age	sex	ср	trestb	ps chol	fbs	restecg	thalac	ch exang	
	63	1	3	145	233	1	0	150	0
	37	1	2	130	250	0	1	187	0
	41	0	1	130	204	0	0	172	0
	56	1	1	120	236	0	1	178	0
	57	0	0	120	354	0	1	163	1
	57	1	0	140	192	0	1	148	0
	56	0	1	140	294	0	0	153	0
	44	1	1	120	263	0	1	173	0
	52	1	2	172	199	1	1	162	0
	57	1	2	150	168	0	1	174	0
	54	1	0	140	239	0	1	160	0
	48	0	2	130	275	0	1	139	0
	49	1	1	130	266	0	1	171	0
	64	1	3	110	211	0	0	144	1
	58	0	3	150	283	1	0	162	0
	50	0	2	120	219	0	1	158	0
	58	0	2	120	340	0	1	172	0
	66	0	3	150	226	0	1	114	0
	43	1	0	150	247	0	1	171	0
	69	0	3	140	239	0	1	151	0
	59	1	0	135	234	0	1	161	0
	44	1	2	130	233	0	1	179	1
	42	1	0	140	226	0	1	178	0
	61	1	2	150	243	1	1	137	1
	40	1	3	140	199	0	1	178	1
	71	0	1	160	302	0	1	162	0
	59	1	2	150	212	1	1	157	0
	51	1	2	110	175	0	1	123	0
	65	0	2	140	417	1	0	157	0
	53	1	2	130	197	1	0	152	0
	41	0	1	105	198	0	1	168	0
	65	1	0	120	177	0	1	140	0
	44	1	1	130	219	0	0	188	0
	54	1	2	125	273	0	0	152	0
	51	1	3	125	213	0	0	125	1
	46	0	2	142	177	0	0	160	1
	54	0	2	135	304	1	1	170	0
	54	1	2	150	232	0	0	165	0
	65	0	2	155	269	0	1	148	0
	65	0	2	160	360	0	0	151	0
	51	0	2	140	308	0	0	142	0
	48	1	1	130	245	0	0	180	0
	45	1	0	104	208	0	0	148	1
	53	0	0	130	264	0	0	143	0
	39	1	2	140	321	0	0	182	0
	52	1	1	120	325	0	1	172	0
	44	1	2	140	235	0	0	180	0
	47	1	2	138	257	0	0	156	0
	53	0	2	128	216	0	0	115	0

53	0	0	138	234	0	0	160	0
51	0	2	130	256	0	0	149	0
66	1	0	120	302	0	0	151	0
62	1	2	130	231	0	1	146	0
44	0	2	108	141	0	1	175	0
63	0	2	135	252	0	0	172	0
52	1	1	134	201	0	1	158	0
48	1	0	122	222	0	0	186	0
45	1	0	115	260	0	0	185	0
34	1	3	118	182	0	0	174	0
57	0	0	128	303	0	0	159	0
71	0	2	110	265	1	0	130	0
54	1	1	108	309	0	1	156	0
52	1	3	118	186	0	0	190	0
41	1	1	135	203	0	1	132	0
58	1	2	140	211	1	0	165	0
35	0	0	138	183	0	1	182	0
51	1	2	100	222	0	1	143	1
45	0	1	130	234	0	0	175	0
44	1	1	120	220	0	1	170	0
62	0	0	124	209	0	1	163	0
54	1	2	120	258	0	0	147	0
51	1	2	94	227	0	1	154	1
29	1	1	130	204	0	0	202	0
51	1	0	140	261	0	0	186	1
43	0	2	122	213	0	1	165	0
55	0	1	135	250	0	0	161	0
51	1	2	125	245	1	0	166	0
59	1	1	140	243	0	1	164	1
52	1	1	128	205	1	1	184	0
58	1		105	240	0	0	154	1
36 41	1	2 2	112	250	0	1	179	0
45	1	1	128	308	0	0	179	0
60	0	2	102	318	0	1	160	0
52	1	3	152	298	1	1	178	
52 42	0					0		0
		0	102	265	0		122	0
67	0	2	115	564	0	0	160	0
68	1	2	118	277	0	1	151	0
46	1	1	101	197	1	1	156	0
54	0	2	110	214	0	1	158	0
58	0	0	100	248	0	0	122	0
48	1	2	124	255	1	1	175	0
57	1	0	132	207	0	1	168	1
52	1	2	138	223	0	1	169	0
54	0	1	132	288	1	0	159	1
45	0	1	112	160	0	1	138	0
53	1	0	142	226	0	0	111	1
62	0	0	140	394	0	0	157	0
52	1	0	108	233	1	1	147	0
43	1	2	130	315	0	1	162	0

