

CS540: HW3 (P2)

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March 7th, 2016

(a)

	BOS	NY	DC	PIT	CHI	SEA	SF	LA	HOU
BOS	0	206	429	572	963	2976	3095	2979	1849
NY		0	233	372	802	2815	2934	2786	1628
DC			0	242	671	2684	2799	2631	1408
PIT				0	461	2529	2576	2427	1336
CHI					0	2013	2142	2054	1082
SEA						0	808	1131	2314
SF							0	379	1927
LA								0	1547
HOU									0

Merging BOS with NY (shortest distance at 206 miles):

	BOS/NY	DC	PIT	CHI	SEA	SF	LA	HOU
BOS/NY	0	233	372	802	2815	2934	2786	1628
DC		0	242	671	2684	2799	2631	1408
PIT			0	461	2529	2576	2427	1336
CHI				0	2013	2142	2054	1082
SEA					0	808	1131	2314
SF						0	379	1927
LA							0	1547
HOU								0

Merging BOS/NY with DC (shortest distance at 233 miles):

	BOS/NY/DC	PIT	CHI	SEA	SF	LA	HOU
BOS/NY/DC	0	242	671	2684	2799	2631	1408
PIT		0	461	2529	2576	2427	1336
CHI			0	2013	2142	2054	1082
SEA				0	808	1131	2314
SF					0	379	1927
LA						0	1547
HOU							0

Merging BOS/NY/DC with PIT (shortest distance at 242 miles):

	BOS/NY/DC/PIT	CHI	SEA	SF	LA	HOU
BOS/NY/DC/PIT	0	461	2529	2576	2427	1336
CHI		0	2013	2142	2054	1082

SEA	0	808	1131	2314
SF		0	379	1927
LA			0	1547
HOU				0

Merging SF with LA (shortest distance at 379 miles):

	BOS/NY/DC/PIT	CHI	SEA	SF/LA	HOU
BOS/NY/DC/PIT	0	461	2529	2427	1336
CHI		0	2013	2054	1082
SEA			0	808	2314
SF/LA				0	1547
HOU					0

Merging BOS/NY/DC/PIT with CHI (shortest distance at 461 miles):

	BOS/NY/DC/PIT/CHI	SEA	SF/LA	HOU
BOS/NY/DC/PIT/CHI	0	2013	2054	1082
SEA		0	808	2314
SF/LA			0	1547
HOU				0

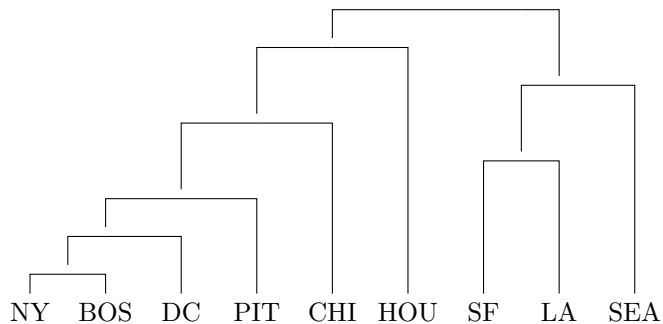
Merging SEA with SF/LA (shortest distance at 808 miles):

	BOS/NY/DC/PIT/CHI	SEA/SF/LA	HOU
BOS/NY/DC/PIT/CHI	0	2013	1082
SEA/SF/LA		0	1547
HOU			0

Merging BOS/NY/DC/PIT/CHI with HOU (shortest distance at 1082 miles):

	BOS/NY/DC/PIT/CHI/HOU	SEA/SF/LA
BOS/NY/DC/PIT/CHI/HOU	0	1547
SEA/SF/LA		0

(b) The dendrogram produced is shown below:



- (c) The three clusters would contain:
 - (i) NY/BOS/DC/PIT/CHI
 - (ii) HOU
 - (iii) SF/LA/SEA