

Name : Rishabh Sharma

Registration Number :- 20MAI0082

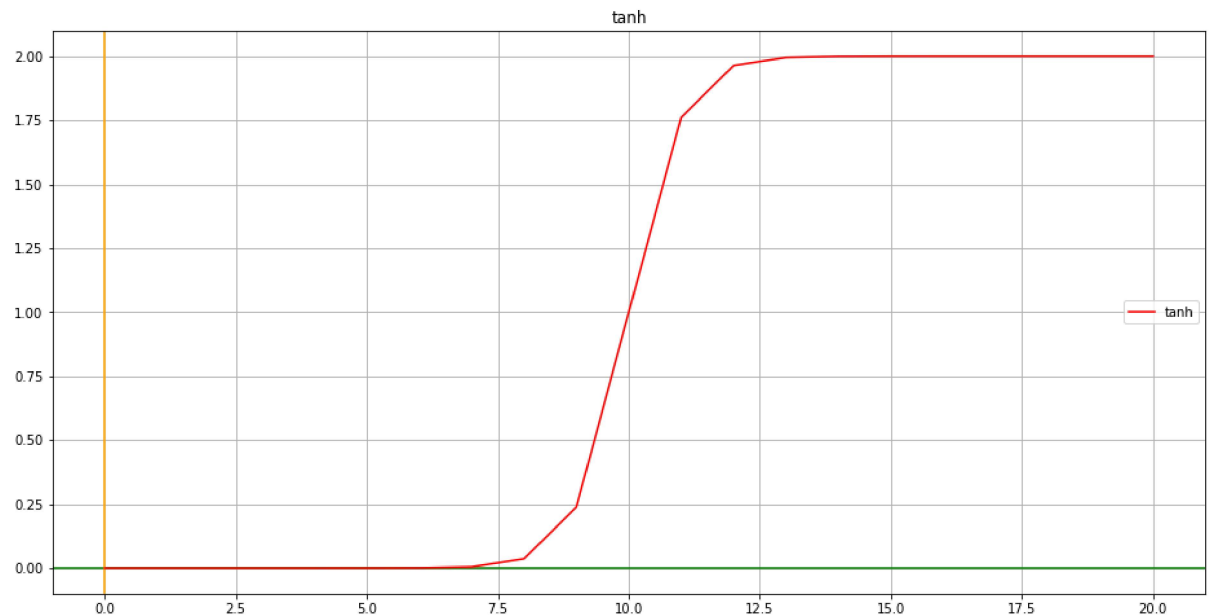
```
In [1]: 1 import matplotlib.pyplot as plt
```

```
In [2]: 1 def plotting(name,label):
2     value=[]
3     for i in range(-10,11):
4         value.append(name(i))
5     plt.figure(figsize=(16,8))
6     plt.axhline(color="green")
7     plt.axvline(color="orange")
8     plt.plot(value,color="red",label=label)
9     plt.grid()
10    plt.legend()
11    plt.title(label)
12    plt.show()
```

Initializing tanh activation function

```
In [3]: 1 def tanh(value):
2     return 2/(1+2.7182818284590452353602874713527**(-2*value))
```