53	1	2	130	246	1	0	173	0
42	1	3	148	244	0	0	178	0
59	1	3	178	270	0	0	145	0
63	0	1	140	195	0	1	179	0
42	1	2	120	240	1	1	194	0
50	1	2	129	196	0	1	163	0
68	0	2	120	211	0	0	115	0
69	1	3	160	234	1	0	131	0
45	0	0	138	236	0	0	152	1
50	0	1	120	244	0	1	162	0
50	0	0	110	254	0	0	159	0
64	0	0	180	325	0	1	154	1
57	1	2	150	126	1	1	173	0
64	0	2	140	313	0	1	133	0
43	1	0	110	211	0	1	161	0
55	1	1	130	262	0	1	155	0
37	0	2	120	215	0	1	170	0
41	1	2	130	214	0	0	168	0
56	1	3	120	193	0	0	162	0
46	0	1	105	204	0	1	172	0
46	0	0	138	243	0	0	152	1
64	0	0	130	303	0	1	122	0
59	1	0	138	271	0	0	182	0
41	0	2	112	268	0	0	172	1
54	0	2	108	267	0	0	167	0
39	0	2	94	199	0	1	179	0
34	0	1	118	210	0	1	192	0
47	1	0	112	204	0	1	143	0
67	0	2	152	277	0	1	172	0
52	0	2	136	196	0	0	169	0
74	0	1	120	269	0	0	121	1
54	0	2	160	201	0	1	163	0
49	0	1	134	271	0	1	162	0
42	1	1	120	295	0	1	162	0
41	1	1	110	235	0	1	153	0
41	0	1	126	306	0	1	163	0
49	0	0	130	269	0	1	163	0
60	0	2	120	178	1	1	96	0
62	1	1	128	208	1	0	140	0
57	1	0	110	201	0	1	126	1
64	1	0	128	263	0	1	105	1
51	0	2	120	295	0	0	157	0
43	1	0	115	303	0	1	181	0
42	0	2	120	209	0	1	173	0
67	0	0	106	223	0	1	142	0
76	0	2	140	197	0	2	116	0
70	1	1	156	245	0	0	143	0
44	0	2	118	242	0	1	149	0
60	0	3	150	240	0	1	171	0
44	1	2	120	226	0	1	169	0

42	1	2	130	180	0	1	150	0
66	1	0	160	228	0	0	138	0
71	0	0	112	149	0	1	125	0
64	1	3	170	227	0	0	155	0
66	0	2	146	278	0	0	152	0
39	0	2	138	220	0	1	152	0
58	0	0	130	197	0	1	131	0
47	1	2	130	253	0	1	179	0
35	1	1	122	192	0	1	174	0
58	1	1	125	220	0	1	144	0
56	1	1	130	221	0	0	163	0
56	1	1	120	240	0	1	169	0
55	0	1	132	342	0	1	166	0
41	1	1	120	157	0	1	182	0
38	1	2	138	175	0	1	173	0
38	1	2	138	175	0	1	173	0
67	1	0	160	286	0	0	108	1
67	1	0	120	229	0	0	129	1
62	0	0	140	268	0	0	160	0
63	1	0	130	254	0	0	147	0
53	1	0	140	203	1	0	155	1
56	1	2	130	256	1	0	142	1
48	1	1	110	229	0	1	168	0
58	1	1	120	284	0	0	160	0
58	1	2	132	224	0	0	173	0
60	1	0	130	206	0	0	132	1
40	1	0	110	167	0	0	114	1
60	1	0	117	230	1	1	160	1
64	1	2	140	335	0	1	158	0
43	1	0	120	177	0	0	120	1
57	1	0	150	276	0	0	112	1
55	1	0	132	353	0	1	132	1
65	0	0	150	225	0	0	114	0
61	0	0	130	330	0	0	169	0
58	1	2	112	230	0	0	165	0
50	1	0	150	243	0	0	128	0
44	1	0	112	290	0	0	153	0
60	1	0	130	253	0	1	144	1
54	1	0	124	266	0	0	109	1
50	1	2	140	233	0	1	163	0
41	1	0	110	172	0	0	158	0
51	0	0	130	305	0	1	142	1
58	1	0	128	216	0	0	131	1
54	1	0	120	188	0	1	113	0
60	1	0	145	282	0	0	142	1
60	1	2	140	185	0	0	155	0
59	1	0	170	326	0	0	140	1
46	1	2	150	231	0	1	147	0
67	1	0	125	254	1	1	163	0
62	1	0	120	267	0	1	99	1

