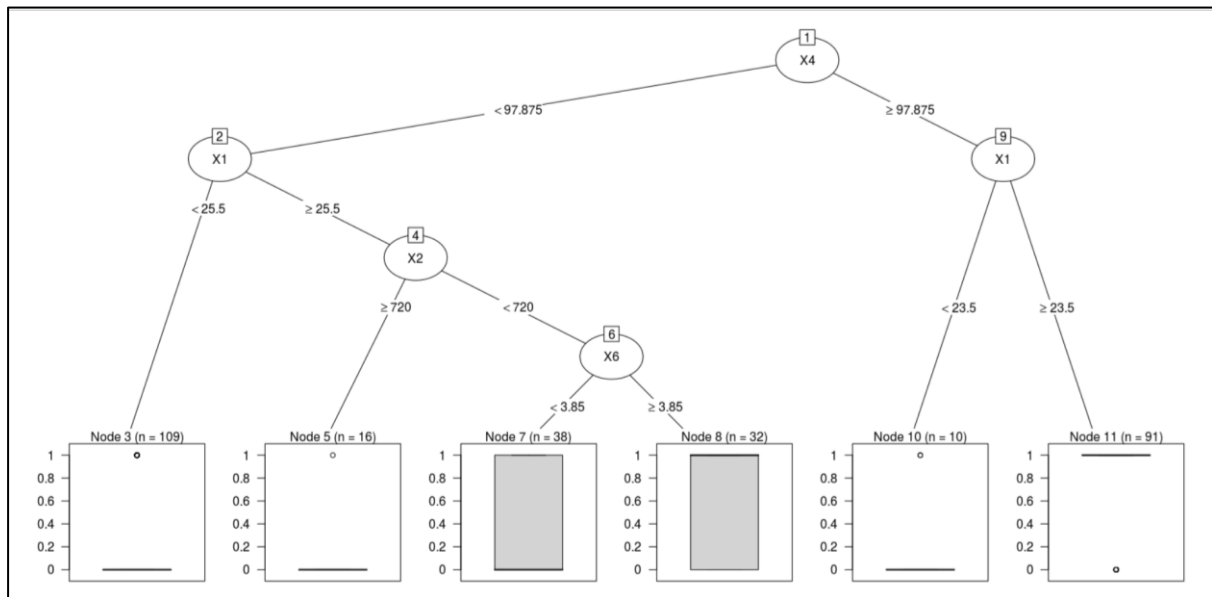


Name: Pooja Ganesh Teje
Student ID: 19300746
Course code: CS7DS1

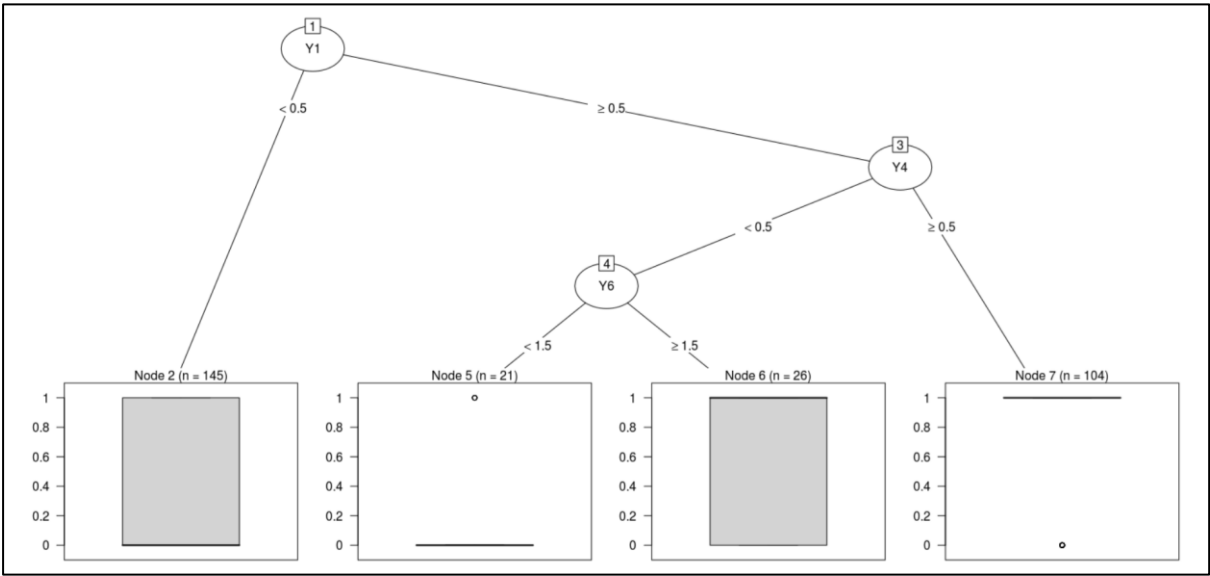
Decision tree using X data



Accuracy for Decision tree using X data: 0.814189189189189

Without handling null values	With handling null values
Accuracy: 0.753378378378378	Accuracy: 0.814189189189189
n= 296	n= 296
CP nsplit rel error xerror xstd	CP nsplit rel error xerror xstd
1 0.48591549 0 1.0000000 1.0000000 0.06052995	1 0.48591549 0 1.0000000 1.0000000 0.06052995
2 0.04225352 1 0.5140845 0.5211268 0.05246361	2 0.04225352 1 0.5140845 0.5563380 0.05359314
	3 0.02816901 2 0.4718310 0.5774648 0.05422251
	4 0.02112676 5 0.3873239 0.5492958 0.05337543

