

# Deep Learning

## Naval Mine Detector Case Study Output

Consider below output of Naval Min Detector case study

Marvellous Infosystems : Dataset loaded succesfully

Marvellous Infosystems : Number of columns: 61

Marvellous Infosystems : X.shape (207, 60)

Marvellous Infosystems : train\_x.shape (144, 60)

Marvellous Infosystems : train\_y.shape (144, 2)

Marvellous Infosystems : test\_x.shape (63, 60)

Marvellous Infosystems : test\_y.shape (63, 2)

Number of columns are n\_dim 60

epoch: 0 - cost: 107.90548 - MSE: 12970.49025514904 - Train Accuracy: 0.5277778  
epoch: 1 - cost: 18.408325 - MSE: 326.78527452191497 - Train Accuracy: 0.4722222  
epoch: 2 - cost: 4.4867907 - MSE: 23.718747349749208 - Train Accuracy: 0.5277778  
epoch: 3 - cost: 0.84933555 - MSE: 0.6765794429695174 - Train Accuracy: 0.4722222  
epoch: 4 - cost: 0.69354004 - MSE: 1.18987381753426 - Train Accuracy: 0.4722222  
epoch: 5 - cost: 0.6855744 - MSE: 1.4014826320490334 - Train Accuracy: 0.5763889  
epoch: 6 - cost: 0.681769 - MSE: 1.5149002616701719 - Train Accuracy: 0.6180556  
epoch: 7 - cost: 0.679123 - MSE: 1.5668014287420975 - Train Accuracy: 0.6111111  
epoch: 8 - cost: 0.67635876 - MSE: 1.600686389715197 - Train Accuracy: 0.6319444  
epoch: 9 - cost: 0.67346275 - MSE: 1.6163661376868574 - Train Accuracy: 0.6388889  
epoch: 10 - cost: 0.67058825 - MSE: 1.630945752648813 - Train Accuracy: 0.6388889  
epoch: 11 - cost: 0.66707647 - MSE: 1.6340140454336625 - Train Accuracy: 0.6458333  
epoch: 12 - cost: 0.6629684 - MSE: 1.6411356560481034 - Train Accuracy: 0.6736111  
epoch: 13 - cost: 0.6582181 - MSE: 1.6307872423597418 - Train Accuracy: 0.6597222  
epoch: 14 - cost: 0.65289557 - MSE: 1.6045874396003879 - Train Accuracy: 0.6666667  
epoch: 15 - cost: 0.6467333 - MSE: 1.579593956007965 - Train Accuracy: 0.6597222  
epoch: 16 - cost: 0.6398356 - MSE: 1.5830506368272295 - Train Accuracy: 0.6736111  
epoch: 17 - cost: 0.63217974 - MSE: 1.56008306606296 - Train Accuracy: 0.7083333  
epoch: 18 - cost: 0.6225089 - MSE: 1.5728201482291237 - Train Accuracy: 0.7152778  
epoch: 19 - cost: 0.6115693 - MSE: 1.5331368965826715 - Train Accuracy: 0.7291667  
epoch: 20 - cost: 0.6001004 - MSE: 1.5188574011761455 - Train Accuracy: 0.7430556  
epoch: 21 - cost: 0.5882291 - MSE: 1.521410001037051 - Train Accuracy: 0.7430556  
epoch: 22 - cost: 0.5764199 - MSE: 1.4452760448685598 - Train Accuracy: 0.7569444  
epoch: 23 - cost: 0.5658703 - MSE: 1.5247893550920282 - Train Accuracy: 0.7638889  
epoch: 24 - cost: 0.5640809 - MSE: 1.2362073273472955 - Train Accuracy: 0.7222222  
epoch: 25 - cost: 0.6273812 - MSE: 2.328777849953099 - Train Accuracy: 0.6388889  
epoch: 26 - cost: 0.88054913 - MSE: 0.9226542601330534 - Train Accuracy: 0.47916666  
epoch: 27 - cost: 0.7794834 - MSE: 3.2699393193196338 - Train Accuracy: 0.5416667  
epoch: 28 - cost: 0.630258 - MSE: 1.0489765198313623 - Train Accuracy: 0.7013889  
epoch: 29 - cost: 0.59409016 - MSE: 1.2107980444473057 - Train Accuracy: 0.7847222  
epoch: 30 - cost: 0.56832623 - MSE: 1.3167269048078327 - Train Accuracy: 0.7638889  
epoch: 31 - cost: 0.54889596 - MSE: 1.3619566394611944 - Train Accuracy: 0.7638889  
epoch: 32 - cost: 0.5326372 - MSE: 1.3415353227930995 - Train Accuracy: 0.7777778  
epoch: 33 - cost: 0.5210135 - MSE: 1.4423086274255421 - Train Accuracy: 0.7708333  
epoch: 34 - cost: 0.51716876 - MSE: 1.261783941167526 - Train Accuracy: 0.7916667  
epoch: 35 - cost: 0.5654564 - MSE: 2.046955063410912 - Train Accuracy: 0.6944444  
epoch: 36 - cost: 0.82074416 - MSE: 1.0170630493013362 - Train Accuracy: 0.47916666  
epoch: 37 - cost: 0.893871 - MSE: 3.3737640111631255 - Train Accuracy: 0.5416667  
epoch: 38 - cost: 0.6258567 - MSE: 1.0568482093123197 - Train Accuracy: 0.5208333  
epoch: 39 - cost: 0.58272266 - MSE: 1.1206943982810005 - Train Accuracy: 0.8055556  
epoch: 40 - cost: 0.5471685 - MSE: 1.2003631060706996 - Train Accuracy: 0.8055556  
epoch: 41 - cost: 0.52200633 - MSE: 1.2881891927393685 - Train Accuracy: 0.8055556  
epoch: 42 - cost: 0.5046869 - MSE: 1.33233596779006 - Train Accuracy: 0.7986111

epoch: 43 - cost: 0.49137524 - MSE: 1.3432144103816674 - Train Accuracy: 0.8055556  
 epoch: 44 - cost: 0.47993088 - MSE: 1.425029560608666 - Train Accuracy: 0.8194444  
 epoch: 45 - cost: 0.4705997 - MSE: 1.4066898520043811 - Train Accuracy: 0.8055556  
 epoch: 46 - cost: 0.474517 - MSE: 1.7076349194657137 - Train Accuracy: 0.8055556  
 epoch: 47 - cost: 0.59117305 - MSE: 1.1654457476290543 - Train Accuracy: 0.6527778  
 epoch: 48 - cost: 1.0856518 - MSE: 4.239048451348506 - Train Accuracy: 0.5416667  
 epoch: 49 - cost: 0.76673424 - MSE: 1.320025554346711 - Train Accuracy: 0.4722222  
 epoch: 50 - cost: 0.6003282 - MSE: 1.1211642720241994 - Train Accuracy: 0.7986111  
 epoch: 51 - cost: 0.5572714 - MSE: 1.1654150280209328 - Train Accuracy: 0.8125  
 epoch: 52 - cost: 0.5156052 - MSE: 1.212206483544225 - Train Accuracy: 0.7986111  
 epoch: 53 - cost: 0.486326 - MSE: 1.2635143508206068 - Train Accuracy: 0.8055556  
 epoch: 54 - cost: 0.4688391 - MSE: 1.3435172352802474 - Train Accuracy: 0.8194444  
 epoch: 55 - cost: 0.45703405 - MSE: 1.3909144796009636 - Train Accuracy: 0.8194444  
 epoch: 56 - cost: 0.44630018 - MSE: 1.4380963126636563 - Train Accuracy: 0.8194444  
 epoch: 57 - cost: 0.43814188 - MSE: 1.3674693597394605 - Train Accuracy: 0.8333333  
 epoch: 58 - cost: 0.4474199 - MSE: 1.5630284728516266 - Train Accuracy: 0.8263889  
 epoch: 59 - cost: 0.59643817 - MSE: 1.1624129479371115 - Train Accuracy: 0.6736111  
 epoch: 60 - cost: 1.1205622 - MSE: 3.686390479820956 - Train Accuracy: 0.5347222  
 epoch: 61 - cost: 0.6462998 - MSE: 1.225027365880427 - Train Accuracy: 0.47916666  
 epoch: 62 - cost: 0.57606584 - MSE: 1.003338898976981 - Train Accuracy: 0.7708333  
 epoch: 63 - cost: 0.53471524 - MSE: 0.9877525256083273 - Train Accuracy: 0.7777778  
 epoch: 64 - cost: 0.49357706 - MSE: 1.072199708870969 - Train Accuracy: 0.8263889  
 epoch: 65 - cost: 0.45395675 - MSE: 1.1758324228349684 - Train Accuracy: 0.8402778  
 epoch: 66 - cost: 0.4286228 - MSE: 1.2864167771747315 - Train Accuracy: 0.8472222  
 epoch: 67 - cost: 0.41451478 - MSE: 1.32189457728598 - Train Accuracy: 0.8541667  
 epoch: 68 - cost: 0.40511596 - MSE: 1.3531070262599978 - Train Accuracy: 0.8541667  
 epoch: 69 - cost: 0.39842126 - MSE: 1.3988980947626795 - Train Accuracy: 0.8541667  
 epoch: 70 - cost: 0.39322716 - MSE: 1.3896152631433236 - Train Accuracy: 0.8541667  
 epoch: 71 - cost: 0.3954373 - MSE: 1.5055113870734507 - Train Accuracy: 0.8541667  
 epoch: 72 - cost: 0.46174324 - MSE: 1.399261446007235 - Train Accuracy: 0.7708333  
 epoch: 73 - cost: 0.9824385 - MSE: 3.1492264221380735 - Train Accuracy: 0.5625  
 epoch: 74 - cost: 0.8159267 - MSE: 1.7311947923278117 - Train Accuracy: 0.4861111  
 epoch: 75 - cost: 0.59602916 - MSE: 1.1708621879283203 - Train Accuracy: 0.6666667  
 epoch: 76 - cost: 0.550706 - MSE: 1.1804409084489556 - Train Accuracy: 0.7569444  
 epoch: 77 - cost: 0.49069384 - MSE: 1.349827108218707 - Train Accuracy: 0.8263889  
 epoch: 78 - cost: 0.4535521 - MSE: 1.615724056287172 - Train Accuracy: 0.8194444  
 epoch: 79 - cost: 0.43161762 - MSE: 1.687195287966773 - Train Accuracy: 0.8333333  
 epoch: 80 - cost: 0.4227818 - MSE: 1.8143288961633703 - Train Accuracy: 0.8055556  
 epoch: 81 - cost: 0.43907267 - MSE: 1.902702820649271 - Train Accuracy: 0.8194444  
 epoch: 82 - cost: 0.51269305 - MSE: 2.258253251785667 - Train Accuracy: 0.75  
 epoch: 83 - cost: 0.7341422 - MSE: 2.218214080178922 - Train Accuracy: 0.6111111  
 epoch: 84 - cost: 0.54037774 - MSE: 1.7034298828378203 - Train Accuracy: 0.7013889  
 epoch: 85 - cost: 0.45843083 - MSE: 1.4715057318065041 - Train Accuracy: 0.8125  
 epoch: 86 - cost: 0.4131659 - MSE: 1.7623460732321066 - Train Accuracy: 0.8263889  
 epoch: 87 - cost: 0.38909113 - MSE: 1.9201206795925272 - Train Accuracy: 0.8402778  
 epoch: 88 - cost: 0.3774549 - MSE: 2.1268040940334196 - Train Accuracy: 0.8402778  
 epoch: 89 - cost: 0.37029737 - MSE: 2.2660502598505827 - Train Accuracy: 0.8611111  
 epoch: 90 - cost: 0.36665434 - MSE: 2.4343589030086474 - Train Accuracy: 0.8402778  
 epoch: 91 - cost: 0.3728283 - MSE: 2.3807468921385797 - Train Accuracy: 0.8611111  
 epoch: 92 - cost: 0.429592 - MSE: 2.890958524885265 - Train Accuracy: 0.7916667  
 epoch: 93 - cost: 0.8274594 - MSE: 2.9347395145258846 - Train Accuracy: 0.6180556  
 epoch: 94 - cost: 0.7176463 - MSE: 3.1326668811687224 - Train Accuracy: 0.5347222  
 epoch: 95 - cost: 0.5387739 - MSE: 1.7235127576284965 - Train Accuracy: 0.7222222  
 epoch: 96 - cost: 0.44212854 - MSE: 1.3916894454750515 - Train Accuracy: 0.8541667  
 epoch: 97 - cost: 0.4078266 - MSE: 1.604506441779921 - Train Accuracy: 0.8402778  
 epoch: 98 - cost: 0.3884541 - MSE: 1.6430448849900285 - Train Accuracy: 0.8541667  
 epoch: 99 - cost: 0.37848768 - MSE: 1.7137334224424587 - Train Accuracy: 0.8472222  
 epoch: 100 - cost: 0.39623368 - MSE: 1.780706623395657 - Train Accuracy: 0.8333333  
 epoch: 101 - cost: 0.49207872 - MSE: 2.099846789295073 - Train Accuracy: 0.7777778  
 epoch: 102 - cost: 0.8161267 - MSE: 2.488394750895374 - Train Accuracy: 0.5972222  
 epoch: 103 - cost: 0.5329218 - MSE: 1.5471272639501168 - Train Accuracy: 0.7222222  
 epoch: 104 - cost: 0.4523207 - MSE: 1.4557866959363632 - Train Accuracy: 0.8333333  
 epoch: 105 - cost: 0.41042173 - MSE: 1.7341480998448584 - Train Accuracy: 0.8333333  
 epoch: 106 - cost: 0.3776071 - MSE: 1.9277611067636569 - Train Accuracy: 0.8472222  
 epoch: 107 - cost: 0.35949588 - MSE: 2.0044350891800553 - Train Accuracy: 0.8611111  
 epoch: 108 - cost: 0.34826863 - MSE: 2.056007084390384 - Train Accuracy: 0.8611111  
 epoch: 109 - cost: 0.34348074 - MSE: 2.2166448615491268 - Train Accuracy: 0.8680556  
 epoch: 110 - cost: 0.34862617 - MSE: 2.2485511867291246 - Train Accuracy: 0.875  
 epoch: 111 - cost: 0.39126956 - MSE: 2.69732043858995 - Train Accuracy: 0.8125  
 epoch: 112 - cost: 0.6547732 - MSE: 2.55075846119172 - Train Accuracy: 0.6736111

