KNN Calculation

age = [21, 20, 22, 22, 23, 21, 25, 30, 31]

income = [60, 55, 60, 61, 65, 62, 65, 70, 68]

here,

k = 3

input value, x = 22

$$distance, d(p,q) = \sqrt{(p-q)^2}$$

No.	age	income	Distance, d
a	21	60	$\sqrt{(22-21)^2} = 1$
b	20	55	$\sqrt{(22-20)^2} = 2$
c	22	60	$\sqrt{(22-22)^2} = 0$
d	22	61	$\sqrt{(22-22)^2} = 0$
e	23	65	$\sqrt{(22-23)^2} = 1$
f	21	62	$\sqrt{(22-21)^2} = 1$
g	25	65	$\sqrt{(22-25)^2} = 3$
h	30	70	$\sqrt{(22-30)^2} = 8$
i	31	68	$\sqrt{(22-31)^2} = 9$

Here, c < d < a < e < f < b < h < i

$$mean = \frac{60 + 61 + 60}{3} = 60.33333333$$

So, the predicted income for age = 22 is 60.33333333.