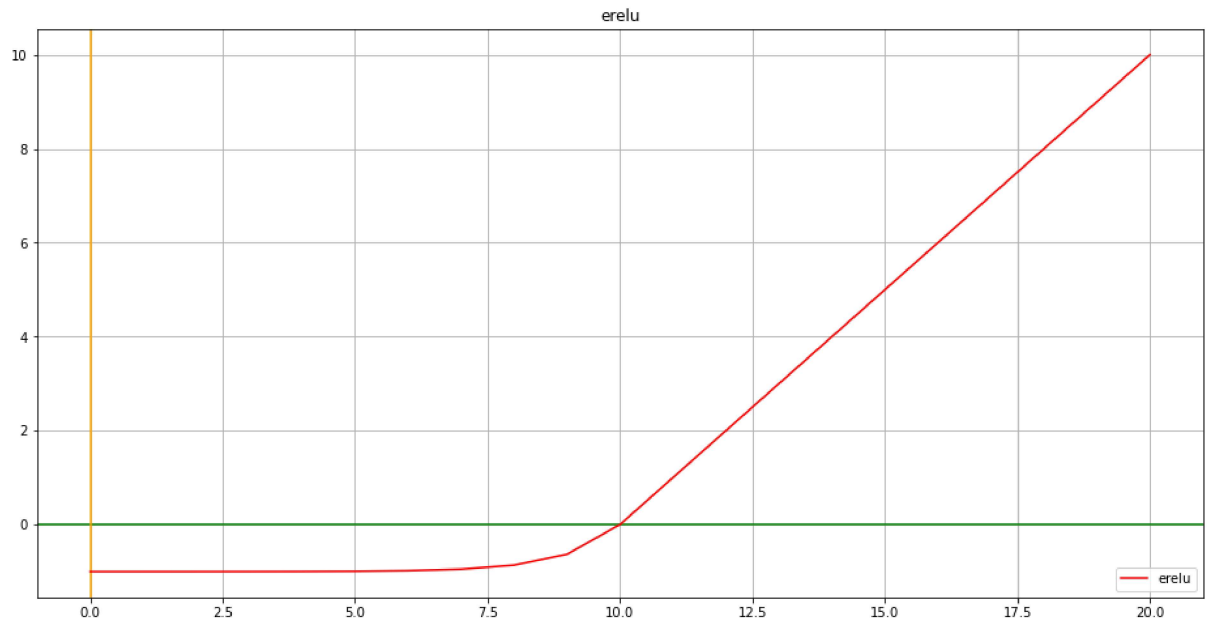
```
In [4]: 1 plotting(tanh,'tanh')
```



Initializing erelu activation function

```
In [5]: 1 def erelu(value,alpha=1):  
2         if value>0:  
3             return value  
4         else:  
5             return alpha*(2.7182818284590452353602874713527**(value) - 1)
```

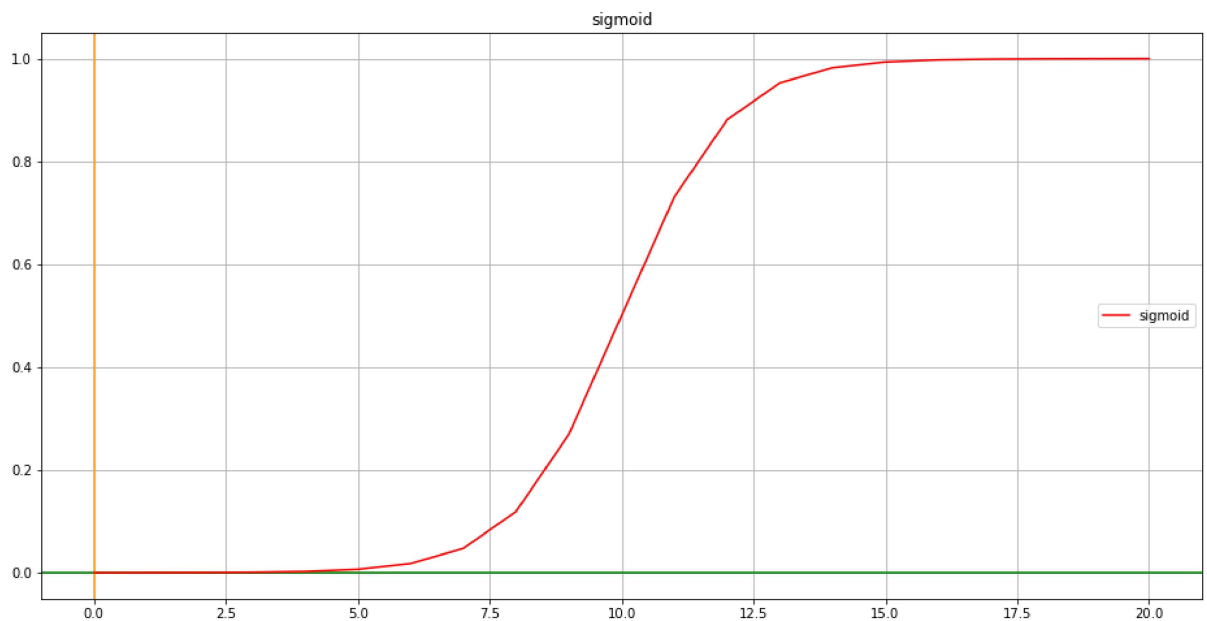
```
In [6]: 1 plotting(erule,'erule')
```