epoch: 113 - cost: 0.6789092 - MSE: 3.4252919501458385 - Train Accuracy: 0.5972222  
 epoch: 114 - cost: 0.65349865 - MSE: 1.6987792324323856 - Train Accuracy: 0.625  
 epoch: 115 - cost: 0.49422944 - MSE: 1.2173400520183175 - Train Accuracy: 0.8402778  
 epoch: 116 - cost: 0.40478837 - MSE: 1.6625306109855351 - Train Accuracy: 0.8472222  
 epoch: 117 - cost: 0.36494943 - MSE: 2.112363950278269 - Train Accuracy: 0.8472222  
 epoch: 118 - cost: 0.3530032 - MSE: 2.1809524391392654 - Train Accuracy: 0.8680556  
 epoch: 119 - cost: 0.35412773 - MSE: 2.5909266524590726 - Train Accuracy: 0.8611111  
 epoch: 120 - cost: 0.42517638 - MSE: 2.2106092480322146 - Train Accuracy: 0.8055556  
 epoch: 121 - cost: 0.633237 - MSE: 3.644907356006231 - Train Accuracy: 0.6736111  
 epoch: 122 - cost: 0.9758899 - MSE: 2.7870351711528896 - Train Accuracy: 0.5625  
 epoch: 123 - cost: 0.5692002 - MSE: 1.2469703908981806 - Train Accuracy: 0.7361111  
 epoch: 124 - cost: 0.5317484 - MSE: 1.2814908920680173 - Train Accuracy: 0.7777778  
 epoch: 125 - cost: 0.49536303 - MSE: 1.3877628246457168 - Train Accuracy: 0.8055556  
 epoch: 126 - cost: 0.46615568 - MSE: 1.5342025430971293 - Train Accuracy: 0.7916667  
 epoch: 127 - cost: 0.4411406 - MSE: 1.7044561947654844 - Train Accuracy: 0.7986111  
 epoch: 128 - cost: 0.42318687 - MSE: 1.8834102457600634 - Train Accuracy: 0.7986111  
 epoch: 129 - cost: 0.40857896 - MSE: 2.017395561933359 - Train Accuracy: 0.8125  
 epoch: 130 - cost: 0.39451644 - MSE: 2.190542769315599 - Train Accuracy: 0.8263889  
 epoch: 131 - cost: 0.38170174 - MSE: 2.351743683768694 - Train Accuracy: 0.8194444  
 epoch: 132 - cost: 0.37329218 - MSE: 2.4149140991549 - Train Accuracy: 0.8541667  
 epoch: 133 - cost: 0.37683493 - MSE: 2.7488461952745937 - Train Accuracy: 0.8125  
 epoch: 134 - cost: 0.45974147 - MSE: 2.612868959528574 - Train Accuracy: 0.7916667  
 epoch: 135 - cost: 0.70107466 - MSE: 4.207301340713685 - Train Accuracy: 0.6180556  
 epoch: 136 - cost: 1.2179639 - MSE: 3.3921287784821215 - Train Accuracy: 0.5347222  
 epoch: 137 - cost: 0.5847136 - MSE: 1.2208213640450494 - Train Accuracy: 0.7361111  
 epoch: 138 - cost: 0.5029497 - MSE: 1.3239390325619702 - Train Accuracy: 0.8541667  
 epoch: 139 - cost: 0.42788136 - MSE: 1.9094718485178706 - Train Accuracy: 0.8541667  
 epoch: 140 - cost: 0.39732254 - MSE: 2.191409073833615 - Train Accuracy: 0.8611111  
 epoch: 141 - cost: 0.37446386 - MSE: 2.270091267203632 - Train Accuracy: 0.8611111  
 epoch: 142 - cost: 0.3547245 - MSE: 2.4001977187905448 - Train Accuracy: 0.8819444  
 epoch: 143 - cost: 0.33738837 - MSE: 2.4976652552660523 - Train Accuracy: 0.8819444  
 epoch: 144 - cost: 0.3240252 - MSE: 2.5523885143923892 - Train Accuracy: 0.8819444  
 epoch: 145 - cost: 0.3133229 - MSE: 2.6981224349222663 - Train Accuracy: 0.8819444  
 epoch: 146 - cost: 0.3046486 - MSE: 2.6353194104614874 - Train Accuracy: 0.8819444  
 epoch: 147 - cost: 0.29907715 - MSE: 2.863749844454815 - Train Accuracy: 0.8888889  
 epoch: 148 - cost: 0.30914673 - MSE: 2.6013741058399886 - Train Accuracy: 0.875  
 epoch: 149 - cost: 0.39294317 - MSE: 3.8614316847829477 - Train Accuracy: 0.8055556  
 epoch: 150 - cost: 0.83447224 - MSE: 2.8645294650523967 - Train Accuracy: 0.6180556  
 epoch: 151 - cost: 0.5370313 - MSE: 2.9008599124858923 - Train Accuracy: 0.6736111  
 epoch: 152 - cost: 0.44238436 - MSE: 1.575271352334907 - Train Accuracy: 0.8125  
 epoch: 153 - cost: 0.3525261 - MSE: 2.1605274784362947 - Train Accuracy: 0.8680556  
 epoch: 154 - cost: 0.32612878 - MSE: 2.1433228913719207 - Train Accuracy: 0.875  
 epoch: 155 - cost: 0.31070194 - MSE: 2.6670597115490833 - Train Accuracy: 0.8958333  
 epoch: 156 - cost: 0.3083966 - MSE: 2.3042244737678685 - Train Accuracy: 0.8819444  
 epoch: 157 - cost: 0.3384055 - MSE: 3.2550163979792957 - Train Accuracy: 0.8611111  
 epoch: 158 - cost: 0.49066815 - MSE: 2.1758780019032935 - Train Accuracy: 0.7638889  
 epoch: 159 - cost: 0.552137 - MSE: 4.075157058590407 - Train Accuracy: 0.6944444  
 epoch: 160 - cost: 0.8021578 - MSE: 2.1503625402311437 - Train Accuracy: 0.5902778  
 epoch: 161 - cost: 0.50673795 - MSE: 1.18514614825403 - Train Accuracy: 0.8194444  
 epoch: 162 - cost: 0.4160075 - MSE: 1.4899947193101553 - Train Accuracy: 0.875  
 epoch: 163 - cost: 0.3489678 - MSE: 1.9322621552083574 - Train Accuracy: 0.875  
 epoch: 164 - cost: 0.3111412 - MSE: 2.4777169490433133 - Train Accuracy: 0.8888889  
 epoch: 165 - cost: 0.29299226 - MSE: 2.6155545391658697 - Train Accuracy: 0.8819444  
 epoch: 166 - cost: 0.28477362 - MSE: 2.987425792133554 - Train Accuracy: 0.8888889  
 epoch: 167 - cost: 0.27950874 - MSE: 2.760055205485976 - Train Accuracy: 0.8958333  
 epoch: 168 - cost: 0.30578378 - MSE: 3.5953929120132466 - Train Accuracy: 0.8819444  
 epoch: 169 - cost: 0.47053856 - MSE: 2.4470784843164677 - Train Accuracy: 0.7847222  
 epoch: 170 - cost: 0.6554014 - MSE: 5.1861435574796175 - Train Accuracy: 0.6388889  
 epoch: 171 - cost: 1.0670204 - MSE: 2.800487689471177 - Train Accuracy: 0.5486111  
 epoch: 172 - cost: 0.6054626 - MSE: 0.8926094627007376 - Train Accuracy: 0.6944444  
 epoch: 173 - cost: 0.5770752 - MSE: 0.9370597831250914 - Train Accuracy: 0.7222222  
 epoch: 174 - cost: 0.5352741 - MSE: 1.0320906401959393 - Train Accuracy: 0.7847222  
 epoch: 175 - cost: 0.47789034 - MSE: 1.2545637587523535 - Train Accuracy: 0.8125  
 epoch: 176 - cost: 0.4241405 - MSE: 1.5452016929039376 - Train Accuracy: 0.8333333  
 epoch: 177 - cost: 0.38912842 - MSE: 1.770136903456392 - Train Accuracy: 0.8333333  
 epoch: 178 - cost: 0.35805258 - MSE: 1.9643349891156134 - Train Accuracy: 0.8541667  
 epoch: 179 - cost: 0.33199632 - MSE: 2.2248665508253977 - Train Accuracy: 0.875  
 epoch: 180 - cost: 0.31317684 - MSE: 2.417683087130407 - Train Accuracy: 0.8888889  
 epoch: 181 - cost: 0.30179918 - MSE: 2.6115267342774793 - Train Accuracy: 0.8958333  
 epoch: 182 - cost: 0.2962359 - MSE: 2.546534166571681 - Train Accuracy: 0.8888889