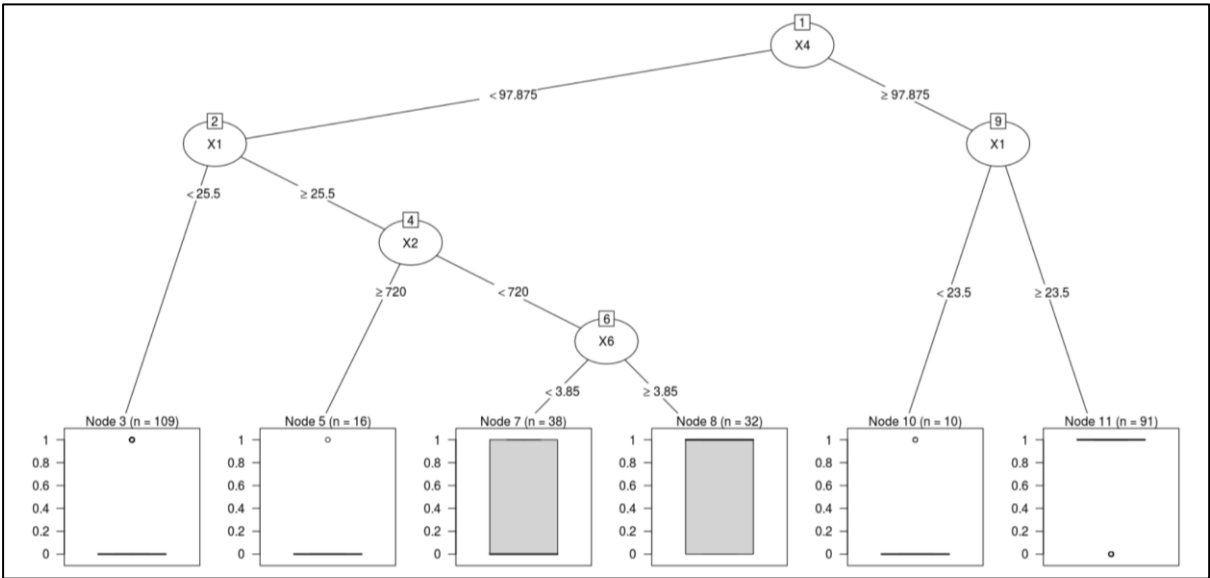
Decision tree using Y data



Accuracy for Decision tree using Y data: 0.756756756756757

Without handling null values						With handling null values					
Accuracy: 0.773648648648649						Accuracy: 0.756756756756757					
n= 296						n= 296					
	CP	nsplit	rel error	xerror	xstd		CP	nsplit	rel error	xerror	xstd
1	0.41549296	0	1.0000000	1.2323944	0.05956313	1	0.40140845	0	1.0000000	1.0000000	0.06052995
2	0.04225352	1	0.5845070	0.6197183	0.05537820	2	0.04929577	1	0.5985915	0.6478873	0.05607571
3	0.03521127	2	0.5422535	0.6056338	0.05500785	3	0.04225352	2	0.5492958	0.6408451	0.05590664
4	0.01000000	4	0.4718310	0.5211268	0.05246361	4	0.01408451	3	0.5070423	0.5492958	0.05337543