### Initializing sigmoid activation function

```
In [7]: 1 def sigmoid(value):  
2         return 1/(1+2.7182818284590452353602874713527**-(value))
```

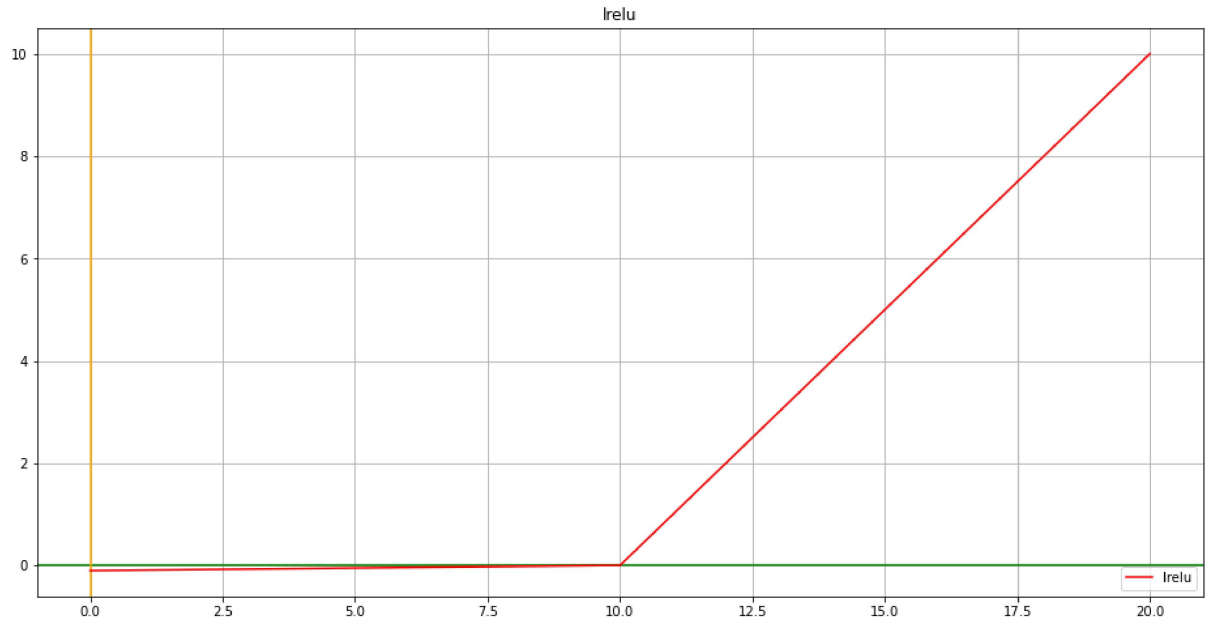
```
In [8]: 1 plotting(sigmoid,'sigmoid')
```



### Initializing Irelu activation function

```
In [9]: 1 def Irelu(value):  
2     if value<0:  
3         return value*0.01  
4     else:  
5         return value
```

```
In [10]: 1 plotting(Irelu,"Irelu")
```



### Initializing relu activation function

```
In [11]: 1 def relu(value):  
2     if value<0:  
3         return 0  
4     else:  
5         return value
```

In [12]: 1 plotting(relu,"relu")