epoch: 183 - cost: 0.29979268 - MSE: 3.035651480424137 - Train Accuracy: 0.8819444  
 epoch: 184 - cost: 0.33724084 - MSE: 2.57976428999409 - Train Accuracy: 0.8472222  
 epoch: 185 - cost: 0.51965714 - MSE: 4.982667040877872 - Train Accuracy: 0.7361111  
 epoch: 186 - cost: 1.1775069 - MSE: 3.8936076914715616 - Train Accuracy: 0.5555556  
 epoch: 187 - cost: 0.47815186 - MSE: 2.183582506253672 - Train Accuracy: 0.7083333  
 epoch: 188 - cost: 0.37856755 - MSE: 1.8686277373673703 - Train Accuracy: 0.8888889  
 epoch: 189 - cost: 0.34228313 - MSE: 1.9765394129652765 - Train Accuracy: 0.9097222  
 epoch: 190 - cost: 0.31830257 - MSE: 2.3657429372863996 - Train Accuracy: 0.9027778  
 epoch: 191 - cost: 0.3057934 - MSE: 2.2368413797786286 - Train Accuracy: 0.8958333  
 epoch: 192 - cost: 0.2976979 - MSE: 2.696895069205701 - Train Accuracy: 0.9027778  
 epoch: 193 - cost: 0.30455577 - MSE: 2.1167002286603736 - Train Accuracy: 0.8888889  
 epoch: 194 - cost: 0.30181348 - MSE: 3.311816886803391 - Train Accuracy: 0.8888889  
 epoch: 195 - cost: 0.3590214 - MSE: 2.047063472624452 - Train Accuracy: 0.8472222  
 epoch: 196 - cost: 0.35594776 - MSE: 3.991021319372054 - Train Accuracy: 0.8125  
 epoch: 197 - cost: 0.557298 - MSE: 2.0977613111754008 - Train Accuracy: 0.7083333  
 epoch: 198 - cost: 0.38559866 - MSE: 3.582830664135188 - Train Accuracy: 0.8194444  
 epoch: 199 - cost: 0.38894188 - MSE: 1.6372877242963086 - Train Accuracy: 0.8263889  
 epoch: 200 - cost: 0.3068723 - MSE: 3.40056556857602 - Train Accuracy: 0.8402778  
 epoch: 201 - cost: 0.35219842 - MSE: 2.1277145078269544 - Train Accuracy: 0.8402778  
 epoch: 202 - cost: 0.31554565 - MSE: 3.844540815671091 - Train Accuracy: 0.8402778  
 epoch: 203 - cost: 0.43746102 - MSE: 2.145569459660208 - Train Accuracy: 0.8125  
 epoch: 204 - cost: 0.41949 - MSE: 4.537620100880813 - Train Accuracy: 0.7986111  
 epoch: 205 - cost: 0.6360148 - MSE: 1.9785081127453854 - Train Accuracy: 0.6388889  
 epoch: 206 - cost: 0.36030924 - MSE: 1.6442955251251277 - Train Accuracy: 0.9097222  
 epoch: 207 - cost: 0.2965588 - MSE: 2.1577902208779047 - Train Accuracy: 0.8888889  
 epoch: 208 - cost: 0.263603 - MSE: 2.7827828037785958 - Train Accuracy: 0.9027778  
 epoch: 209 - cost: 0.24722998 - MSE: 2.881675545261368 - Train Accuracy: 0.9027778  
 epoch: 210 - cost: 0.23789841 - MSE: 3.2879387958526913 - Train Accuracy: 0.9097222  
 epoch: 211 - cost: 0.23462135 - MSE: 3.075954118508342 - Train Accuracy: 0.8958333  
 epoch: 212 - cost: 0.24475098 - MSE: 3.9006581921859054 - Train Accuracy: 0.9097222  
 epoch: 213 - cost: 0.3140742 - MSE: 2.655140685610329 - Train Accuracy: 0.8611111  
 epoch: 214 - cost: 0.41563773 - MSE: 5.471355932757643 - Train Accuracy: 0.7986111  
 epoch: 215 - cost: 1.0211979 - MSE: 3.252489811025443 - Train Accuracy: 0.5625  
 epoch: 216 - cost: 0.46667683 - MSE: 1.8767286325206787 - Train Accuracy: 0.75  
 epoch: 217 - cost: 0.35986567 - MSE: 1.6356875458892748 - Train Accuracy: 0.9027778  
 epoch: 218 - cost: 0.31810272 - MSE: 2.218884062131184 - Train Accuracy: 0.9097222  
 epoch: 219 - cost: 0.2892236 - MSE: 1.8945725248636525 - Train Accuracy: 0.9027778  
 epoch: 220 - cost: 0.26826376 - MSE: 2.7957093227119247 - Train Accuracy: 0.9097222  
 epoch: 221 - cost: 0.25893503 - MSE: 2.2252526778431734 - Train Accuracy: 0.9097222  
 epoch: 222 - cost: 0.25358978 - MSE: 3.343484787402879 - Train Accuracy: 0.9027778  
 epoch: 223 - cost: 0.28266335 - MSE: 2.305498857975462 - Train Accuracy: 0.8819444  
 epoch: 224 - cost: 0.322415 - MSE: 4.442705563792617 - Train Accuracy: 0.8333333  
 epoch: 225 - cost: 0.6129081 - MSE: 2.2922111851060287 - Train Accuracy: 0.6944444  
 epoch: 226 - cost: 0.39139783 - MSE: 3.870657538021384 - Train Accuracy: 0.8125  
 epoch: 227 - cost: 0.37235335 - MSE: 1.4076271004146226 - Train Accuracy: 0.8333333  
 epoch: 228 - cost: 0.26037443 - MSE: 3.3031453675302034 - Train Accuracy: 0.9027778  
 epoch: 229 - cost: 0.25130033 - MSE: 2.446566908463988 - Train Accuracy: 0.9097222  
 epoch: 230 - cost: 0.24495149 - MSE: 3.910454911221798 - Train Accuracy: 0.9097222  
 epoch: 231 - cost: 0.26048014 - MSE: 2.5640422404608803 - Train Accuracy: 0.8888889  
 epoch: 232 - cost: 0.27726078 - MSE: 4.6278883137163005 - Train Accuracy: 0.8680556  
 epoch: 233 - cost: 0.46795422 - MSE: 2.4243408626665985 - Train Accuracy: 0.7708333  
 epoch: 234 - cost: 0.6038029 - MSE: 6.605568808550418 - Train Accuracy: 0.6805556  
 epoch: 235 - cost: 1.0003562 - MSE: 2.3651057865637157 - Train Accuracy: 0.5625  
 epoch: 236 - cost: 0.6002393 - MSE: 0.8845416203615382 - Train Accuracy: 0.6319444  
 epoch: 237 - cost: 0.5552728 - MSE: 0.9653561175952311 - Train Accuracy: 0.7152778  
 epoch: 238 - cost: 0.48741668 - MSE: 1.2685216017762988 - Train Accuracy: 0.8125  
 epoch: 239 - cost: 0.41207618 - MSE: 1.7660746718102347 - Train Accuracy: 0.8680556  
 epoch: 240 - cost: 0.3530301 - MSE: 2.2056059168434596 - Train Accuracy: 0.8611111  
 epoch: 241 - cost: 0.31799096 - MSE: 2.6775315729676437 - Train Accuracy: 0.8819444  
 epoch: 242 - cost: 0.29269087 - MSE: 2.8949527171300016 - Train Accuracy: 0.8680556  
 epoch: 243 - cost: 0.2752458 - MSE: 3.0323057823378092 - Train Accuracy: 0.8958333  
 epoch: 244 - cost: 0.2582835 - MSE: 3.4368196228090735 - Train Accuracy: 0.9027778  
 epoch: 245 - cost: 0.25937706 - MSE: 3.1217971504420765 - Train Accuracy: 0.8958333  
 epoch: 246 - cost: 0.25717974 - MSE: 4.259625089058635 - Train Accuracy: 0.9097222  
 epoch: 247 - cost: 0.30278742 - MSE: 3.2589570312618132 - Train Accuracy: 0.8472222  
 epoch: 248 - cost: 0.35286242 - MSE: 5.893390729701902 - Train Accuracy: 0.8402778  
 epoch: 249 - cost: 0.6301288 - MSE: 3.5532345381818646 - Train Accuracy: 0.7083333  
 epoch: 250 - cost: 0.7644427 - MSE: 7.066371764053374 - Train Accuracy: 0.6111111  
 epoch: 251 - cost: 0.80857617 - MSE: 1.8035109285344977 - Train Accuracy: 0.5416667  
 epoch: 252 - cost: 0.5961165 - MSE: 1.0675345192149486 - Train Accuracy: 0.6180556

