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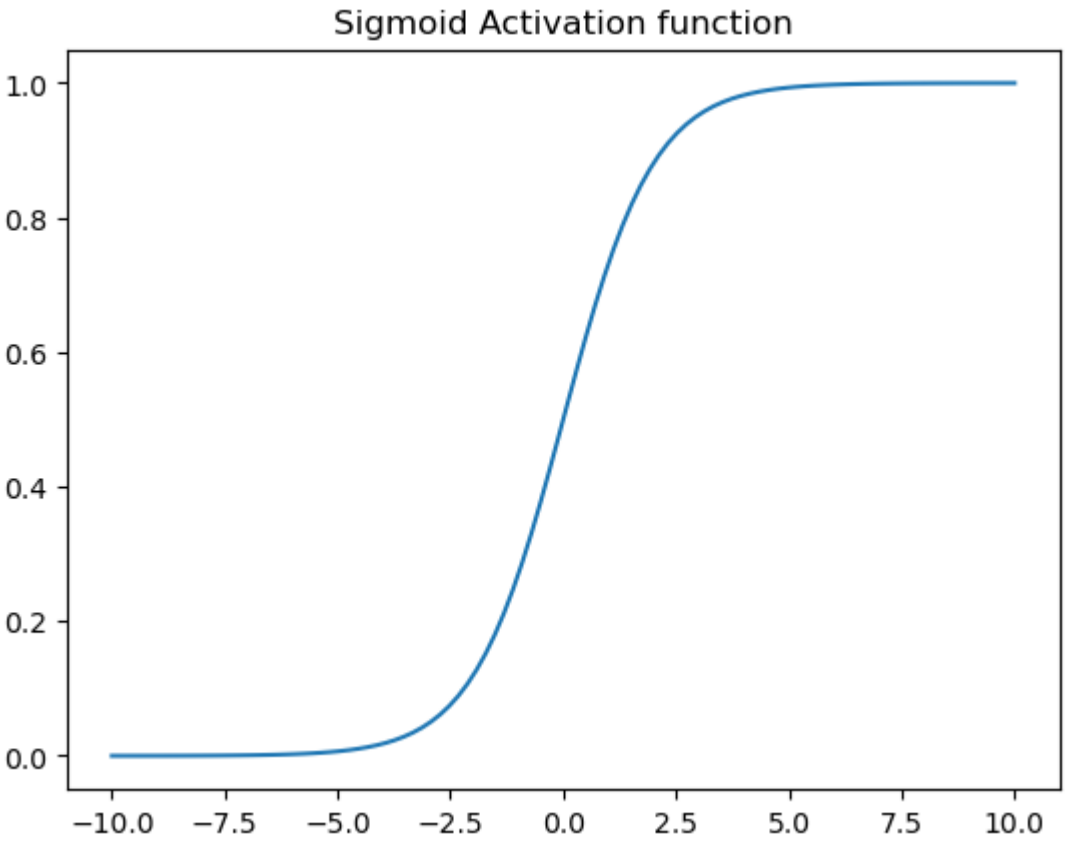
Batch : B

In [5]:
```
import numpy as np
from matplotlib import pyplot as pt
```

In [17]:
```
x=np.linspace(-10,10,100)
```

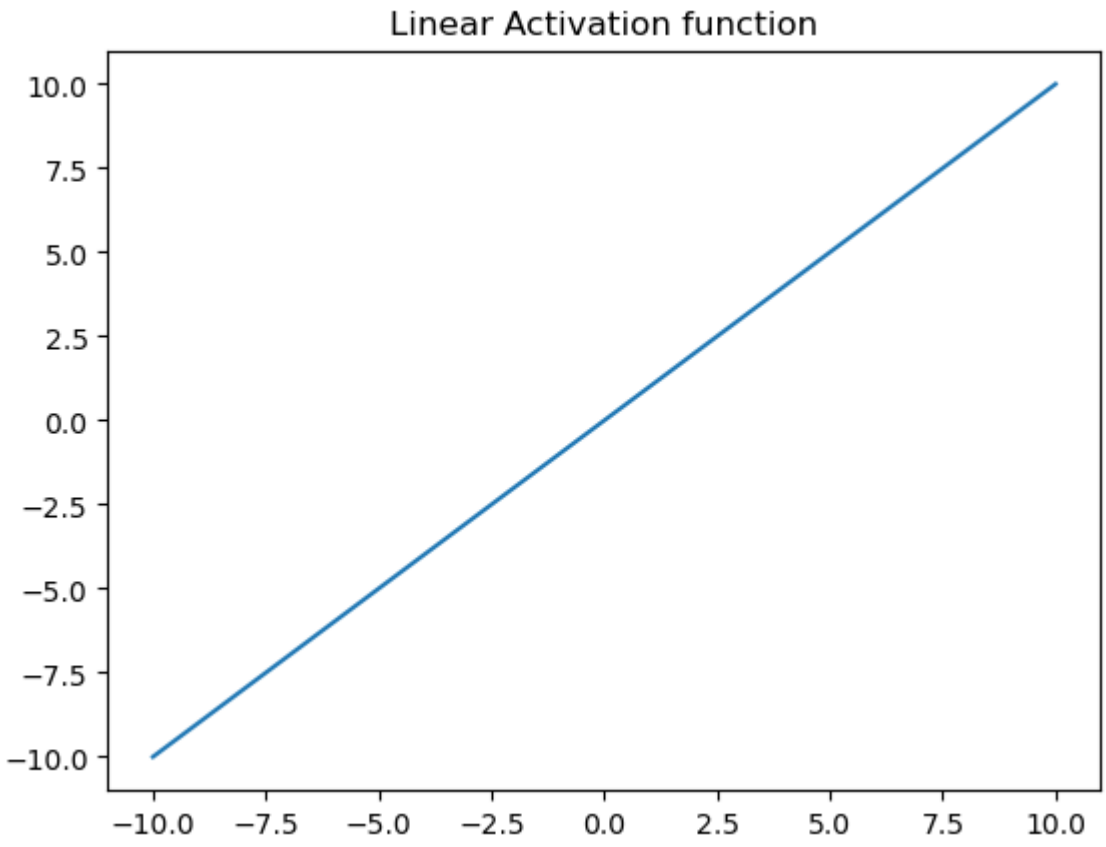
In [29]:
```
#sigmoid
plt.title("Sigmoid Activation function")
pt.plot(x,1/(1+np.exp(-x)))
```

