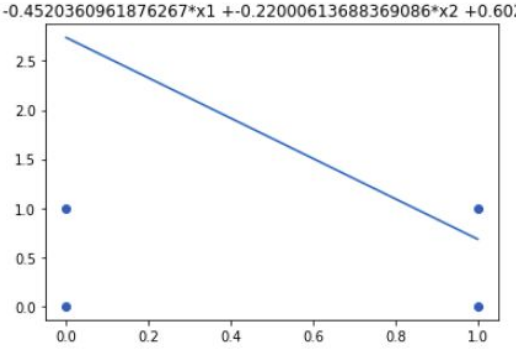
ANN1 Assignment

Q2.How you will verify your trained algorithms? Justify your solution

I have verified the trained algorithm by drawing the decision boundary using the trained weights that is the line with equation w1*x1 + w2*x2 + B =0. This line divides the x-y plane into 2 halves . First w1*x1 + w2*x2 + B>0 and w1*x1 + w2*x2 + B<0 which signifies the two classes - 1 and 0.

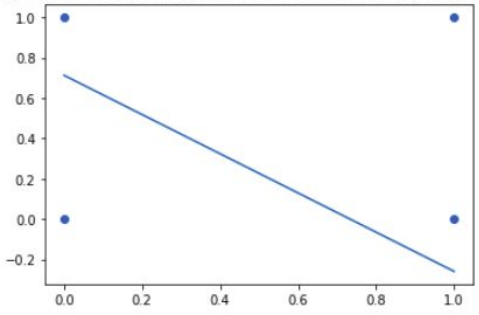
```
Error = 0.0
[<matplotlib.lines.Line2D at 0x7fd36eccc9b0>]
```

NAND GATE Line : -0.4520360961876267*x1 +-0.22000613688369086*x2 +0.6024274316724276 = 0



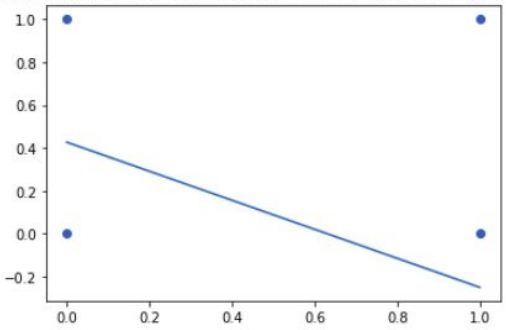

```
Error = 0.0
[<matplotlib.lines.Line2D at 0x7fd36eceec50>]
```

NOR GATE Line : -0.2415829284111164*x1 +-0.24835147136537028*x2 +0.1770092238500961 = 0



```
Error = 0.0
[<matplotlib.lines.Line2D at 0x7fd36e9454a8>]
```

OR GATE Line : 0.22406716111279223*x1 +0.3314835741758198*x2 +-0.1413043105158603 = 0




```
Error = 0.0
[<matplotlib.lines.Line2D at 0x7fd372987ac8>]
```

AND GATE Line : 0.46582622436475085*x1 +0.9152381572714807*x2 +0.9323478934238001 = 0