65	1	0	110	248	0	0	158	0
44	1	0	110	197	0	0	177	0
60	1	0	125	258	0	0	141	1
58	1	0	150	270	0	0	111	1
68	1	2	180	274	1	0	150	1
62	0	0	160	164	0	0	145	0
52	1	0	128	255	0	1	161	1
59	1	0	110	239	0	0	142	1
60	0	0	150	258	0	0	157	0
49	1	2	120	188	0	1	139	0
59	1	0	140	177	0	1	162	1
57	1	2	128	229	0	0	150	0
61	1	0	120	260	0	1	140	1
39	1	0	118	219	0	1	140	0
61	0	0	145	307	0	0	146	1
56	1	0	125	249	1	0	144	1
43	0	0	132	341	1	0	136	1
62	0	2	130	263	0	1	97	0
63	1	0	130	330	1	0	132	1
65	1	0	135	254	0	0	127	0
48	1	0	130	256	1	0	150	1
63	0	0	150	407	0	0	154	0
55	1	0	140	217	0	1	111	1
65	1	3	138	282	1	0	174	0
56	0	0	200	288	1	0	133	1
54	1	0	110	239	0	1	126	1
70	1	0	145	174	0	1	125	1
62	1	1	120	281	0	0	103	0
35	1	0	120	198	0	1	130	1
59	1	3	170	288	0	0	159	0
64	1	2	125	309	0	1	131	1
47	1	2	108	243	0	1	152	0
57	1	0	165	289	1	0	124	0
55	1	0	160	289	0	0	145	1
64	1	0	120	246	0	0	96	1
70	1	0	130	322	0	0	109	0
51	1	0	140	299	0	1	173	1
58	1	0	125	300	0	0	171	0
60	1	0	140	293	0	0	170	0
77	1	0	125	304	0	0	162	1
35	1	0	126	282	0	0	156	1
70	1	2	160	269	0	1	112	1
59	0	0	174	249	0	1	143	1
64	1	0	145	212	0	0	132	0
57	1	0	152	274	0	1	88	1
56	1	0	132	184	0	0	105	1
48	1	0	124	274	0	0	166	0
56	0	0	134	409	0	0	150	1
66	1	1	160	246	0	1	120	1
54	1	1	192	283	0	0	195	0
54	1	1	132	203	U	U	133	U

69	1	2	140	254	0	0	146	0
51	1	0	140	298	0	1	122	1
43	1	0	132	247	1	0	143	1
62	0	0	138	294	1	1	106	0
67	1	0	100	299	0	0	125	1
59	1	3	160	273	0	0	125	0
45	1	0	142	309	0	0	147	1
58	1	0	128	259	0	0	130	1
50	1	0	144	200	0	0	126	1
62	0	0	150	244	0	1	154	1
38	1	3	120	231	0	1	182	1
66	0	0	178	228	1	1	165	1
52	1	0	112	230	0	1	160	0
53	1	0	123	282	0	1	95	1
63	0	0	108	269	0	1	169	1
54	1	0	110	206	0	0	108	1
66	1	0	112	212	0	0	132	1
55	0	0	180	327	0	2	117	1
49	1	2	118	149	0	0	126	0
54	1	0	122	286	0	0	116	1
56	1	0	130	283	1	0	103	1
46	1	0	120	249	0	0	144	0
61	1	3	134	234	0	1	145	0
67	1	0	120	237	0	1	71	0
58	1	0	100	234	0	1	156	0
47	1	0	110	275	0	0	118	1
52	1	0	125	212	0	1	168	0
58	1	0	146	218	0	1	105	0
57	1	1	124	261	0	1	141	0
58	0	1	136	319	1	0	152	0
61	1	0	138	166	0	0	125	1
42	1	0	136	315	0	1	125	1
52	1	0	128	204	1	1	156	1
59	1	2	126	218	1	1	134	0
40	1	0	152	223	0	1	181	0
61	1	0	140	207	0	0	138	1
46	1	0	140	311	0	1	120	1
59	1	3	134	204	0	1	162	0
57	1	1	154	232	0	0	164	0
57	1	0	110	335	0	1	143	1
55	0	0	128	205	0	2	130	1
61	1	0	148	203	0	1	161	0
58	1	0	114	318	0	2	140	0
58	0	0	170	225	1	0	146	1
67	1	2	152	212	0	0	150	0
44	1	0	120	169	0	1	144	1
63	1	0	140	187	0	0	144	1
63	0	0	124	197	0	1	136	1
59	1	0	164	176	1	0	90	0
57	0	0	140	241	0	1	123	1