epoch: 253 - cost: 0.50250185 - MSE: 1.1697490932932106 - Train Accuracy: 0.7638889  
 epoch: 254 - cost: 0.4173618 - MSE: 1.4377626482512902 - Train Accuracy: 0.8263889  
 epoch: 255 - cost: 0.3711387 - MSE: 1.5355259866466924 - Train Accuracy: 0.8402778  
 epoch: 256 - cost: 0.3302256 - MSE: 1.6130772406289136 - Train Accuracy: 0.8680556  
 epoch: 257 - cost: 0.30203965 - MSE: 1.9548726671197554 - Train Accuracy: 0.875  
 epoch: 258 - cost: 0.28921264 - MSE: 2.03406307325995 - Train Accuracy: 0.8819444  
 epoch: 259 - cost: 0.29501328 - MSE: 2.6718586105555584 - Train Accuracy: 0.8402778  
 epoch: 260 - cost: 0.33416018 - MSE: 2.439618833703465 - Train Accuracy: 0.8263889  
 epoch: 261 - cost: 0.42057917 - MSE: 3.985031916770898 - Train Accuracy: 0.7708333  
 epoch: 262 - cost: 0.80244756 - MSE: 3.3753245912550627 - Train Accuracy: 0.5833333  
 epoch: 263 - cost: 0.58974695 - MSE: 3.805487911050917 - Train Accuracy: 0.5486111  
 epoch: 264 - cost: 0.38841975 - MSE: 1.1956493910884611 - Train Accuracy: 0.8263889  
 epoch: 265 - cost: 0.30784792 - MSE: 1.7150264371524866 - Train Accuracy: 0.8611111  
 epoch: 266 - cost: 0.2611268 - MSE: 1.9086305578556193 - Train Accuracy: 0.8958333  
 epoch: 267 - cost: 0.2337261 - MSE: 2.3375834979873136 - Train Accuracy: 0.9236111  
 epoch: 268 - cost: 0.2224492 - MSE: 2.3016065973841813 - Train Accuracy: 0.9027778  
 epoch: 269 - cost: 0.22043297 - MSE: 2.959646796428705 - Train Accuracy: 0.9097222  
 epoch: 270 - cost: 0.24717031 - MSE: 2.418891411099666 - Train Accuracy: 0.8888889  
 epoch: 271 - cost: 0.2845012 - MSE: 4.0606586215133325 - Train Accuracy: 0.8680556  
 epoch: 272 - cost: 0.4879643 - MSE: 2.7582392866736805 - Train Accuracy: 0.7708333  
 epoch: 273 - cost: 0.6649805 - MSE: 6.312561733434577 - Train Accuracy: 0.6666667  
 epoch: 274 - cost: 0.94404095 - MSE: 2.485667286637343 - Train Accuracy: 0.5555556  
 epoch: 275 - cost: 0.57342625 - MSE: 0.8061623324418711 - Train Accuracy: 0.7430556  
 epoch: 276 - cost: 0.5223256 - MSE: 0.9740117474169689 - Train Accuracy: 0.7708333  
 epoch: 277 - cost: 0.46631548 - MSE: 1.1899833257610108 - Train Accuracy: 0.7916667  
 epoch: 278 - cost: 0.40497276 - MSE: 1.3661719310227973 - Train Accuracy: 0.8611111  
 epoch: 279 - cost: 0.33856848 - MSE: 1.6252019852227302 - Train Accuracy: 0.875  
 epoch: 280 - cost: 0.28082252 - MSE: 2.079049288790296 - Train Accuracy: 0.9097222  
 epoch: 281 - cost: 0.24706657 - MSE: 3.0009266723908823 - Train Accuracy: 0.9027778  
 epoch: 282 - cost: 0.23386638 - MSE: 3.170173992475972 - Train Accuracy: 0.9236111  
 epoch: 283 - cost: 0.23671757 - MSE: 3.545936092138108 - Train Accuracy: 0.8680556  
 epoch: 284 - cost: 0.27221838 - MSE: 3.877523706047198 - Train Accuracy: 0.9027778  
 epoch: 285 - cost: 0.44228035 - MSE: 5.209497601704859 - Train Accuracy: 0.8125  
 epoch: 286 - cost: 1.0009016 - MSE: 7.452763547762988 - Train Accuracy: 0.5555556  
 epoch: 287 - cost: 1.4643434 - MSE: 5.676704089751834 - Train Accuracy: 0.5486111  
 epoch: 288 - cost: 0.5770066 - MSE: 1.4046045635556237 - Train Accuracy: 0.6527778  
 epoch: 289 - cost: 0.50355786 - MSE: 1.5525277530798651 - Train Accuracy: 0.7777778  
 epoch: 290 - cost: 0.43128347 - MSE: 1.8820729203822306 - Train Accuracy: 0.8402778  
 epoch: 291 - cost: 0.3968856 - MSE: 1.8962186192672819 - Train Accuracy: 0.8680556  
 epoch: 292 - cost: 0.36246288 - MSE: 2.1794508893641327 - Train Accuracy: 0.8472222  
 epoch: 293 - cost: 0.33423036 - MSE: 2.161017450090211 - Train Accuracy: 0.875  
 epoch: 294 - cost: 0.2996687 - MSE: 2.4446096769636063 - Train Accuracy: 0.875  
 epoch: 295 - cost: 0.27486143 - MSE: 2.5813243607402576 - Train Accuracy: 0.8958333  
 epoch: 296 - cost: 0.24816185 - MSE: 2.9579890359721612 - Train Accuracy: 0.9097222  
 epoch: 297 - cost: 0.2218308 - MSE: 3.1947669012716715 - Train Accuracy: 0.9305556  
 epoch: 298 - cost: 0.20893793 - MSE: 3.478216398397218 - Train Accuracy: 0.9305556  
 epoch: 299 - cost: 0.20203084 - MSE: 3.5225686074362885 - Train Accuracy: 0.9375  
 epoch: 300 - cost: 0.20488757 - MSE: 3.969378635825872 - Train Accuracy: 0.9236111  
 epoch: 301 - cost: 0.24266966 - MSE: 3.6599372724317965 - Train Accuracy: 0.8888889  
 epoch: 302 - cost: 0.28601792 - MSE: 5.184406469841229 - Train Accuracy: 0.8611111  
 epoch: 303 - cost: 0.5342914 - MSE: 3.992935772446608 - Train Accuracy: 0.7222222  
 epoch: 304 - cost: 0.6161641 - MSE: 7.342572041245344 - Train Accuracy: 0.6875  
 epoch: 305 - cost: 0.7366675 - MSE: 3.2585338847130814 - Train Accuracy: 0.6041667  
 epoch: 306 - cost: 0.47987598 - MSE: 2.1976978702700967 - Train Accuracy: 0.75  
 epoch: 307 - cost: 0.4101572 - MSE: 2.2903860794504984 - Train Accuracy: 0.8472222  
 epoch: 308 - cost: 0.3396865 - MSE: 2.5737899168692335 - Train Accuracy: 0.9027778  
 epoch: 309 - cost: 0.28350666 - MSE: 2.907818287088599 - Train Accuracy: 0.9027778  
 epoch: 310 - cost: 0.24479696 - MSE: 3.296902883386262 - Train Accuracy: 0.9097222  
 epoch: 311 - cost: 0.22183676 - MSE: 3.8146441114885006 - Train Accuracy: 0.9027778  
 epoch: 312 - cost: 0.20658128 - MSE: 4.022823164960911 - Train Accuracy: 0.9166667  
 epoch: 313 - cost: 0.1919349 - MSE: 4.462211683166927 - Train Accuracy: 0.9236111  
 epoch: 314 - cost: 0.18382591 - MSE: 4.720123408774649 - Train Accuracy: 0.9166667  
 epoch: 315 - cost: 0.17552382 - MSE: 4.823157574886611 - Train Accuracy: 0.9513889  
 epoch: 316 - cost: 0.17006324 - MSE: 5.195059127317051 - Train Accuracy: 0.9097222  
 epoch: 317 - cost: 0.16427277 - MSE: 5.518704677100899 - Train Accuracy: 0.9513889  
 epoch: 318 - cost: 0.16122691 - MSE: 5.613016654969054 - Train Accuracy: 0.9166667  
 epoch: 319 - cost: 0.16526492 - MSE: 6.014265998550898 - Train Accuracy: 0.9652778  
 epoch: 320 - cost: 0.17893425 - MSE: 6.080999091403006 - Train Accuracy: 0.9097222  
 epoch: 321 - cost: 0.2305257 - MSE: 7.283838135380728 - Train Accuracy: 0.9027778  
 epoch: 322 - cost: 0.3954059 - MSE: 6.162630752849687 - Train Accuracy: 0.8125