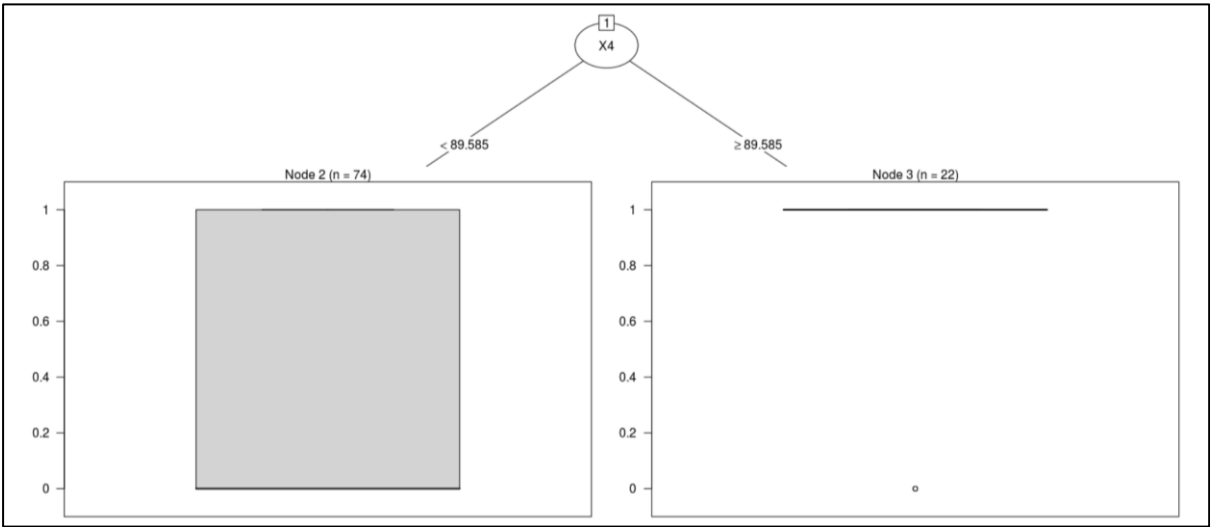
Decision tree using X & Y data



Accuracy for Decision tree using X & Y data: 0.814189189189189

Without handling null values	With handling null values
Accuracy: 0.753378378378378	Accuracy: 0.814189189189189
n= 296	n= 296
CP nsplit rel error xerror xstd	CP nsplit rel error xerror xstd
1 0.48591549 0 1.0000000 1.000000 0.06052995	1 0.48591549 0 1.0000000 1.0000000 0.06052995
2 0.04225352 1 0.5140845 0.528169 0.05269781	2 0.04225352 1 0.5140845 0.5492958 0.05337543
	3 0.02816901 2 0.4718310 0.5281690 0.05269781
	4 0.02112676 5 0.3873239 0.5000000 0.05173521