Out[29]:
```
[<matplotlib.lines.Line2D at 0x1bc6fc4f510>]
```



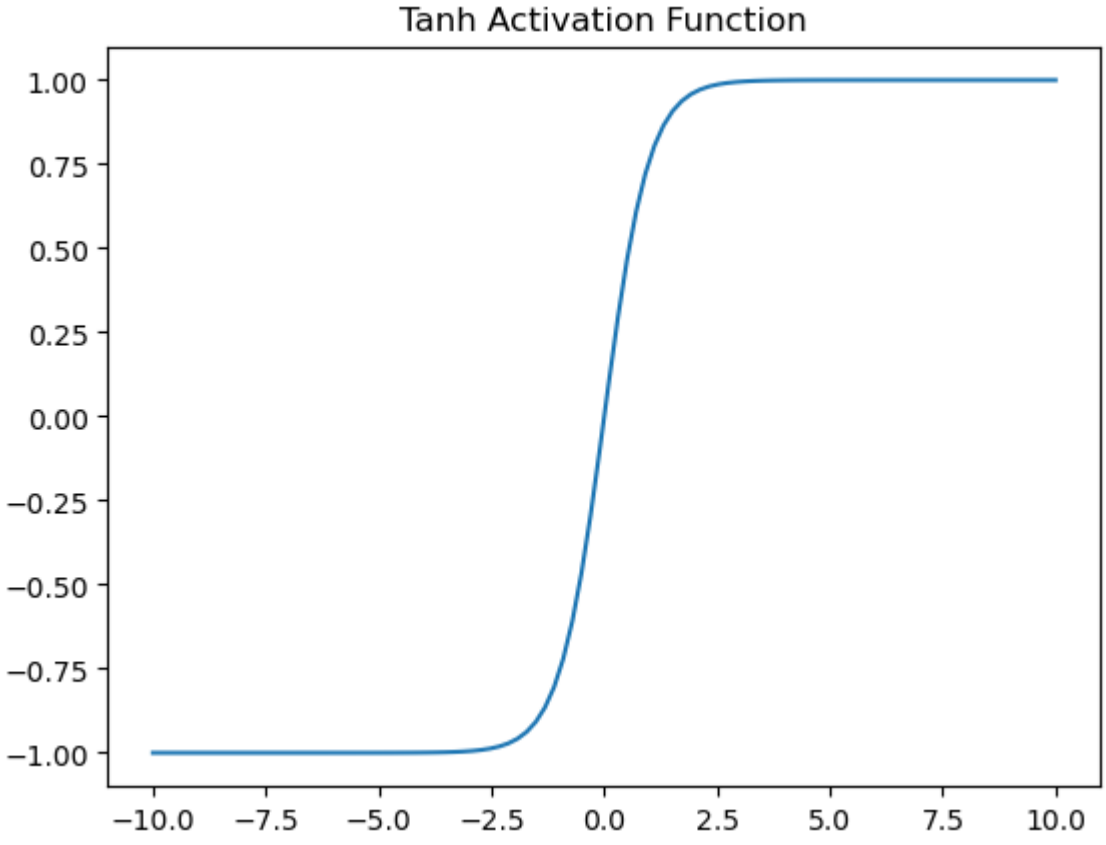
In [30]:
```
#Linear
plt.title("Linear Activation function")
pt.plot(x,x)
```

