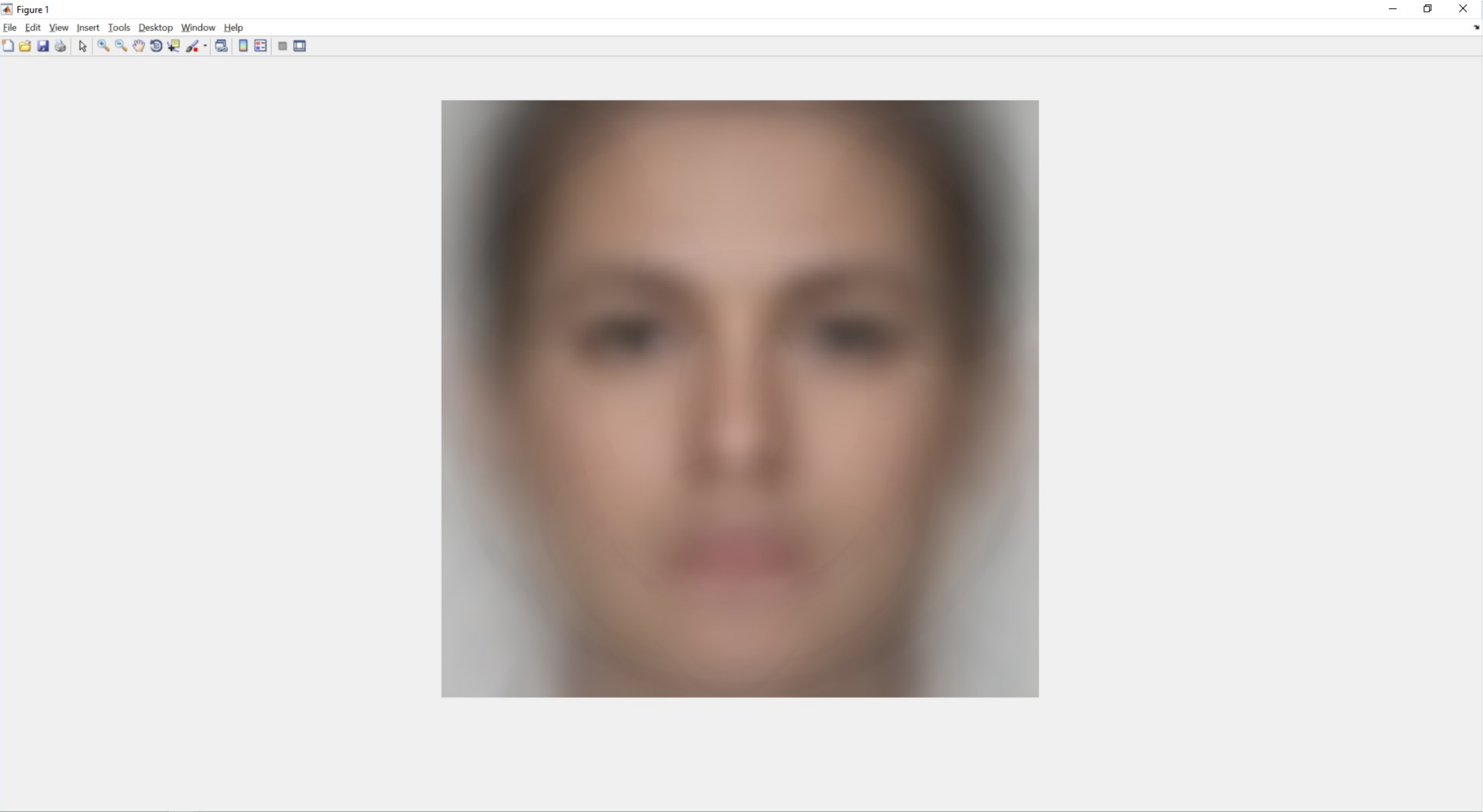
Lab10c.m

```
close all;  
clear all;  
clc;
```

```
sum_image = zeros(512,512,3);  
for i = 1:135  
    im = imread(['./faces/face' num2str(i) '.png']);  
    im = imresize(im,[512,512]);  
    sum_image = sum_image + double(im);  
end
```

```
sum_image = sum_image/(135*255);  
figure,imshow(sum_image,[]);
```



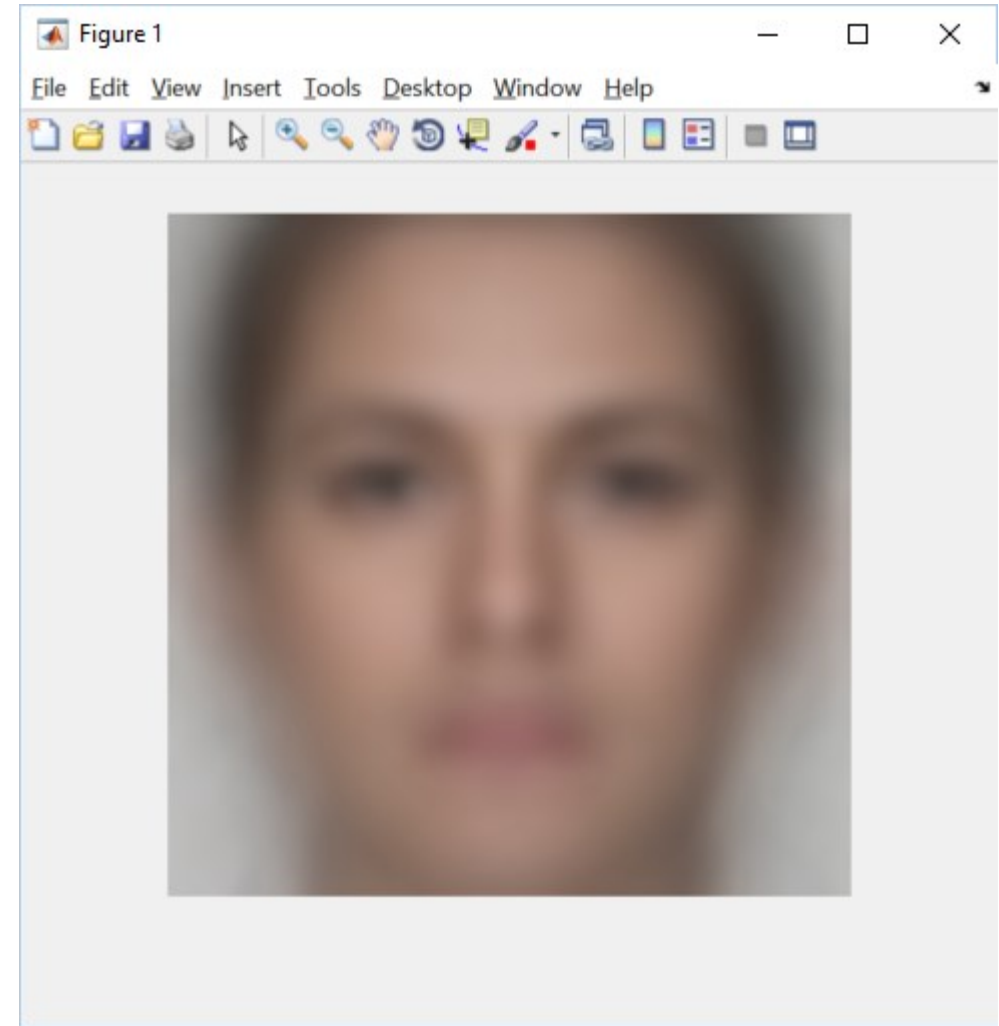


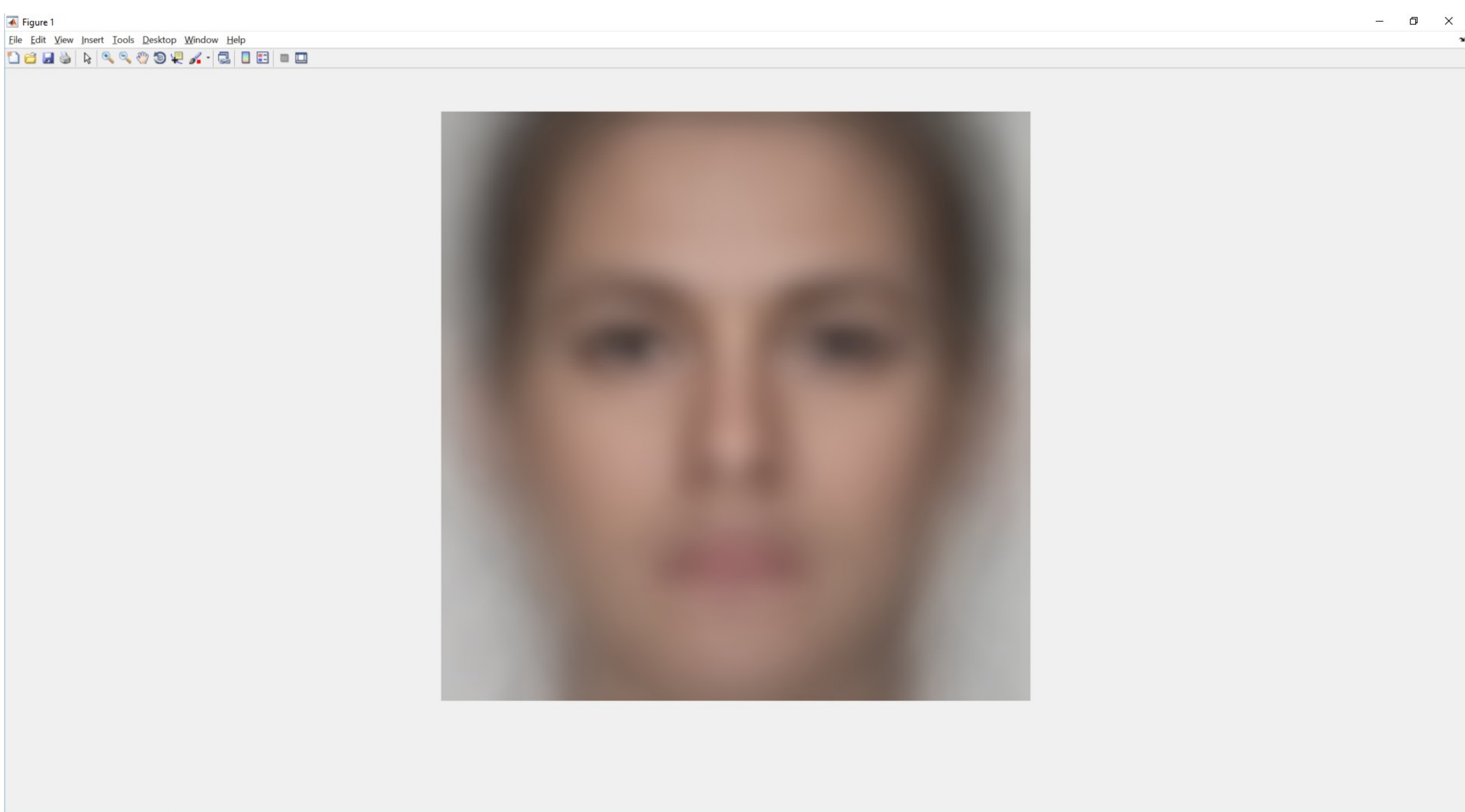
Lab10c.m

```
close all;  
clear all;  
clc;
```

```
sum_image = zeros(512,512,3);  
for i = 1:132  
    im = imread(['./faces/face' num2str(i) '.png']);  
    im = imresize(im,[512,512]);  
    sum_image = sum_image + double(im);  
end
```

```
sum_image = sum_image/(132*255);  
figure,imshow(sum_image,[]);
```





Q&A