45	1	3	110	264	0	1	132	0
68	1	0	144	193	1	1	141	0
57	1	0	130	131	0	1	115	1
57	0	1	130	236	0	0	174	0

oldpeak slope	ca	thal	target	
2.3	0	0	1	1
3.5	0	0	2	1
1.4	2	0	2	1
0.8	2	0	2	1
0.6	2	0	2	1
0.4	1	0	1	1
1.3	1	0	2	1
0	2	0	3	1
0.5	2	0	3	1
1.6	2	0	2	1
1.2	2	0	2	1
0.2	2	0	2	1
0.6	2	0	2	1
1.8	1	0	2	1
1	2	0	2	1
1.6	1	0	2	1
0	2	0	2	1
2.6	0	0	2	1
1.5	2	0	2	1
1.8	2	2	2	1
0.5	1	0	3	1
0.4	2	0	2	1
0	2	0	2	1
1	1	0	2	1
1.4	2	0	3	1
0.4	2	2	2	1
1.6	2	0	2	1
0.6	2	0	2	1
0.8	2	1	2	1
1.2	0	0	2	1
0	2	1	2	1
0.4	2	0	3	1
0	2	0	2	1
0.5	0	1	2	1
1.4	2	1	2	1
1.4	0	0	2	1
0	2	0	2	1
1.6	2	0	3	1
0.8	2	0	2	1
0.8	2	0	2	1
1.5	2	1	2	1
0.2	1	0	2	1
3	1	0	2	1
0.4	1	0	2	1
0	2	0	2	1
0.2	2	0	2	1
0	2	0	2	1
0	2	0	2	1
0	2	0	0	1

0	2	0	2	1
0.5	2	0	2	1
0.4	1	0	2	1
1.8	1	3	3	1
0.6	1	0	2	1
0	2	0	2	1
0.8	2	1	2	1
0.8				1
	2	0	2	
0	2	0	2	1
0	2	0	2	1
0	2	1	2	1
0	2	1	2	1
0	2	0	3	1
0	1	0	1	1
0	1	0	1	1
0	2	0	2	1
1.4	2	0	2	1
1.2	1	0	2	1
0.6	1	0	2	1
0	2	0	2	1
0	2	0	2	1
0.4	1	0	3	1
0	2	1	3	1
0	2	0	2	1
0	2	0	2	1
0.2	1	0	2	1
1.4	1	0	2	1
2.4	1	0	2	1
0	2	0	2	1
0	2	0	2	1
0.6	1	0	3	1
0	2	0	2	1
0	2	0	2	1
0	2	1	2	
				1
1.2	1	0	3	1
0.6	1	0	2	1
1.6	1	0	3	1
1	2	1	3	1
0	2	0	3	1
1.6	1	0	2	1
1	1	0	2	1
0	2	2	2	1
0	2	0	3	1
0	2	4	2	1
0	2	1	2	1
0	1	0	2	1
0	2	0	3	1
1.2	1	0	2	1
0.1	2	3	3	1
1.9	2	1	2	1

0	2	3	2	1
0.8	2	2	2	1
4.2	0	0	3	1
0	2	2	2	1
8.0	0	0	3	1
0	2	0	2	1
1.5	1	0	2	1
0.1	1	1	2	1
0.2	1	0	2	1
1.1	2	0	2	1
0	2	0	2	1
0	2	0	2	1
0.2	2	1	3	1
0.2	2	0	3	1
0	2	0	3	1
0	2	0	2	1
0	2	0	2	1
2	1	0	2	1
1.9	1	0	3	1
0	2	0	2	1
0	1	0	2	1
2	1	2	2	1
0	2	0	2	1
0	2	0	2	1
0	2	0	2	1
0	2	0	2	1
0.7	2	0	2	1
0.1	2	0	2	1
0.1	2	1	2	1
0.1	1	0	2	1
	2	1		1
0.2 0	2	1	2 2	1
0	1	0	2	1
0	2	0		1
			2	
0 0	2 2	0 0	2	1 1
	2		2	
0		0	2	1
0	2	0	2	1
0	2	0	2	1
1.5	1	0	1	1
0.2	1	1	3	1
0.6	2	0	2	1
1.2	1	0	2	1
0	1	0	2	1
0.3	2	2	2	1
1.1	1	0	2	1
0	2	0	2	1
0.3	1	1	2	1
0.9	2	0	2	1
0	2	0	2	1