Out[30]:
```
[<matplotlib.lines.Line2D at 0x1bc6fcb2dd0>]
```



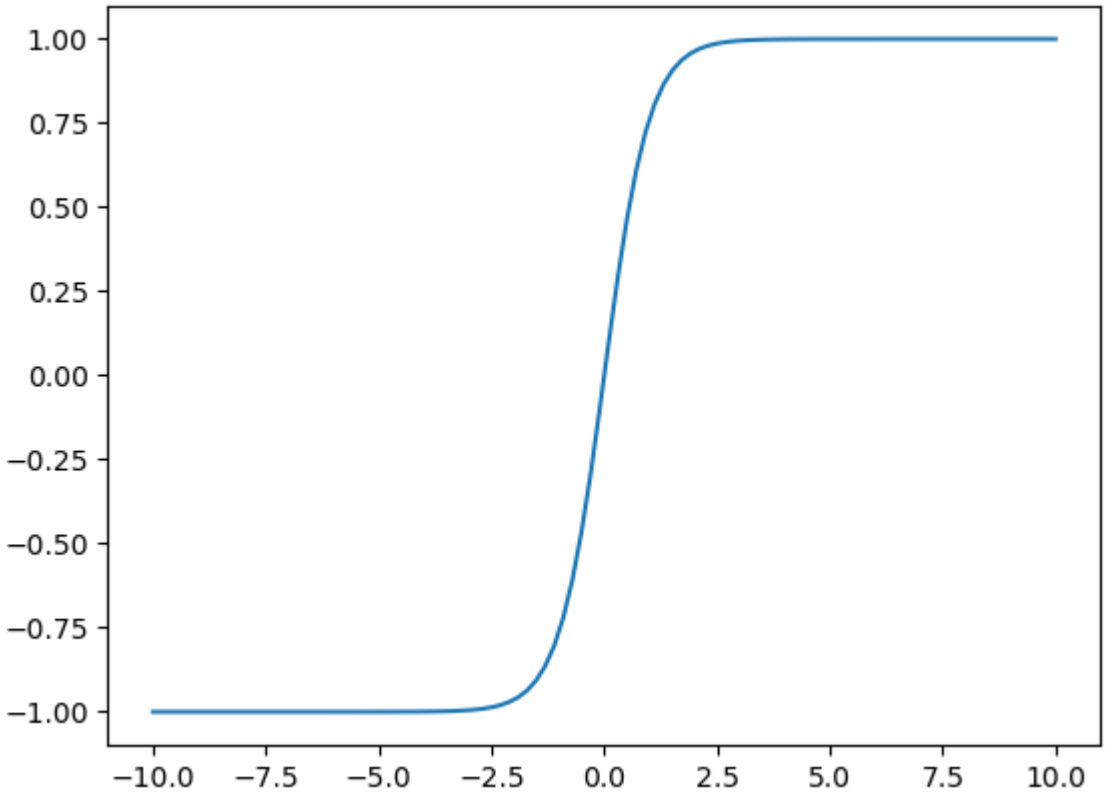
In [37]:
```
#tanh
plt.title("Tanh Activation Function")
pt.plot(x,2/(1+np.exp(-2*x))-1)
```

Out[37]: [<matplotlib.lines.Line2D at 0x1bc6ffc1510>]