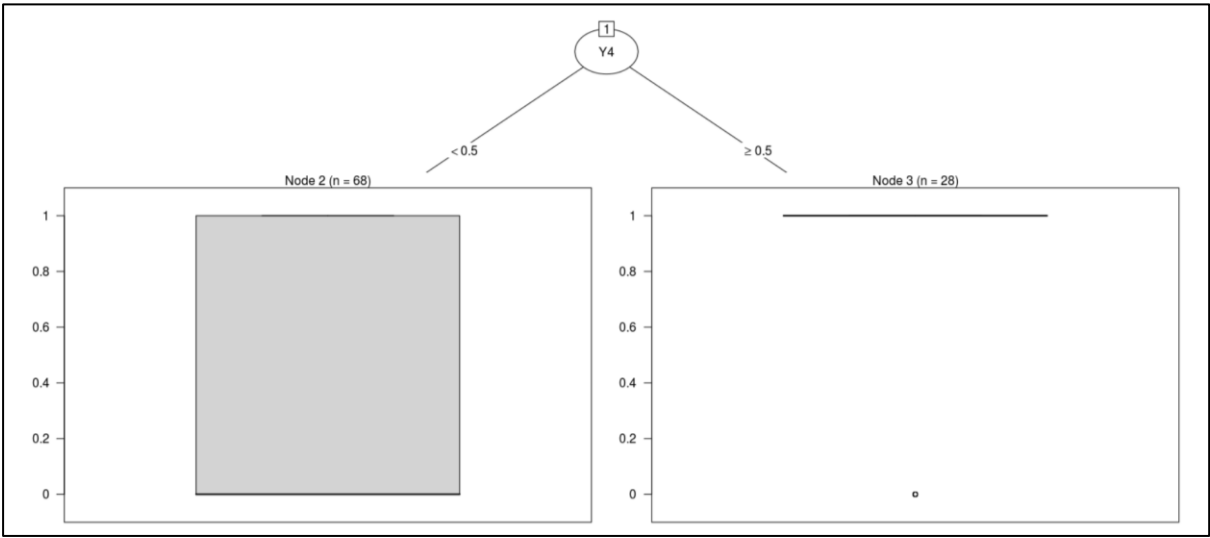
Decision tree using X data for group 0



Accuracy for Decision tree using X data for group 0: 0.736486486486487

Without handling null values	With handling null values
Accuracy: 0.736486486486487	Accuracy: 0.736486486486487
n= 96	n= 96
CP nsplit rel error xerror xstd	CP nsplit rel error xerror xstd
1 0.40909091 0 1.0000000 1.0000000 0.1109532	1 0.4090909 0 1.0000000 1.0000000 0.1109532
2 0.04545455 1 0.5909091 0.6590909 0.1022464	2 0.0625000 1 0.5909091 0.6363636 0.1012151

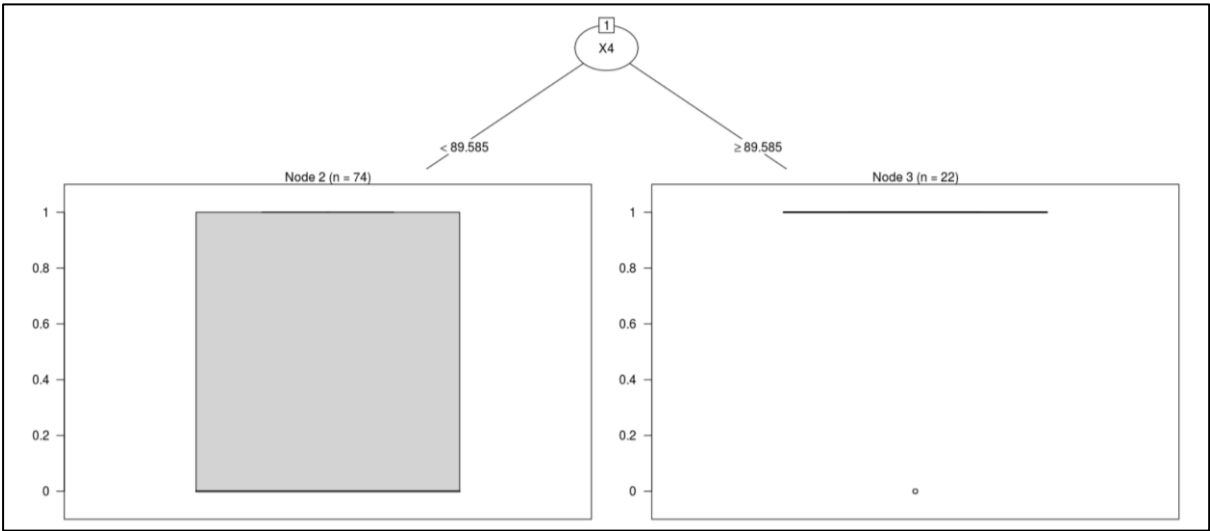
Decision tree using Y data for group 0



Accuracy for Decision tree using Y data for group 0: 0.668918918918919

Without handling null values	With handling null values
Accuracy: 0.668918918918919	Accuracy: 0.668918918918919
n= 96	n= 96
CP nsplit rel error xerror xstd	CP nsplit rel error xerror xstd
1 0.3636364 0 1.0000000 1.0000000 0.1109532	1 0.36363636 0 1.0000000 1.0000000 0.1109532
2 0.0100000 1 0.6363636 0.6363636 0.1012151	2 0.01363636 1 0.6363636 0.6363636 0.1012151