0	2	0	2	1
2.3	2	0	1	1
1.6	1	0	2	1
0.6	1	0	3	1
0	1	1	2	1
0	1	0	2	1
0.6	1	0	2	1
0	2	0	2	1
0	2	0	2	1
0.4	1	4	3	1
0	2	0	3	1
0	0	0	2	1
1.2	2	0	2	1
0	2	0	2	1
0	2	4	2	1
0	2	4	2	1
1.5	1	3	2	0
2.6	1	2	3	0
3.6	0	2	2	0
1.4	1	1	3	0
3.1	0	0	3	0
0.6	1	1	1	0
1	0	0	3	0
1.8	1	0	2	0
3.2	2	2	3	0
2.4	1	2	3	0
2	1	0	3	0
1.4	2	2	3	0
0	2	0	2	0
2.5	1	0	3	0
0.6	1	1	1	0
		1	3	0
1.2	1			
1	1	3	3	0
0	2	0	2	0
2.5	1	1	3	0
2.6	1	0	3	0
0	2	1	2	0
1.4	2	1	3	0
2.2	1	1	3	0
	1		3	
0.6		1		0
0	2	0	3	0
1.2	1	0	3	0
2.2	1	3	3	0
1.4	1	1	3	0
2.8	1	2	3	0
3	1	0	2	0
3.4	0	0	3	0
3.6	1	0	2	0
0.2	1	2	3	0
1.8	1	2	3	0

0.6	2	2	1	0	
0	2	1	2	0	
2.8	1	1	3	0	
0.8	2	0	3	0	
1.6	1	0	3	0	
	0	3	3	0	
6.2					
0	2	1	3	0	
1.2	1	1	3	0	
2.6	1	2	3	0	
2	1	3	3	0	
0	2	1	3	0	
0.4	1	1	3	0	
3.6	1	1	3	0	
1.2	1	0	3	0	
1	1	0	3	0	
1.2	1	1	2	0	
3	1	0	3	0	
1.2	1	1	3	0	
1.8	2	3	3	0	
	1				
2.8		1	3	0	
0	2	2	3	0	
4	1	3	3	0	
5.6	0	0	3	0	
1.4	1	1	2	0	
4	0	2	3	0	
2.8	1	1	3	0	
2.6	0	0	3	0	
1.4	1	1	3	0	
1.6	1	0	3	0	
0.2	1	0	3	0	
1.8	1	0	3	0	
0	2	0	2	0	
1	1	3	3	0	
	1	1		0	
0.8			3		
2.2	0	1	2	0	
2.4	1	3	2	0	
1.6	2	0	3	0	
0	2	2	3	0	
1.2	1	2	3	0	
0	2	3	2	0	
0	2	0	3	0	
2.9	1	1	3	0	
0	1	0	2	0	
2	1	2	1	0	
1.2	1	1	3	0	
2.1	1	1	1	0	
0.5	1	0	3	0	
1.9	1	2	3	0	
0	1	3	1	0	
0	2	1	3	0	

2	1	3	3	0
4.2	1	3	3	0
0.1	1	4	3	0
1.9	1	3	2	0
0.9	1	2	2	0
0	2	0	2	0
0	1	3	3	0
3	1	2	3	0
0.9	1	0	3	0
1.4	1	0	2	0
3.8	1	0	3	0
1	1	2	3	0
0	2	1	2	0
2	1	2	3	0
1.8	1	2	2	0
0	1	1	2	0
0.1	2	1	2	0
3.4	1	0	2	0
0.8	2	3	2	0
	1		2	
3.2	0	2 0	3	0 0
1.6				
0.8	2	0	3	0
2.6	1	2	2	0
1	1	0	2	0
0.1	2	1	3	0
1	1	1	2	0
1	2	2	3	0
2	1	1	3	0
0.3	2	0	3	0
0	2	2	2	0
3.6	1	1	2	0
1.8	1	0	1	0
1	1	0	0	0
2.2	1	1	1	0
0	2	0	3	0
1.9	2	1	3	0
1.8	1	2	3	0
0.8	2	2	2	0
0	2	1	2	0
3	1	1	3	0
2	1	1	3	0
0	2	1	3	0
4.4	0	3	1	0
2.8	1	2	1	0
0.8	1	0	3	0
2.8	0	0	1	0
4	2	2	3	0
0	1	0	2	0
1	1	2	1	0
0.2	1	0	3	0
	-	ū	-	-

1.2	1	0	3	0
3.4	1	2	3	0
1.2	1	1	3	0
0	1	1	2	0