epoch: 323 - cost: 0.7760947 - MSE: 10.29049184152609 - Train Accuracy: 0.6388889  
 epoch: 324 - cost: 1.3407246 - MSE: 5.137610448348185 - Train Accuracy: 0.5347222  
 epoch: 325 - cost: 0.5009627 - MSE: 1.8753459520412228 - Train Accuracy: 0.7847222  
 epoch: 326 - cost: 0.39991233 - MSE: 2.1559073606630674 - Train Accuracy: 0.9166667  
 epoch: 327 - cost: 0.33526263 - MSE: 2.6098591421999586 - Train Accuracy: 0.9305556  
 epoch: 328 - cost: 0.31010967 - MSE: 2.741504810389863 - Train Accuracy: 0.9444444  
 epoch: 329 - cost: 0.3112248 - MSE: 3.619916193144756 - Train Accuracy: 0.8819444  
 epoch: 330 - cost: 0.3198318 - MSE: 3.127234372812108 - Train Accuracy: 0.8888889  
 epoch: 331 - cost: 0.25775594 - MSE: 4.237093991650611 - Train Accuracy: 0.9166667  
 epoch: 332 - cost: 0.23241417 - MSE: 4.608278481972558 - Train Accuracy: 0.9305556  
 epoch: 333 - cost: 0.2229492 - MSE: 4.9232271481334555 - Train Accuracy: 0.9375  
 epoch: 334 - cost: 0.22180846 - MSE: 5.397679049265259 - Train Accuracy: 0.9305556  
 epoch: 335 - cost: 0.24208921 - MSE: 5.536498524523855 - Train Accuracy: 0.9097222  
 epoch: 336 - cost: 0.24467815 - MSE: 6.383197658116509 - Train Accuracy: 0.8958333  
 epoch: 337 - cost: 0.32371023 - MSE: 6.357222585583397 - Train Accuracy: 0.8541667  
 epoch: 338 - cost: 0.22061595 - MSE: 7.06635142244229 - Train Accuracy: 0.9305556  
 epoch: 339 - cost: 0.23581007 - MSE: 6.085940962314193 - Train Accuracy: 0.9027778  
 epoch: 340 - cost: 0.1973355 - MSE: 7.105936752573133 - Train Accuracy: 0.9444444  
 epoch: 341 - cost: 0.22624643 - MSE: 7.557859621419258 - Train Accuracy: 0.9027778  
 epoch: 342 - cost: 0.19361195 - MSE: 7.945895679644382 - Train Accuracy: 0.9444444  
 epoch: 343 - cost: 0.2427969 - MSE: 7.677597771212009 - Train Accuracy: 0.8819444  
 epoch: 344 - cost: 0.18528642 - MSE: 8.19673716374047 - Train Accuracy: 0.9583333  
 epoch: 345 - cost: 0.1967864 - MSE: 7.781248261049385 - Train Accuracy: 0.9097222  
 epoch: 346 - cost: 0.19099285 - MSE: 8.604726728555544 - Train Accuracy: 0.9375  
 epoch: 347 - cost: 0.27200717 - MSE: 8.574059644813705 - Train Accuracy: 0.8680556  
 epoch: 348 - cost: 0.26000133 - MSE: 9.089472855864791 - Train Accuracy: 0.9166667  
 epoch: 349 - cost: 0.36030325 - MSE: 7.000542036030186 - Train Accuracy: 0.8402778  
 epoch: 350 - cost: 0.2721054 - MSE: 8.785528693350695 - Train Accuracy: 0.8958333  
 epoch: 351 - cost: 0.33676985 - MSE: 6.509250612469357 - Train Accuracy: 0.8263889  
 epoch: 352 - cost: 0.23231438 - MSE: 8.259556292652816 - Train Accuracy: 0.9375  
 epoch: 353 - cost: 0.19699328 - MSE: 6.24620380349005 - Train Accuracy: 0.9097222  
 epoch: 354 - cost: 0.16213433 - MSE: 7.701918719672292 - Train Accuracy: 0.9444444  
 epoch: 355 - cost: 0.19067428 - MSE: 7.658591494053681 - Train Accuracy: 0.9027778  
 epoch: 356 - cost: 0.14262918 - MSE: 8.184667155600515 - Train Accuracy: 0.9583333  
 epoch: 357 - cost: 0.13292831 - MSE: 7.937134081539025 - Train Accuracy: 0.9513889  
 epoch: 358 - cost: 0.13084364 - MSE: 8.584353202075334 - Train Accuracy: 0.9652778  
 epoch: 359 - cost: 0.16373096 - MSE: 8.738333918508497 - Train Accuracy: 0.9236111  
 epoch: 360 - cost: 0.21236724 - MSE: 9.840850124154692 - Train Accuracy: 0.9097222  
 epoch: 361 - cost: 0.6753416 - MSE: 9.976543719258313 - Train Accuracy: 0.7291667  
 epoch: 362 - cost: 1.449077 - MSE: 15.954289008592301 - Train Accuracy: 0.5416667  
 epoch: 363 - cost: 1.0150079 - MSE: 3.915375097148284 - Train Accuracy: 0.5486111  
 epoch: 364 - cost: 0.7531874 - MSE: 1.6401795756321944 - Train Accuracy: 0.5555556  
 epoch: 365 - cost: 0.71134186 - MSE: 1.4684031247960805 - Train Accuracy: 0.5555556  
 epoch: 366 - cost: 0.685335 - MSE: 1.4070694189653596 - Train Accuracy: 0.5555556  
 epoch: 367 - cost: 0.6663545 - MSE: 1.438360899333547 - Train Accuracy: 0.5694444  
 epoch: 368 - cost: 0.65136635 - MSE: 1.5469181257862834 - Train Accuracy: 0.6041667  
 epoch: 369 - cost: 0.6407366 - MSE: 1.649001682250814 - Train Accuracy: 0.6180556  
 epoch: 370 - cost: 0.62967557 - MSE: 1.7658864532238663 - Train Accuracy: 0.6527778  
 epoch: 371 - cost: 0.61659026 - MSE: 1.934888729462647 - Train Accuracy: 0.6597222  
 epoch: 372 - cost: 0.6003305 - MSE: 2.1018285510188957 - Train Accuracy: 0.6805556  
 epoch: 373 - cost: 0.5858823 - MSE: 2.269872990626592 - Train Accuracy: 0.6666667  
 epoch: 374 - cost: 0.5674542 - MSE: 2.4846802421718275 - Train Accuracy: 0.6805556  
 epoch: 375 - cost: 0.5334289 - MSE: 2.8229824245055104 - Train Accuracy: 0.7152778  
 epoch: 376 - cost: 0.5073333 - MSE: 3.683688883576174 - Train Accuracy: 0.6736111  
 epoch: 377 - cost: 0.5115884 - MSE: 3.1743959992321398 - Train Accuracy: 0.7291667  
 epoch: 378 - cost: 0.44316596 - MSE: 4.686288517914802 - Train Accuracy: 0.7430556  
 epoch: 379 - cost: 0.47769457 - MSE: 4.311345100823056 - Train Accuracy: 0.7916667  
 epoch: 380 - cost: 0.5160231 - MSE: 6.306526415205488 - Train Accuracy: 0.7013889  
 epoch: 381 - cost: 0.68902665 - MSE: 5.254211544633749 - Train Accuracy: 0.5555556  
 epoch: 382 - cost: 0.5073366 - MSE: 3.2484406625406295 - Train Accuracy: 0.6527778  
 epoch: 383 - cost: 0.43060374 - MSE: 2.668568781877017 - Train Accuracy: 0.7986111  
 epoch: 384 - cost: 0.3776847 - MSE: 3.2371207353908082 - Train Accuracy: 0.8402778  
 epoch: 385 - cost: 0.33904946 - MSE: 3.8633121269976503 - Train Accuracy: 0.8541667  
 epoch: 386 - cost: 0.2982432 - MSE: 4.403041402552923 - Train Accuracy: 0.875  
 epoch: 387 - cost: 0.24958822 - MSE: 5.365522099977511 - Train Accuracy: 0.9027778  
 epoch: 388 - cost: 0.2313808 - MSE: 5.677750671431708 - Train Accuracy: 0.9375  
 epoch: 389 - cost: 0.2867508 - MSE: 7.252844851794391 - Train Accuracy: 0.8472222  
 epoch: 390 - cost: 0.8378818 - MSE: 7.500357100326719 - Train Accuracy: 0.6111111  
 epoch: 391 - cost: 1.9084786 - MSE: 17.49189183104421 - Train Accuracy: 0.5833333  
 epoch: 392 - cost: 0.58324486 - MSE: 1.9095591525273548 - Train Accuracy: 0.7430556