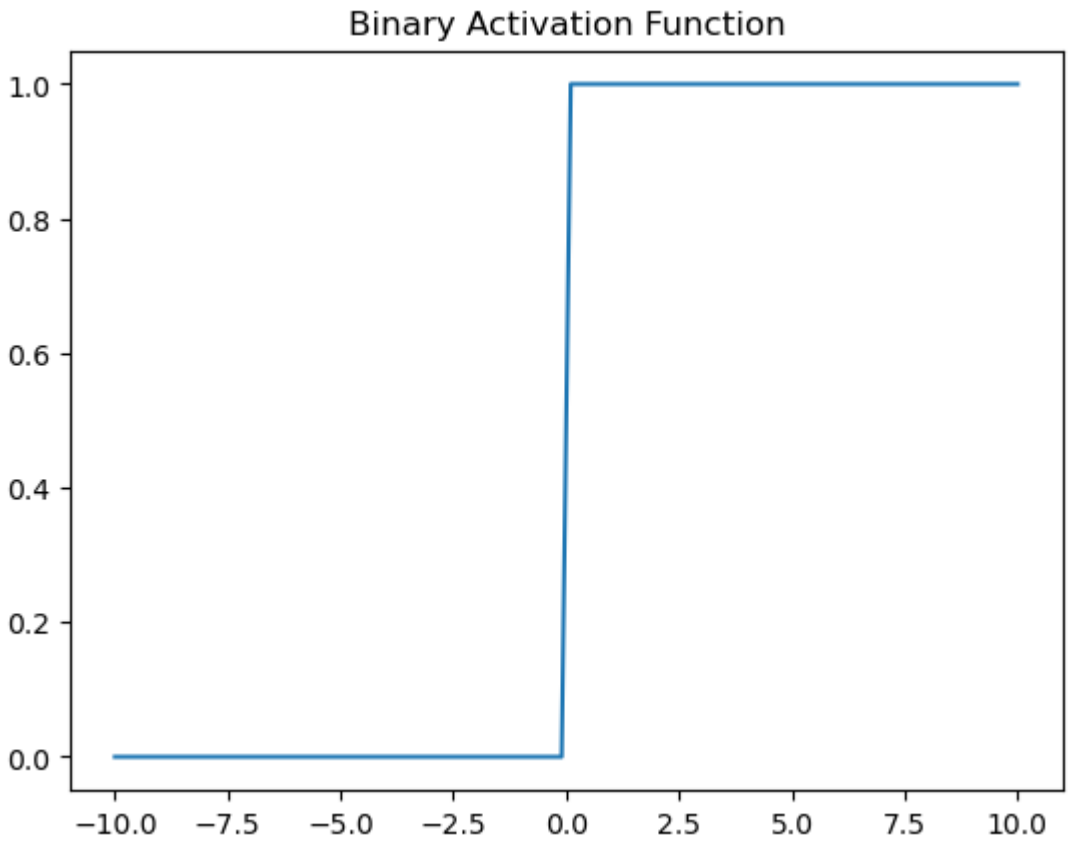
In [38]:
```
pt.plot(x,np.tanh(x))
```

Out[38]: [<matplotlib.lines.Line2D at 0x1bc701efb10>]



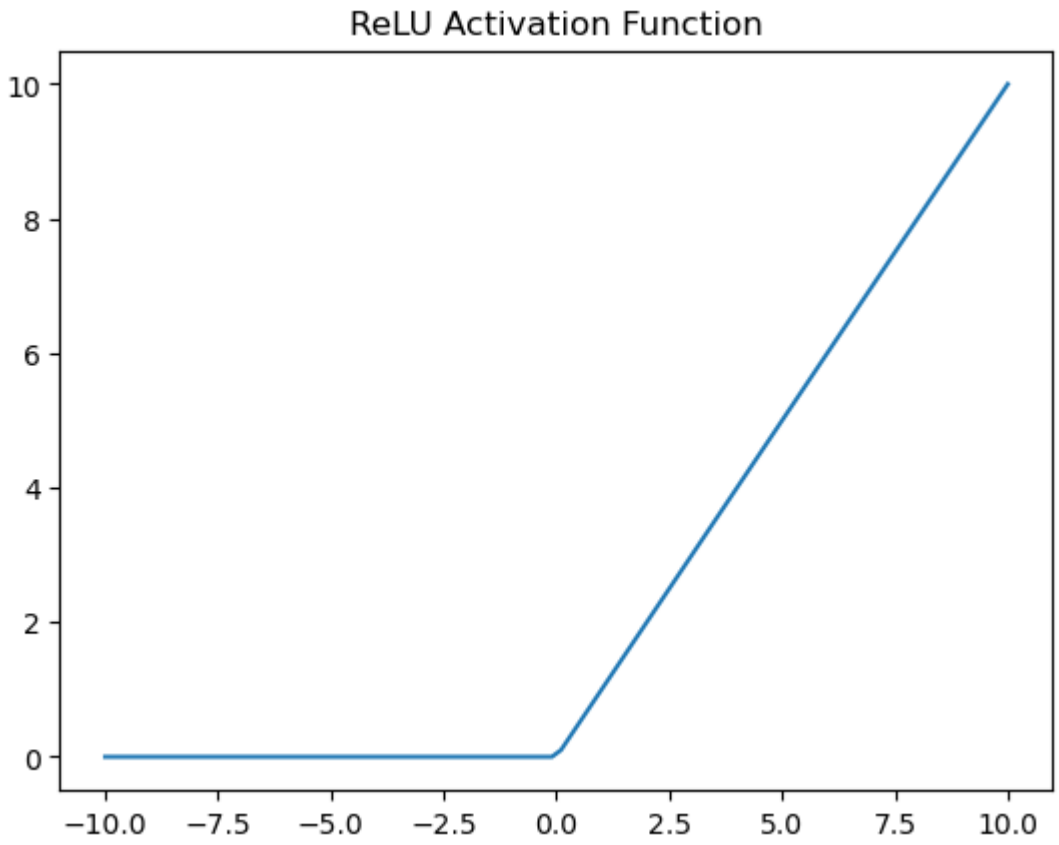
In [34]:
```
def BinaryFunc(x):
    y=[]
    for i in range(0,len(x)):
        if x[i]<0:
            y.append(0)
        else:
            y.append(1)
    return y

pt.title("Binary Activation Function")
pt.plot(x,BinaryFunc(x))
```

Out[34]: [<matplotlib.lines.Line2D at 0x1bc6fe67250>]