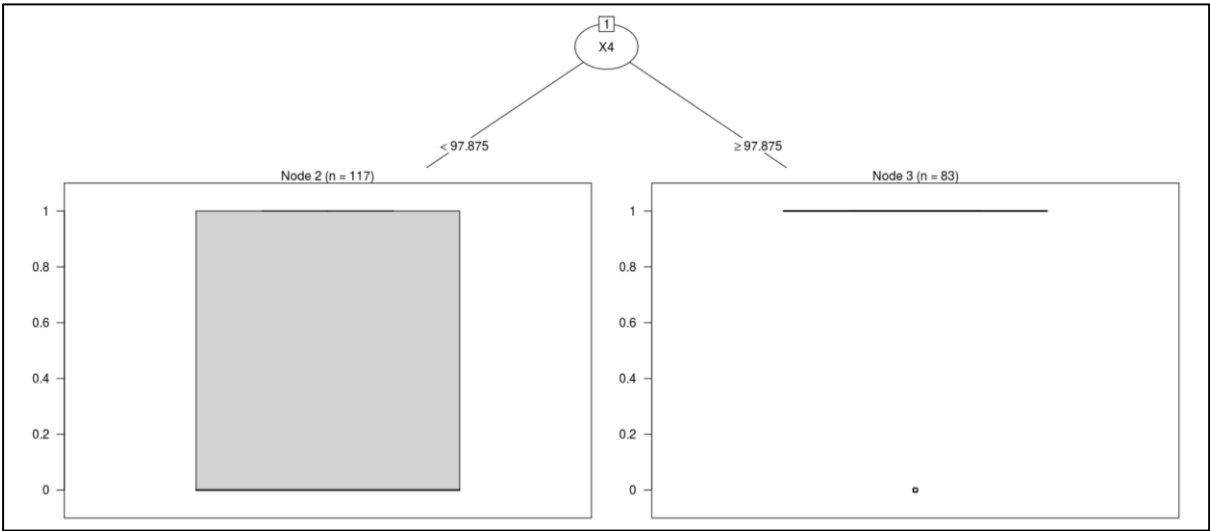
Decision tree using X & Y data for group 0



Accuracy for Decision tree using X & Y data for group 0: 0.736486486486487

Without handling null values	With handling null values
Accuracy: 0.736486486486487	Accuracy: 0.736486486486487
n= 96	n= 96
CP nsplit rel error xerror xstd	CP nsplit rel error xerror xstd
1 0.40909091 0 1.0000000 1.0000000 0.1109532	1 0.4090909 0 1.0000000 1.0000000 0.1109532
2 0.04545455 1 0.5909091 0.6363636 0.1012151	2 0.0625000 1 0.5909091 0.6590909 0.1022464

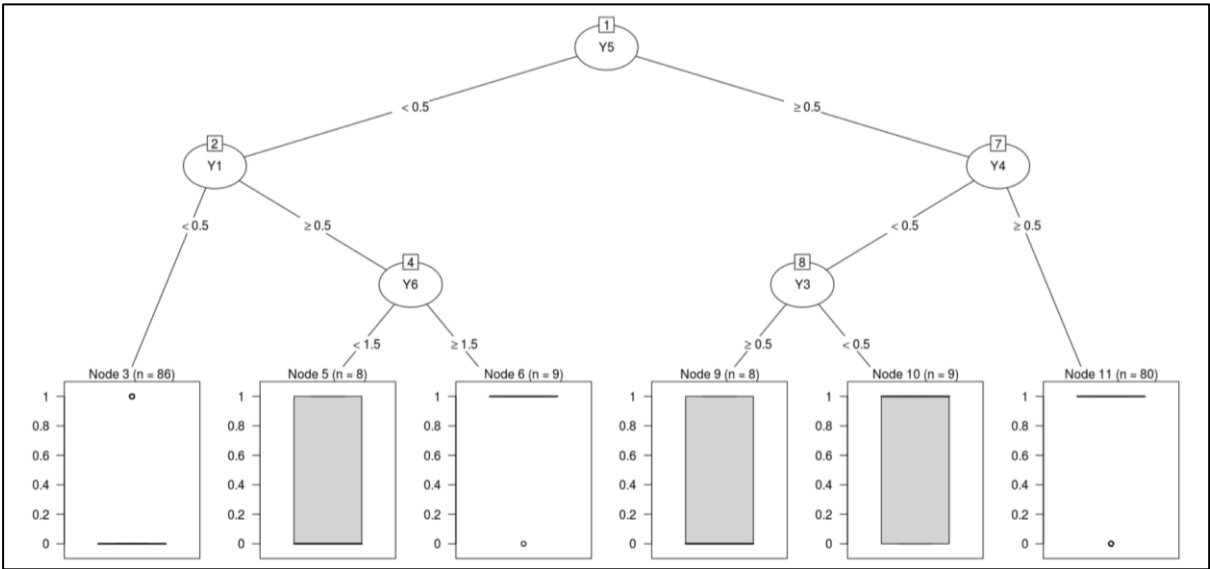
Decision tree using X data for group 1



Accuracy for Decision tree using X data for group 1: 0.753378378378378

Without handling null values	With handling null values
Accuracy: 0.756756756756757	Accuracy: 0.753378378378378
n= 200	n= 200
CP nsplit rel error xerror xstd	CP nsplit rel error xerror xstd
1 0.54081633 0 1.0000000 1.0816327 0.07202376	1 0.54081633 0 1.0000000 1.1632653 0.07144315
2 0.06122449 1 0.4591837 0.5510204 0.06406668	2 0.03571429 1 0.4591837 0.5306122 0.06329821
3 0.02040816 2 0.3979592 0.5204082 0.06289805	
4 0.01020408 4 0.3571429 0.5408163 0.06368769	
5 0.01000000 5 0.3469388 0.5102041 0.06248698	