epoch: 393 - cost: 0.5212252 - MSE: 2.334021723315077 - Train Accuracy: 0.8888889  
 epoch: 394 - cost: 0.4859122 - MSE: 2.936374356881297 - Train Accuracy: 0.9027778  
 epoch: 395 - cost: 0.44894463 - MSE: 3.677953176084609 - Train Accuracy: 0.9166667  
 epoch: 396 - cost: 0.40743288 - MSE: 4.595816797087841 - Train Accuracy: 0.9166667  
 epoch: 397 - cost: 0.36510643 - MSE: 5.61576207660938 - Train Accuracy: 0.9305556  
 epoch: 398 - cost: 0.32641205 - MSE: 6.37581755022854 - Train Accuracy: 0.9305556  
 epoch: 399 - cost: 0.29498994 - MSE: 6.777351688017582 - Train Accuracy: 0.9444444  
 epoch: 400 - cost: 0.26863372 - MSE: 7.110240356464017 - Train Accuracy: 0.9444444  
 epoch: 401 - cost: 0.2440548 - MSE: 7.472725388662572 - Train Accuracy: 0.9444444  
 epoch: 402 - cost: 0.22599094 - MSE: 7.255133040348282 - Train Accuracy: 0.9513889  
 epoch: 403 - cost: 0.21331303 - MSE: 8.02999442712993 - Train Accuracy: 0.9375  
 epoch: 404 - cost: 0.2415468 - MSE: 6.92084494054803 - Train Accuracy: 0.8958333  
 epoch: 405 - cost: 0.4793928 - MSE: 10.760327927880443 - Train Accuracy: 0.7777778  
 epoch: 406 - cost: 1.4175017 - MSE: 8.647847290345894 - Train Accuracy: 0.5  
 epoch: 407 - cost: 1.0583743 - MSE: 10.330204306847474 - Train Accuracy: 0.6041667  
 epoch: 408 - cost: 0.52345955 - MSE: 2.382736221820395 - Train Accuracy: 0.6319444  
 epoch: 409 - cost: 0.48399863 - MSE: 2.5291646558131884 - Train Accuracy: 0.6736111  
 epoch: 410 - cost: 0.4384536 - MSE: 2.6682519710201915 - Train Accuracy: 0.7430556  
 epoch: 411 - cost: 0.3941431 - MSE: 2.729647890525046 - Train Accuracy: 0.8125  
 epoch: 412 - cost: 0.35110417 - MSE: 2.8095661574484327 - Train Accuracy: 0.9027778  
 epoch: 413 - cost: 0.31153286 - MSE: 3.1360482365704234 - Train Accuracy: 0.9305556  
 epoch: 414 - cost: 0.27389574 - MSE: 3.6056889571834456 - Train Accuracy: 0.9375  
 epoch: 415 - cost: 0.24333662 - MSE: 3.787760325368568 - Train Accuracy: 0.9722222  
 epoch: 416 - cost: 0.21759926 - MSE: 4.496722307182841 - Train Accuracy: 0.9583333  
 epoch: 417 - cost: 0.20862845 - MSE: 4.246654610218412 - Train Accuracy: 0.9513889  
 epoch: 418 - cost: 0.29046232 - MSE: 6.083012129888128 - Train Accuracy: 0.8333333  
 epoch: 419 - cost: 0.71109813 - MSE: 4.147785336104414 - Train Accuracy: 0.6458333  
 epoch: 420 - cost: 1.6017325 - MSE: 11.321287812081467 - Train Accuracy: 0.5625  
 epoch: 421 - cost: 0.55618083 - MSE: 1.2911898818848342 - Train Accuracy: 0.6666667  
 epoch: 422 - cost: 0.48850143 - MSE: 1.6978404946227192 - Train Accuracy: 0.8819444  
 epoch: 423 - cost: 0.42063868 - MSE: 2.7534468800499714 - Train Accuracy: 0.8958333  
 epoch: 424 - cost: 0.3618971 - MSE: 3.7871384420930134 - Train Accuracy: 0.875  
 epoch: 425 - cost: 0.31625226 - MSE: 4.320982837149462 - Train Accuracy: 0.8888889  
 epoch: 426 - cost: 0.2687116 - MSE: 5.174214877171256 - Train Accuracy: 0.9027778  
 epoch: 427 - cost: 0.23239595 - MSE: 5.685999715748141 - Train Accuracy: 0.9166667  
 epoch: 428 - cost: 0.20587847 - MSE: 6.467707163049076 - Train Accuracy: 0.9236111  
 epoch: 429 - cost: 0.18629853 - MSE: 6.8401411319563765 - Train Accuracy: 0.9375  
 epoch: 430 - cost: 0.16939725 - MSE: 7.08551981162508 - Train Accuracy: 0.9375  
 epoch: 431 - cost: 0.15050937 - MSE: 7.312192191798102 - Train Accuracy: 0.9513889  
 epoch: 432 - cost: 0.13408086 - MSE: 7.275284752067841 - Train Accuracy: 0.9722222  
 epoch: 433 - cost: 0.120611906 - MSE: 7.775876680061822 - Train Accuracy: 0.9583333  
 epoch: 434 - cost: 0.11100218 - MSE: 7.692511207917661 - Train Accuracy: 0.9791667  
 epoch: 435 - cost: 0.106834024 - MSE: 8.361416097041444 - Train Accuracy: 0.9583333  
 epoch: 436 - cost: 0.10521433 - MSE: 7.983538529912196 - Train Accuracy: 0.9791667  
 epoch: 437 - cost: 0.11099116 - MSE: 9.237438548644421 - Train Accuracy: 0.9583333  
 epoch: 438 - cost: 0.12897308 - MSE: 8.40810332249382 - Train Accuracy: 0.9444444  
 epoch: 439 - cost: 0.22146015 - MSE: 10.613011950051476 - Train Accuracy: 0.8958333  
 epoch: 440 - cost: 0.43298352 - MSE: 9.715400700957423 - Train Accuracy: 0.8055556  
 epoch: 441 - cost: 0.85166824 - MSE: 11.255912206332578 - Train Accuracy: 0.6666667  
 epoch: 442 - cost: 0.4632424 - MSE: 4.541968908712786 - Train Accuracy: 0.7291667  
 epoch: 443 - cost: 0.25975612 - MSE: 2.2440532738030563 - Train Accuracy: 0.9027778  
 epoch: 444 - cost: 0.18869917 - MSE: 3.61745553584061 - Train Accuracy: 0.9513889  
 epoch: 445 - cost: 0.15468884 - MSE: 4.578530170620395 - Train Accuracy: 0.9513889  
 epoch: 446 - cost: 0.13574679 - MSE: 5.258622748685154 - Train Accuracy: 0.9513889  
 epoch: 447 - cost: 0.12101564 - MSE: 5.818814335112003 - Train Accuracy: 0.9652778  
 epoch: 448 - cost: 0.10892819 - MSE: 6.367879735726186 - Train Accuracy: 0.9791667  
 epoch: 449 - cost: 0.100065164 - MSE: 6.869424271438975 - Train Accuracy: 0.9791667  
 epoch: 450 - cost: 0.092841186 - MSE: 7.3383485919655635 - Train Accuracy: 0.9791667  
 epoch: 451 - cost: 0.086947374 - MSE: 7.638684347835499 - Train Accuracy: 0.9791667  
 epoch: 452 - cost: 0.08219421 - MSE: 7.9628878123494555 - Train Accuracy: 0.9861111  
 epoch: 453 - cost: 0.07877045 - MSE: 8.202345702957869 - Train Accuracy: 0.9791667  
 epoch: 454 - cost: 0.0756218 - MSE: 8.474079208195413 - Train Accuracy: 0.9791667  
 epoch: 455 - cost: 0.07332989 - MSE: 8.782301955843254 - Train Accuracy: 0.9861111  
 epoch: 456 - cost: 0.07059033 - MSE: 9.016491450306894 - Train Accuracy: 0.9861111  
 epoch: 457 - cost: 0.06891264 - MSE: 9.271182737168166 - Train Accuracy: 0.9861111  
 epoch: 458 - cost: 0.066425286 - MSE: 9.47399375644199 - Train Accuracy: 0.9861111  
 epoch: 459 - cost: 0.064657785 - MSE: 9.71947078409047 - Train Accuracy: 0.9861111  
 epoch: 460 - cost: 0.06341628 - MSE: 9.897657027982849 - Train Accuracy: 0.9861111  
 epoch: 461 - cost: 0.06404204 - MSE: 10.011860491646589 - Train Accuracy: 0.9861111  
 epoch: 462 - cost: 0.06228406 - MSE: 10.38060359189328 - Train Accuracy: 0.9861111



epoch: 463 - cost: 0.06652118 - MSE: 10.344688878998552 - Train Accuracy: 0.9861111  
 epoch: 464 - cost: 0.0659294 - MSE: 10.790694744153448 - Train Accuracy: 0.9722222  
 epoch: 465 - cost: 0.07426366 - MSE: 10.65761740293409 - Train Accuracy: 0.9652778  
 epoch: 466 - cost: 0.076613106 - MSE: 11.334992178568529 - Train Accuracy: 0.9722222  
 epoch: 467 - cost: 0.102450065 - MSE: 10.945119544953412 - Train Accuracy: 0.9375  
 epoch: 468 - cost: 0.15917362 - MSE: 12.649517353216643 - Train Accuracy: 0.9375  
 epoch: 469 - cost: 0.53901017 - MSE: 11.465139910193788 - Train Accuracy: 0.7847222  
 epoch: 470 - cost: 1.2950857 - MSE: 17.87261409005797 - Train Accuracy: 0.5416667  
 epoch: 471 - cost: 1.8224826 - MSE: 13.839565889021921 - Train Accuracy: 0.5833333  
 epoch: 472 - cost: 0.56420356 - MSE: 1.5976573007372281 - Train Accuracy: 0.7361111  
 epoch: 473 - cost: 0.4601601 - MSE: 1.6579905067437302 - Train Accuracy: 0.8194444  
 epoch: 474 - cost: 0.34877157 - MSE: 2.7421894022707605 - Train Accuracy: 0.875  
 epoch: 475 - cost: 0.28188133 - MSE: 3.541855448407293 - Train Accuracy: 0.8958333  
 epoch: 476 - cost: 0.2521502 - MSE: 4.275821778386721 - Train Accuracy: 0.9097222  
 epoch: 477 - cost: 0.22772843 - MSE: 4.412024293823497 - Train Accuracy: 0.9166667  
 epoch: 478 - cost: 0.21175963 - MSE: 5.072733592365568 - Train Accuracy: 0.9305556  
 epoch: 479 - cost: 0.19891316 - MSE: 5.054233290778379 - Train Accuracy: 0.9513889  
 epoch: 480 - cost: 0.19045599 - MSE: 5.80294448485033 - Train Accuracy: 0.9305556  
 epoch: 481 - cost: 0.18201753 - MSE: 5.550852349481037 - Train Accuracy: 0.9583333  
 epoch: 482 - cost: 0.18568648 - MSE: 6.490352780220272 - Train Accuracy: 0.9375  
 epoch: 483 - cost: 0.18103753 - MSE: 5.806512838372715 - Train Accuracy: 0.9513889  
 epoch: 484 - cost: 0.20612736 - MSE: 7.513954583625059 - Train Accuracy: 0.9027778  
 epoch: 485 - cost: 0.2045461 - MSE: 6.476384433901922 - Train Accuracy: 0.9375  
 epoch: 486 - cost: 0.28210804 - MSE: 8.74138482371563 - Train Accuracy: 0.8680556  
 epoch: 487 - cost: 0.36249173 - MSE: 7.519033257242333 - Train Accuracy: 0.8611111  
 epoch: 488 - cost: 0.605137 - MSE: 11.038733979666159 - Train Accuracy: 0.7152778  
 epoch: 489 - cost: 0.31191444 - MSE: 3.9574736653185814 - Train Accuracy: 0.8611111  
 epoch: 490 - cost: 0.21062894 - MSE: 3.967078183097933 - Train Accuracy: 0.9722222  
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 epoch: 493 - cost: 0.122006774 - MSE: 8.009565658291367 - Train Accuracy: 0.9861111  
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 epoch: 496 - cost: 0.09784149 - MSE: 9.28204751992197 - Train Accuracy: 1.0  
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 epoch: 499 - cost: 0.08358935 - MSE: 10.32270056726466 - Train Accuracy: 1.0  
 epoch: 500 - cost: 0.079931766 - MSE: 10.474776513434039 - Train Accuracy: 1.0  
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 epoch: 532 - cost: 0.03251634 - MSE: 11.599514642213613 - Train Accuracy: 1.0



epoch: 533 - cost: 0.03114842 - MSE: 11.693022320413553 - Train Accuracy: 1.0  
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 epoch: 602 - cost: 0.0077660363 - MSE: 19.08144808331246 - Train Accuracy: 1.0