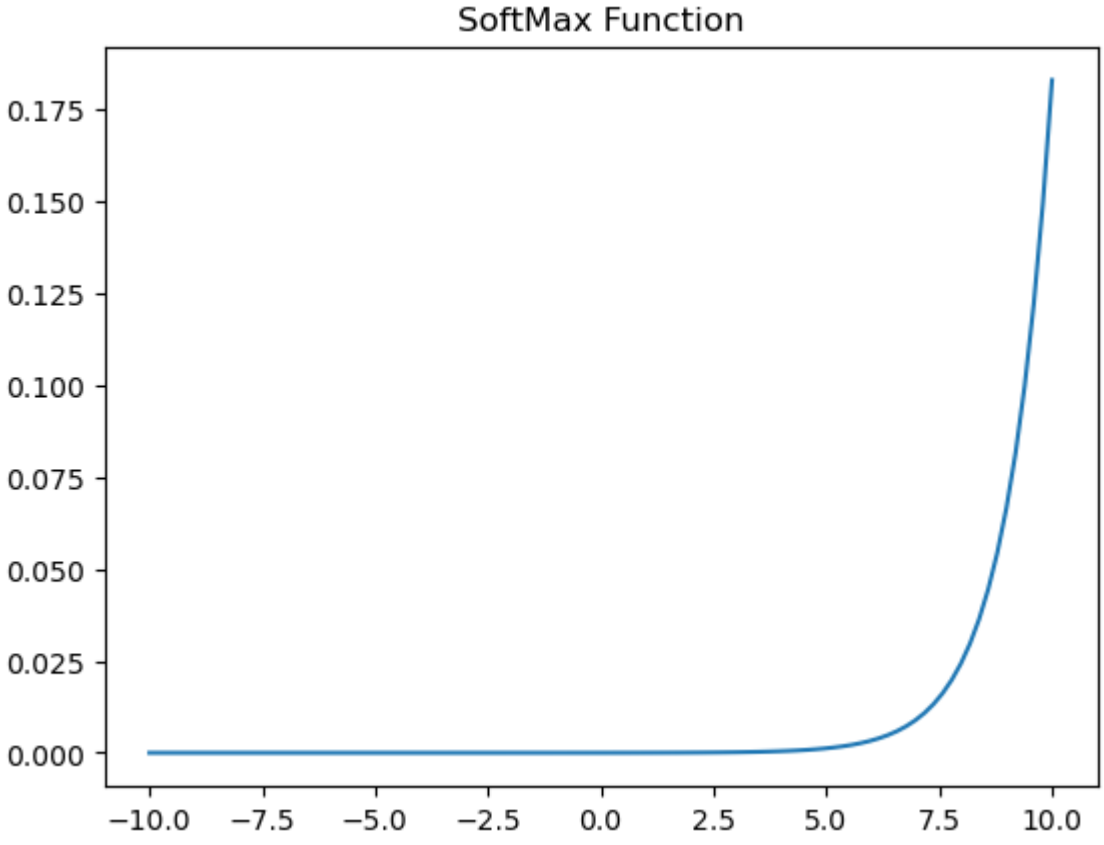
In [45]:
```
#ReLU

def ReLUFunction(x):
    y=[]
    for i in x:
        if i<0:
            y.append(0)
        else:
            y.append(i)
    return y

pt.title("ReLU Activation Function")
pt.plot(x,ReLUFunction(x))
```

Out[45]:
```
[<matplotlib.lines.Line2D at 0x1bc7005f910>]
```



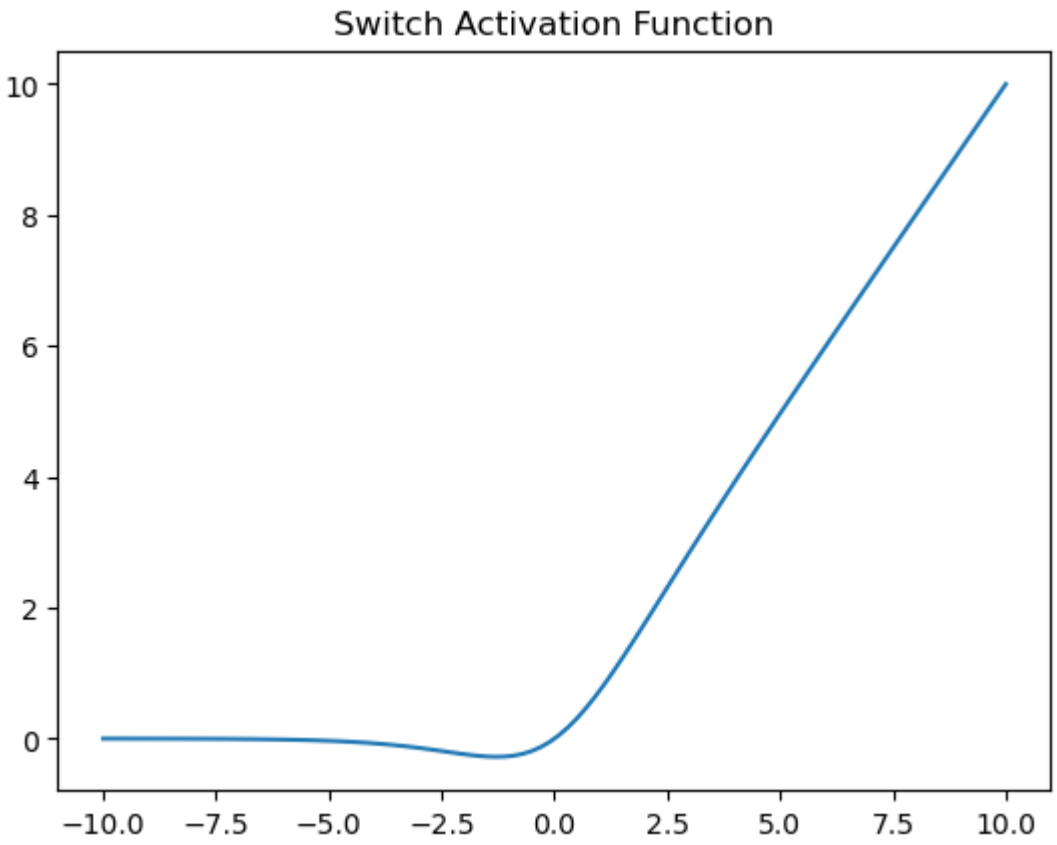
In [44]:
```
#softmax
pt.title("SoftMax Function")
pt.plot(x,np.exp(x)/np.sum(np.exp(x)))
```

