Suppose we have following equation below :

$$\ln\left(\frac{P}{(1-P)}\right) = b_0 + b_1x_1 + b_2x_2 + \cdots + b_nx_n = y$$

We can say *P* is Probability of purchasing and *1-P* is probability of not purchasing.
And by the equation above $\left(\frac{P}{(1-P)}\right)$ is called Odds.

We can derive the equation above and yields :

$$\ln\left(\frac{P}{(1-p)}\right) = y$$

$$\left(\frac{P}{1-p}\right) = e^y$$

$$\left(\frac{1-P}{P}\right) = \frac{1}{e^y}$$

$$\frac{1}{P} - 1 = \frac{1}{e^y}$$

$$\frac{1}{P} = \frac{1+e^y}{e^y}$$

$$\boldsymbol{P = \frac{e^y}{1+e^y}}$$

This is the final equation to find the probability of each object.