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 epoch: 632 - cost: 0.0055380855 - MSE: 20.726757768047225 - Train Accuracy: 1.0  
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 epoch: 635 - cost: 0.005371221 - MSE: 20.91264211680427 - Train Accuracy: 1.0  
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 epoch: 643 - cost: 0.0049686558 - MSE: 21.272703434329504 - Train Accuracy: 1.0  
 epoch: 644 - cost: 0.0049215457 - MSE: 21.287902004029256 - Train Accuracy: 1.0  
 epoch: 645 - cost: 0.0048795333 - MSE: 21.352028018525193 - Train Accuracy: 1.0  
 epoch: 646 - cost: 0.0048310095 - MSE: 21.368724278707457 - Train Accuracy: 1.0  
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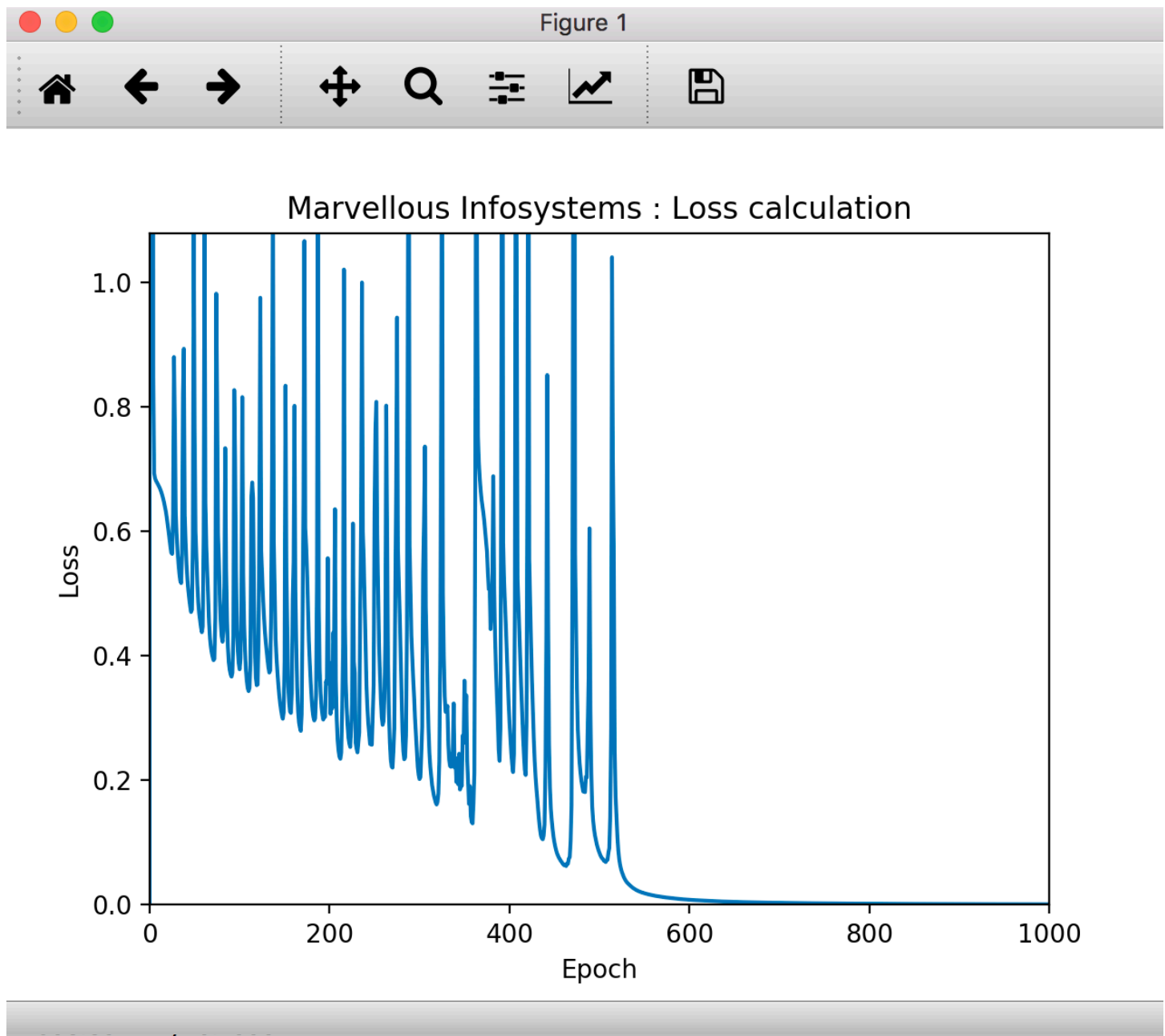
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 epoch: 888 - cost: 0.0012304262 - MSE: 27.792730064780674 - Train Accuracy: 1.0  
 epoch: 889 - cost: 0.0012262687 - MSE: 27.82088273302518 - Train Accuracy: 1.0  
 epoch: 890 - cost: 0.0012218418 - MSE: 27.82734505231399 - Train Accuracy: 1.0  
 epoch: 891 - cost: 0.0012175572 - MSE: 27.85331590494942 - Train Accuracy: 1.0  
 epoch: 892 - cost: 0.0012136465 - MSE: 27.858984475041325 - Train Accuracy: 1.0  
 epoch: 893 - cost: 0.001209309 - MSE: 27.88353991771432 - Train Accuracy: 1.0  
 epoch: 894 - cost: 0.0012053906 - MSE: 27.9092316370197 - Train Accuracy: 1.0  
 epoch: 895 - cost: 0.0012014173 - MSE: 27.910592953193934 - Train Accuracy: 1.0  
 epoch: 896 - cost: 0.0011972261 - MSE: 27.938542770062583 - Train Accuracy: 1.0  
 epoch: 897 - cost: 0.0011935467 - MSE: 27.941846027912586 - Train Accuracy: 1.0  
 epoch: 898 - cost: 0.0011892597 - MSE: 27.969562169854843 - Train Accuracy: 1.0  
 epoch: 899 - cost: 0.0011856656 - MSE: 27.987627975789938 - Train Accuracy: 1.0  
 epoch: 900 - cost: 0.0011815982 - MSE: 27.99561226725211 - Train Accuracy: 1.0  
 epoch: 901 - cost: 0.0011774306 - MSE: 28.023043863968297 - Train Accuracy: 1.0  
 epoch: 902 - cost: 0.0011738754 - MSE: 28.045191327831752 - Train Accuracy: 1.0  
 epoch: 903 - cost: 0.0011698484 - MSE: 28.05347390699672 - Train Accuracy: 1.0  
 epoch: 904 - cost: 0.0011659674 - MSE: 28.074799813820814 - Train Accuracy: 1.0  
 epoch: 905 - cost: 0.0011623303 - MSE: 28.082780159328696 - Train Accuracy: 1.0  
 epoch: 906 - cost: 0.0011583564 - MSE: 28.105023556010376 - Train Accuracy: 1.0  
 epoch: 907 - cost: 0.0011547937 - MSE: 28.131970743187697 - Train Accuracy: 1.0  
 epoch: 908 - cost: 0.0011511561 - MSE: 28.13038574654048 - Train Accuracy: 1.0  
 epoch: 909 - cost: 0.0011471164 - MSE: 28.157726022496643 - Train Accuracy: 1.0  
 epoch: 910 - cost: 0.0011436573 - MSE: 28.164258433611906 - Train Accuracy: 1.0  
 epoch: 911 - cost: 0.001139998 - MSE: 28.191283746310408 - Train Accuracy: 1.0  
 epoch: 912 - cost: 0.0011363792 - MSE: 28.20854011016217 - Train Accuracy: 1.0  
 epoch: 913 - cost: 0.0011326586 - MSE: 28.216455482676654 - Train Accuracy: 1.0  
 epoch: 914 - cost: 0.0011288667 - MSE: 28.24114638371857 - Train Accuracy: 1.0  
 epoch: 915 - cost: 0.0011255728 - MSE: 28.26593490981242 - Train Accuracy: 1.0  
 epoch: 916 - cost: 0.0011222088 - MSE: 28.264702206646753 - Train Accuracy: 1.0  
 epoch: 917 - cost: 0.0011183242 - MSE: 28.29117914220176 - Train Accuracy: 1.0  
 epoch: 918 - cost: 0.0011150035 - MSE: 28.299132857750497 - Train Accuracy: 1.0  
 epoch: 919 - cost: 0.0011115922 - MSE: 28.316441180872978 - Train Accuracy: 1.0  
 epoch: 920 - cost: 0.0011079679 - MSE: 28.342610637489262 - Train Accuracy: 1.0  
 epoch: 921 - cost: 0.0011045614 - MSE: 28.35024081330731 - Train Accuracy: 1.0  
 epoch: 922 - cost: 0.0011011739 - MSE: 28.367532452499812 - Train Accuracy: 1.0  
 epoch: 923 - cost: 0.0010978695 - MSE: 28.39340670333085 - Train Accuracy: 1.0  
 epoch: 924 - cost: 0.0010943266 - MSE: 28.39949636081388 - Train Accuracy: 1.0  
 epoch: 925 - cost: 0.0010908515 - MSE: 28.42351273124252 - Train Accuracy: 1.0  
 epoch: 926 - cost: 0.0010876844 - MSE: 28.42927384348517 - Train Accuracy: 1.0  
 epoch: 927 - cost: 0.0010842431 - MSE: 28.451928253129363 - Train Accuracy: 1.0  
 epoch: 928 - cost: 0.0010811226 - MSE: 28.47112865674276 - Train Accuracy: 1.0  
 epoch: 929 - cost: 0.0010777417 - MSE: 28.478754894707663 - Train Accuracy: 1.0  
 epoch: 930 - cost: 0.0010744544 - MSE: 28.49952857550007 - Train Accuracy: 1.0  
 epoch: 931 - cost: 0.0010714207 - MSE: 28.507617561989814 - Train Accuracy: 1.0  
 epoch: 932 - cost: 0.001068095 - MSE: 28.527261596388055 - Train Accuracy: 1.0  
 epoch: 933 - cost: 0.0010648384 - MSE: 28.552412277479636 - Train Accuracy: 1.0  
 epoch: 934 - cost: 0.0010619638 - MSE: 28.551459047946132 - Train Accuracy: 1.0  
 epoch: 935 - cost: 0.0010584667 - MSE: 28.57672043074565 - Train Accuracy: 1.0  
 epoch: 936 - cost: 0.001055486 - MSE: 28.601760408973263 - Train Accuracy: 1.0  
 epoch: 937 - cost: 0.0010523157 - MSE: 28.603913895662973 - Train Accuracy: 1.0  
 epoch: 938 - cost: 0.0010491078 - MSE: 28.628791081668552 - Train Accuracy: 1.0  
 epoch: 939 - cost: 0.0010461864 - MSE: 28.631741683800758 - Train Accuracy: 1.0  
 epoch: 940 - cost: 0.0010429482 - MSE: 28.654881948199396 - Train Accuracy: 1.0  
 epoch: 941 - cost: 0.0010398912 - MSE: 28.678132899947283 - Train Accuracy: 1.0  
 epoch: 942 - cost: 0.0010369453 - MSE: 28.683810199876703 - Train Accuracy: 1.0  
 epoch: 943 - cost: 0.0010340383 - MSE: 28.70017571380361 - Train Accuracy: 1.0  
 epoch: 944 - cost: 0.0010309899 - MSE: 28.724298371222304 - Train Accuracy: 1.0  
 epoch: 945 - cost: 0.0010279297 - MSE: 28.732220193878785 - Train Accuracy: 1.0  
 epoch: 946 - cost: 0.0010250475 - MSE: 28.748501759117822 - Train Accuracy: 1.0  
 epoch: 947 - cost: 0.0010221158 - MSE: 28.75621979916316 - Train Accuracy: 1.0  
 epoch: 948 - cost: 0.0010190218 - MSE: 28.781099368730096 - Train Accuracy: 1.0  
 epoch: 949 - cost: 0.0010161427 - MSE: 28.799888130009165 - Train Accuracy: 1.0  
 epoch: 950 - cost: 0.0010132523 - MSE: 28.805628804575022 - Train Accuracy: 1.0  
 epoch: 951 - cost: 0.0010103594 - MSE: 28.830007719622873 - Train Accuracy: 1.0  
 epoch: 952 - cost: 0.0010077051 - MSE: 28.846204914164613 - Train Accuracy: 1.0