Out[44]: [<matplotlib.lines.Line2D at 0x1bc73e6fbd0>]



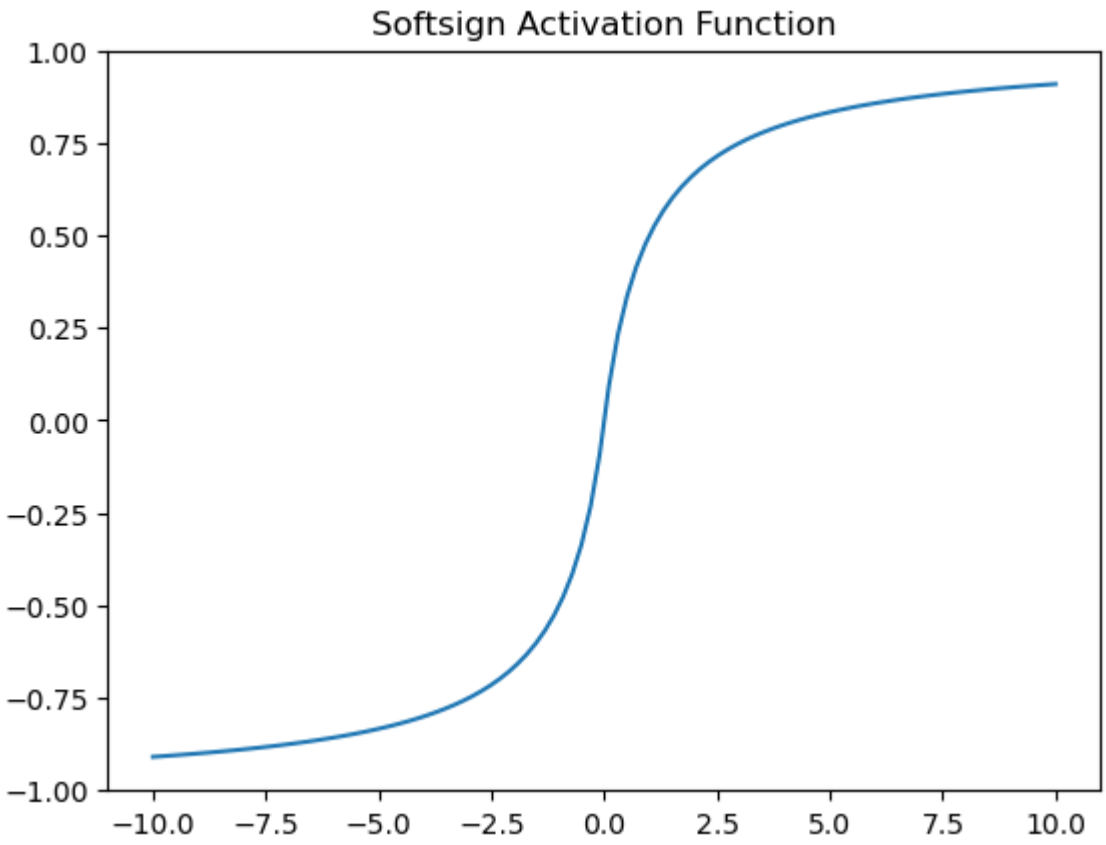
In [48]:
```
#switch
pt.title("Switch Activation Function")
pt.plot(x,x/(1+np.exp(-x)))
```