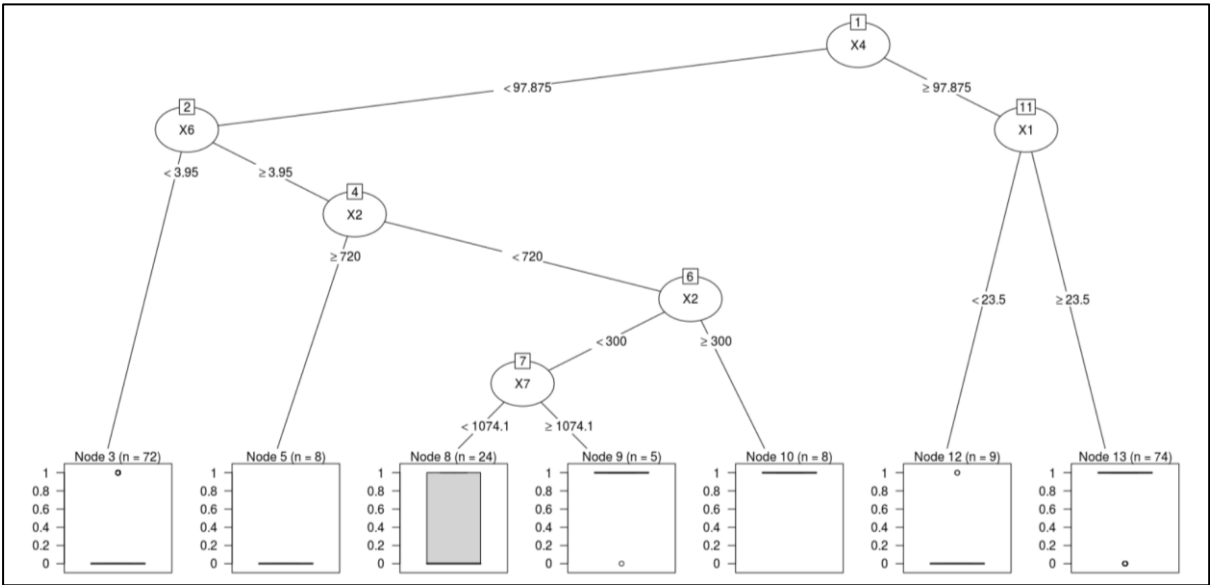
Decision tree using Y data for group 1



Accuracy for Decision tree using Y data for group 1: 0.77027027027027

Without handling null values	With handling null values
Accuracy: 0.719594594594595	Accuracy: 0.77027027027027
n= 200	n= 200
CP nsplit rel error xerror xstd	CP nsplit rel error xerror xstd
1 0.51020408 0 1.0000000 1.0000000 0.07213932	1 0.51020408 0 1.0000000 1.0612245 0.07209601
2 0.02040816 1 0.4897959 0.5204082 0.06289805	2 0.02040816 1 0.4897959 0.5510204 0.06406668
	3 0.01020408 3 0.4489796 0.5204082 0.06289805
	4 0.01000000 5 0.4285714 0.4897959 0.06163130

Decision tree using X & Y data for group 1 *



Accuracy for Decision tree using X & Y data for group 1: 0.817567567567568

Without handling null values	With handling null values
Accuracy: 0.766891891891892	Accuracy: 0.817567567567568
n= 200	n= 200
CP nsplit rel error xerror xstd	CP nsplit rel error xerror xstd
1 0.54081633 0 1.0000000 1.0612245 0.07209601	1 0.54081633 0 1.0000000 1.1632653 0.07144315
2 0.06122449 1 0.4591837 0.5510204 0.06406668	2 0.05102041 1 0.4591837 0.5714286 0.06479391
3 0.02040816 2 0.3979592 0.5000000 0.06206481	3 0.02721088 2 0.4081633 0.5306122 0.06329821
	4 0.01020408 6 0.2959184 0.5204082 0.06289805