epoch: 953 - cost: 0.0010046446 - MSE: 28.85362467405137 - Train Accuracy: 1.0  
epoch: 954 - cost: 0.0010017252 - MSE: 28.876126458782107 - Train Accuracy: 1.0  
epoch: 955 - cost: 0.0009990254 - MSE: 28.882046338903862 - Train Accuracy: 1.0  
epoch: 956 - cost: 0.0009960836 - MSE: 28.90445942201927 - Train Accuracy: 1.0  
epoch: 957 - cost: 0.0009934674 - MSE: 28.922740992480435 - Train Accuracy: 1.0  
epoch: 958 - cost: 0.0009906127 - MSE: 28.930027862374384 - Train Accuracy: 1.0  
epoch: 959 - cost: 0.0009878216 - MSE: 28.949472200571627 - Train Accuracy: 1.0  
epoch: 960 - cost: 0.0009852224 - MSE: 28.956694212222875 - Train Accuracy: 1.0  
epoch: 961 - cost: 0.000982427 - MSE: 28.975380944733523 - Train Accuracy: 1.0  
epoch: 962 - cost: 0.0009796559 - MSE: 28.99913583060141 - Train Accuracy: 1.0  
epoch: 963 - cost: 0.0009770811 - MSE: 29.001144667917778 - Train Accuracy: 1.0  
epoch: 964 - cost: 0.0009741984 - MSE: 29.024702849477684 - Train Accuracy: 1.0  
epoch: 965 - cost: 0.00097170036 - MSE: 29.046469173602617 - Train Accuracy: 1.0  
epoch: 966 - cost: 0.0009690374 - MSE: 29.048744835923735 - Train Accuracy: 1.0  
epoch: 967 - cost: 0.0009662581 - MSE: 29.07206132278513 - Train Accuracy: 1.0  
epoch: 968 - cost: 0.00096379954 - MSE: 29.075258035302017 - Train Accuracy: 1.0  
epoch: 969 - cost: 0.00096102967 - MSE: 29.0985432931602 - Train Accuracy: 1.0  
epoch: 970 - cost: 0.0009585224 - MSE: 29.116383126212774 - Train Accuracy: 1.0  
epoch: 971 - cost: 0.0009558721 - MSE: 29.123312165584636 - Train Accuracy: 1.0  
epoch: 972 - cost: 0.0009532422 - MSE: 29.144743771369598 - Train Accuracy: 1.0  
epoch: 973 - cost: 0.0009508201 - MSE: 29.146453851847692 - Train Accuracy: 1.0  
epoch: 974 - cost: 0.0009481284 - MSE: 29.16893281076638 - Train Accuracy: 1.0  
epoch: 975 - cost: 0.0009456697 - MSE: 29.186793988939616 - Train Accuracy: 1.0  
epoch: 976 - cost: 0.00094316184 - MSE: 29.192459449348434 - Train Accuracy: 1.0  
epoch: 977 - cost: 0.00094055344 - MSE: 29.21539966645354 - Train Accuracy: 1.0  
epoch: 978 - cost: 0.00093827065 - MSE: 29.230228415242646 - Train Accuracy: 1.0  
epoch: 979 - cost: 0.0009356176 - MSE: 29.23710359888419 - Train Accuracy: 1.0  
epoch: 980 - cost: 0.0009330881 - MSE: 29.258108163946897 - Train Accuracy: 1.0  
epoch: 981 - cost: 0.00093070016 - MSE: 29.263457363999215 - Train Accuracy: 1.0  
epoch: 982 - cost: 0.000928128 - MSE: 29.284875446700426 - Train Accuracy: 1.0  
epoch: 983 - cost: 0.00092581875 - MSE: 29.305764667210504 - Train Accuracy: 1.0  
epoch: 984 - cost: 0.00092344906 - MSE: 29.307371692492357 - Train Accuracy: 1.0  
epoch: 985 - cost: 0.00092084496 - MSE: 29.329829586213425 - Train Accuracy: 1.0  
epoch: 986 - cost: 0.0009186509 - MSE: 29.34721637116086 - Train Accuracy: 1.0  
epoch: 987 - cost: 0.0009161208 - MSE: 29.353940053466655 - Train Accuracy: 1.0  
epoch: 988 - cost: 0.0009137831 - MSE: 29.372250623330405 - Train Accuracy: 1.0  
epoch: 989 - cost: 0.00091146614 - MSE: 29.37918913010645 - Train Accuracy: 1.0  
epoch: 990 - cost: 0.0009090186 - MSE: 29.396722138063264 - Train Accuracy: 1.0  
epoch: 991 - cost: 0.0009067882 - MSE: 29.419032706090714 - Train Accuracy: 1.0  
epoch: 992 - cost: 0.0009044417 - MSE: 29.421252031369576 - Train Accuracy: 1.0  
epoch: 993 - cost: 0.00090201636 - MSE: 29.4434203292601 - Train Accuracy: 1.0  
epoch: 994 - cost: 0.0008998304 - MSE: 29.448816523949 - Train Accuracy: 1.0  
epoch: 995 - cost: 0.0008974581 - MSE: 29.465957808914627 - Train Accuracy: 1.0  
epoch: 996 - cost: 0.00089518767 - MSE: 29.4878953195942 - Train Accuracy: 1.0  
epoch: 997 - cost: 0.0008929432 - MSE: 29.490858893390698 - Train Accuracy: 1.0  
epoch: 998 - cost: 0.0008905619 - MSE: 29.510764264846078 - Train Accuracy: 1.0  
epoch: 999 - cost: 0.0008884485 - MSE: 29.53115829939033 - Train Accuracy: 1.0

Model saved in file: %s Marvellous



Test Accuracy:

```
[[ -4.446126  0.3697214 ]
 [ -8.845036  7.255663  ]
 [ -0.9535107 -6.2538776 ]
 [ -7.9143634  7.3004293 ]
 [ -9.799102  7.887108  ]
 [  0.8456606 -3.928712  ]
 [-10.320235  6.916441  ]
 [ -3.3817005 -2.3879533 ]
 [ -3.9195924 -0.2883476 ]
 [  3.8292508 -2.3903131 ]
 [  1.8242371 -7.981529  ]
 [ -3.9008675 -1.5346069 ]
 [  2.167184  -6.147563  ]
 [  1.7464296 -8.328248  ]
 [  2.526966  -10.648548 ]
 [  0.26015186 -6.3878922 ]
 [ -1.8562845  1.7887558 ]
 [-10.773588  8.2372675 ]
 [  2.9327252 -8.841003  ]
```



```
[ -2.9956038 -3.8671932 ]  
[ -2.5665708 0.23767853]  
[ -12.18731 7.7599897 ]  
[ -0.67557126 -3.6443543 ]  
[ 0.9363494 -8.39437 ]  
[ 2.133265 -8.524235 ]  
[ -4.8078237 3.2919083 ]  
[ 3.290877 -8.819478 ]  
[ -8.358753 4.6877184 ]  
[ -7.346096 -0.65017146]  
[ -8.995619 4.5229435 ]  
[ 0.9056669 -7.4593496 ]  
[ -5.457081 2.8834348 ]  
[ 0.78741854 0.3215155 ]  
[ 2.9372303 -5.8279386 ]  
[ -6.8188286 5.4872 ]  
[ 1.9168731 -1.6819127 ]  
[ -8.384395 2.8778129 ]  
[ 3.1030192 -1.465939 ]  
[ -1.9057459 -7.860928 ]  
[ 1.9690424 -10.96998 ]  
[ 1.9221525 -4.9256597 ]  
[ 2.093832 -11.014261 ]  
[ -6.176895 3.3870616 ]  
[ -0.95483583 -4.2883067 ]  
[ 2.5443923 -0.63840425]  
[ 2.8351965 -9.131773 ]  
[ -3.2479777 -0.7246959 ]  
[ -2.4649506 -4.1413054 ]  
[ -4.1311016 2.1808329 ]  
[ -8.332326 6.880907 ]  
[ 0.21354352 -2.918889 ]  
[ -7.80213 6.349978 ]  
[ 2.0648932 -8.09214 ]  
[ 2.2642 -4.9337225 ]  
[ 0.3048715 -4.313774 ]  
[ 0.7445554 -3.9163828 ]  
[ 0.3920557 -9.065508 ]  
[ 2.6484592 -6.0532603 ]  
[ 2.7762039 -8.155848 ]  
[ 1.755967 -9.18322 ]  
[ 2.0897872 -8.584969 ]  
[ -2.1575608 -2.848289 ]  
[ -1.3256401 -5.8770237 ]]
```

Mean Square Error : 29.5312