Out[48]:
```
[<matplotlib.lines.Line2D at 0x1bc74163d10>]
```



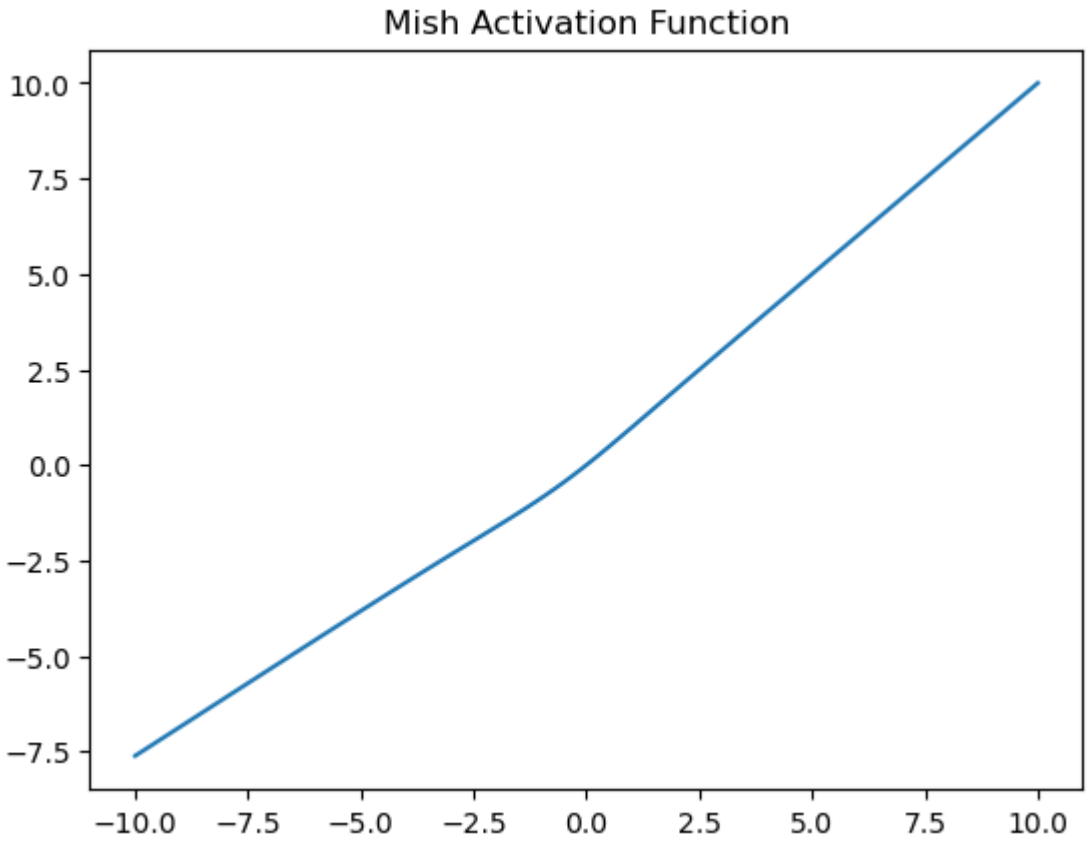
In [56]:
```
#softsign
pt.plot(x,x/(1+abs(x)))
pt.title("Softsign Activation Function")
```

Out[56]:
```
Text(0.5, 1.0, 'Softsign Activation Function')
```



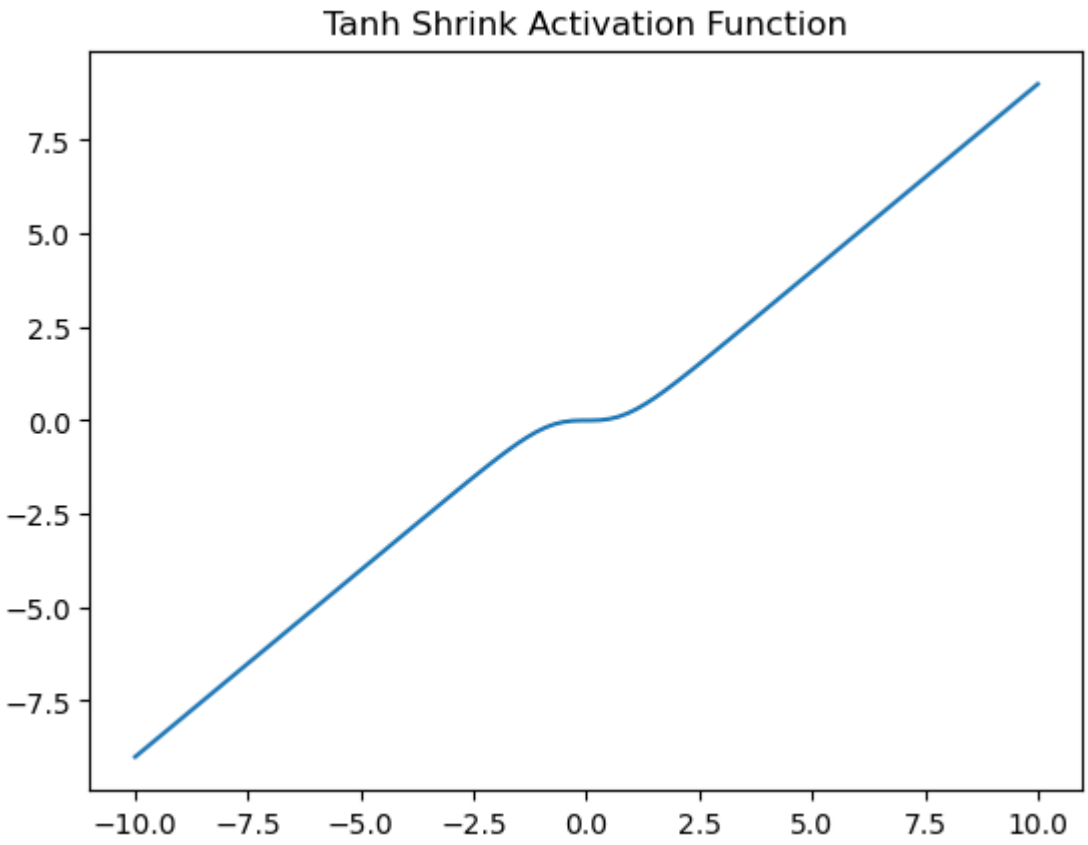
In [67]:
```
#Mish
#not correct
pt.plot(x,x*np.tanh(1+np.log(1+np.exp(x))))
pt.title("Mish Activation Function")
```

