Homework #3 Report

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Part 1 – 5 Fundamental matrices F(0)

10 points for each pair of images selected manually:

Image 1:

Image 1		Image 2	
356	412	375	410
223	165	258	165
152	355	185	356
46	390	89	392
517	428	530	429
140	470	173	470
850	502	857	505
361	276	384	280
495	62	507	64
962	534	992	540

Image 2:

Image 1		Image 2	
349	138	387	137
382	265	410	264
526	234	554	234
184	254	212	253
74	536	73	537
684	377	707	376
604	440	627	440
65	197	98	197
532	166	567	166
310	8	333	9

Image 3:

Image 1		Image 2	
34	101	22	102
48	26	20	25
139	4	113	3
233	64	213	66
21	169	11	172
62	327	57	331
177	304	173	304
239	187	229	188
123	189	120	188

237	136	226	137

Image 4:

Image 1		Image 2	
239	98	233	97
108	201	113	199
279	160	278	158
151	157	151	155
36	11	33	11
96	36	97	36
241	44	234	44
291	48	282	48
54	82	50	82
61	73	55	72

Image 5:

Image 1		Image 2	
386	113	351	112
152	189	117	190
66	56	30	56
78	126	42	126
113	180	78	182
278	64	243	63
171	27	136	27
312	131	278	131
205	155	200	153
254	193	237	193

5 Fundamental Matrices:

Image 1:

F_man_img{1, 1}

1	2	3	4
-9.5836e-07	3.1394e-05	-0.0167	
-2.8022e-05	1.9474e-06	0.0203	
0.0157	-0.0234	0.9993	

ommand Window

ew to MATLAB? See resources for Getting Started.

```
>> F_man_img{1,1}

ans =

   -0.0000    0.0000   -0.0167
   -0.0000    0.0000    0.0203
    0.0157   -0.0234    0.9993
```

Image 2:

F_man_img{1, 2}

1	2	3	4
7.8759e-06	9.2598e-04	-0.1090	
-9.7570e-04	6.3823e-05	-0.5475	
0.1154	0.5156	0.7044	

ommand Window

ew to MATLAB? See resources for Getting Start

```
>> F_man_img{1,2}

ans =

    0.0000    0.0009   -0.1090
   -0.0010    0.0001   -0.5475
    0.1154    0.5156    0.7044
```

Image 3:

F_man_img{1, 3}

1	2	3	4
-5.0298e-07	4.1777e-04	-0.0396	
-3.4159e-04	-3.2811e-05	0.6176	
0.0329	-0.6167	0.6178	

ommand Window

ew to MATLAB? See resources for Getting Start

```
>> F_man_img{1,3}

ans =

   -0.0000    0.0004   -0.0396
   -0.0003   -0.0000    0.6176
    0.0329   -0.6167    0.6178
```

Image 4:

F_man_img{1, 4}

1	2	3	4
2.9962e-06	-0.0032	0.1320	
0.0032	2.3061e-04	0.1909	
-0.1332	-0.2244	0.9390	

ommand Window

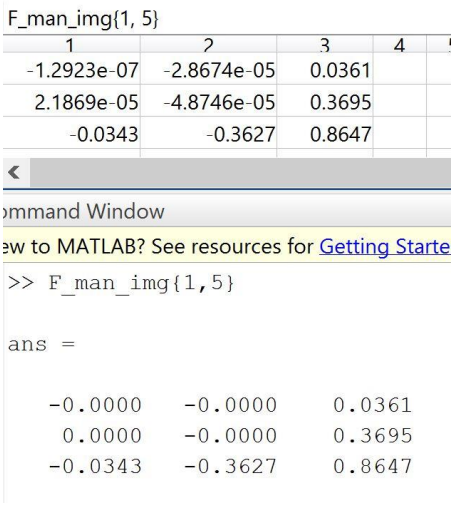
lew to MATLAB? See resources for Getting Start

```
>> F_man_img{1,4}

ans =

    0.0000   -0.0032    0.1320
    0.0032    0.0002    0.1909
   -0.1332   -0.2244    0.9390
```

Image 5:



Part 2 – 5 Fundamental Matrices F

Image 1:

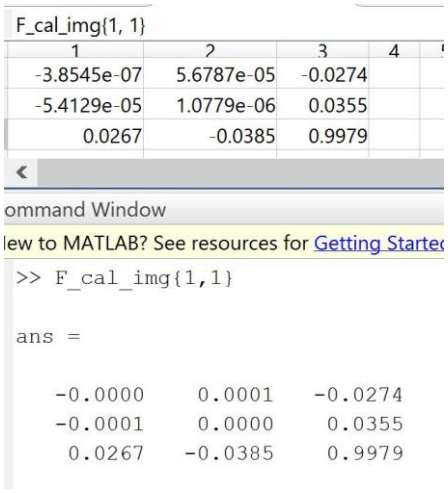


Image 2:

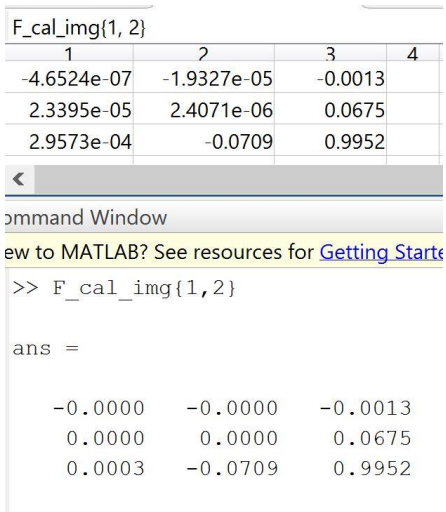


Image 3:

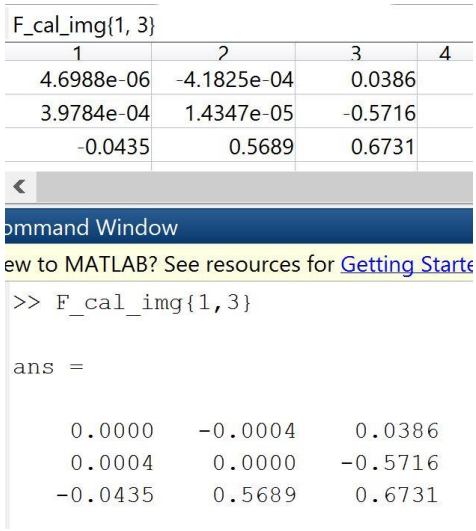


Image 4:

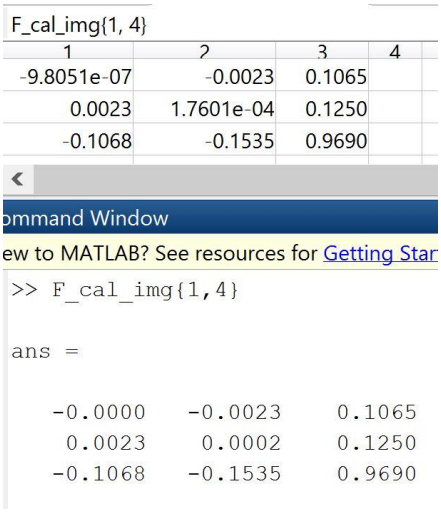
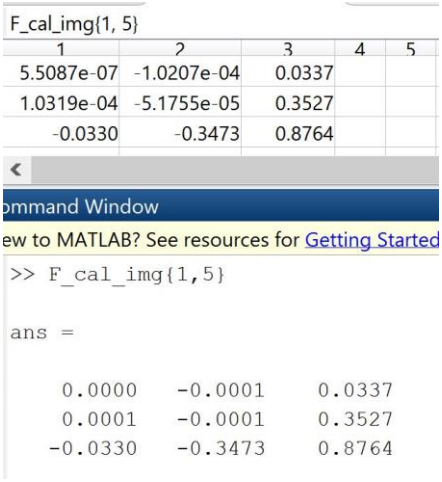


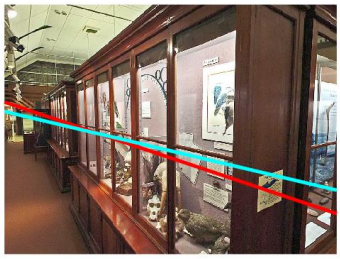
Image 5:



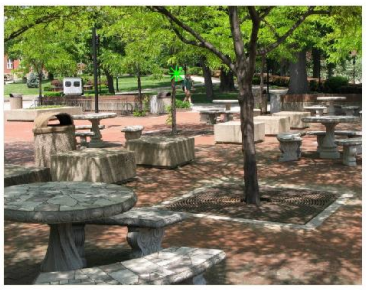
Part 3 – 25 Figures with captions:

Step 3:

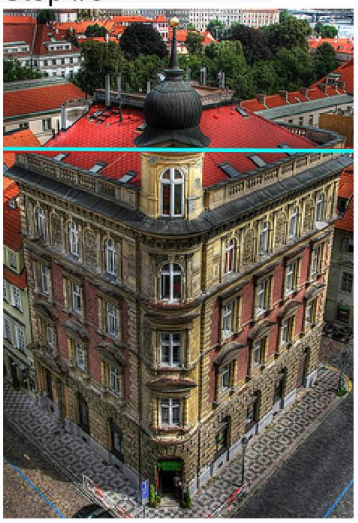
Result Images for Step #3



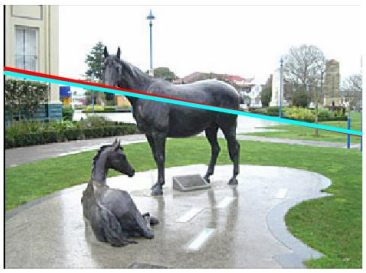
Result Images for Step #3



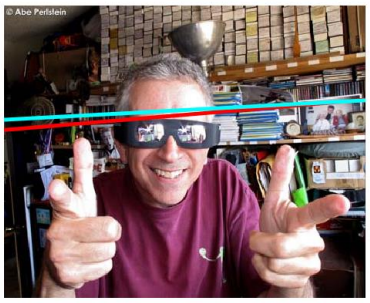
Result Images for Step #3



Result Images for Step #3

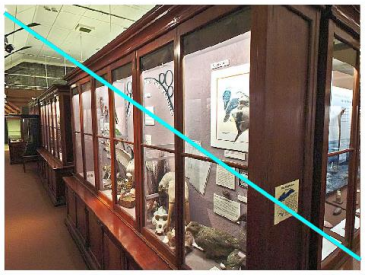


Result Images for Step #3

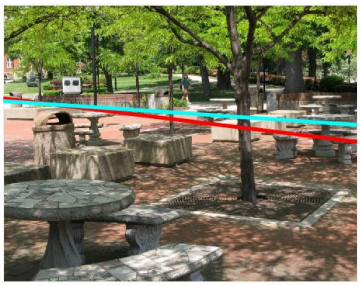


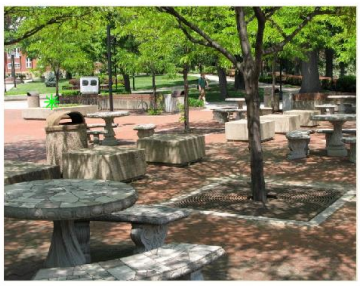
Step 4:

Result Images for Step #4

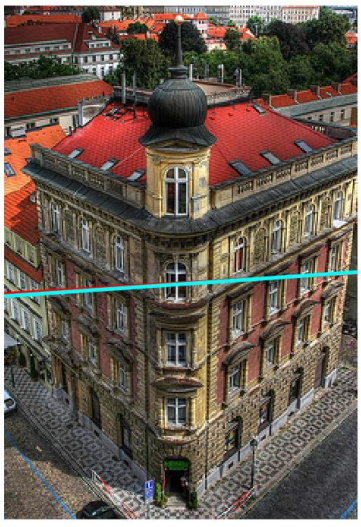


Result Images for Step #4





Result Images for Step #4



Result Images for Step #4

Result Images for Step #4

Step 5:

Calculated Coordinates:

Image 1-1				Image 1-2			
F(0)		F'		F(0)		F'	
764.8273	556.8592	561.3375	399.1108	710.8581	536.037	569.3432	398.3307
Image 2-1				Image 2-2			
F(0)		F'		F(0)		F'	
-553.1	122.4494	-564.68	113.7429	-564.68	113.7429	-389.675	74.77243
Image 3-1				Image 3-2			
F(0)		F'		F(0)		F'	
1798.84	97.04065	1143.148	170.3784	1483.496	94.19981	1011.638	169.0015
Image 4-1				Image 4-2			
F(0)		F'		F(0)		F'	
-63.1276	41.65045	-37.1038	58.19529	-67.8517	42.00218	-38.1897	58.60902
Image 5-1				Image 5-2			
F(0)		F'		F(0)		F'	
-13952	1321.283	-144542	12768.49	-15161.3	1478.145	18710.45	-1579.6

Image 1:

Result Images for Step #5

Image 2:

Result Images for Step #5

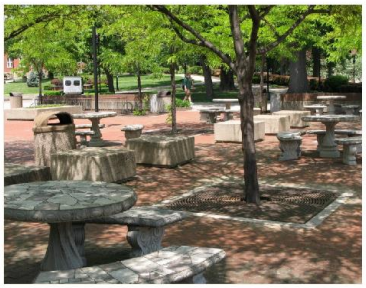


Image 3:

Result Images for Step #5

Image 4:

Result Images for Step #5

Image 5:

Result Images for Step #5

Part 4 – Printout of Software:

Matlab