Out[67]:
```
Text(0.5, 1.0, 'Mish Activation Function')
```



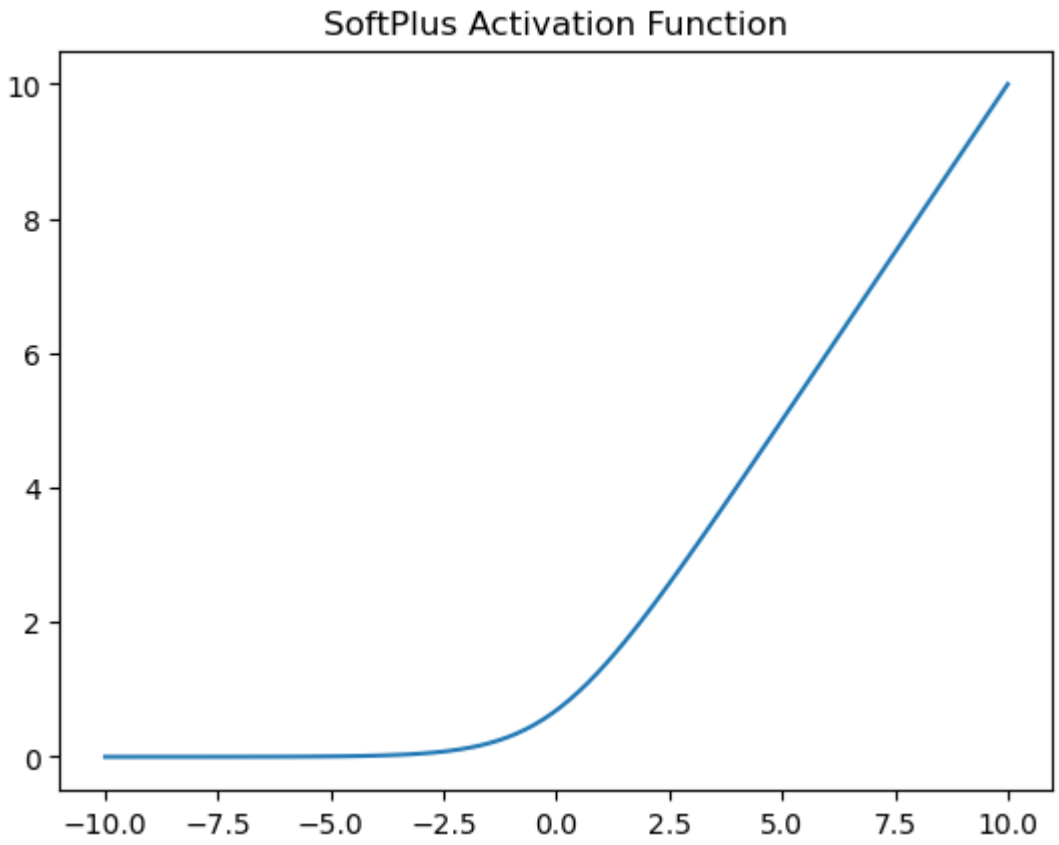
In [57]:
```
#Tanh Shrink
pt.plot(x,x-np.tanh(x))
pt.title("Tanh Shrink Activation Function")
```

Out[57]:
```
Text(0.5, 1.0, 'Tanh Shrink Activation Function')
```



In [64]:
```
#SoftPlus
pt.plot(x,np.log(np.exp(x)+1))
pt.title("SoftPlus Activation Function")
```

Out[64]:
```
Text(0.5, 1.0, 'SoftPlus Activation Function')
```


SoftPlus Activation Function
10
8
6
4
2
0
−10.0
−7.5
−5.0
−2.5
0.0
2.5
5.0
7.5
10.0

In [ ]: