Nama : Santoso

NIM :17.52.0006

1. Membuat dataset 30 record
   a. Data Set

Day	Discount	Free Delivery	Purchase
Weekday	Yes	Yes	Yes
Weekday	Yes	Yes	Yes
Weekday	No	No	No
Holiday	Yes	Yes	Yes
Weekday	Yes	Yes	Yes
Holiday	No	No	No
Weekend	Yes	No	Yes
Weekday	Yes	Yes	Yes
Weekend	Yes	Yes	Yes
Holiday	Yes	Yes	Yes
Holiday	No	Yes	Yes
Holiday	No	No	No
Weekend	Yes	Yes	Yes
Holiday	Yes	Yes	Yes
Weekday	Yes	Yes	Yes
Weekday	Yes	Yes	Yes
Weekday	Yes	No	Yes
Weekend	Yes	No	Yes
weekday	Yes	Yes	Yes
weekday	Yes	Yes	Yes
Weekend	Yes	Yes	Yes
weekday	Yes	Yes	Yes
Holiday	Yes	Yes	Yes
Holiday	Yes	Yes	Yes
Holiday	Yes	Yes	Yes
Weekend	No	Yes	Yes
Weekend	No	Yes	Yes
Weekend	Yes	Yes	Yes
Holiday	Yes	Yes	Yes
Holiday	Yes	Yes	Yes

b. Freequency Tabel

Frequency Table		Buy		
		yes	no	
Discount	yes	19	1	20
	no	5	5	10
		24	6	30

Frequency Table		Buy		
		yes	no	
Free Delivery	yes	21	2	23
	no	3	4	7
		24	6	30

Frequency Table		Buy		
		yes	no	
Day	Weekday	9	2	11
	weekend	7	1	8
	Holiday	8	3	11
		24	6	30

Likelihood Tabel

likelihood Table		Buy		
		yes	no	
Discount	yes	19/24	1/6	20/30
	no	5/24	5/6	10/30
		24/30	6/30	

Likelihood Table		Buy		
		yes	no	
Free Delivery	yes	21/24	2/6	23/30
	no	3/24	4/6	7/30
		24/30	6/30	

Likelihood Table		Buy		
		yes	no	
Day	Weekday	9/24	2/6	11/30
	weekend	7/24	1/6	8/30
	Holiday	8/24	3/6	11/30
		24/30	6/30	

2. Menghitung Probability

a) P(Buy|day = weekday, Freedelivery = yes, Discount= yes

$$= \frac{P(no)x\ P(no)x\ P(no)x\ P(Buy)}{P(day = \ weekday)x\ P(freedelivery = \ yes)x\ P(discount = \ yes)}$$

$$= \frac{\left(\left(\frac{9}{24}\right)\ x\ \left(\frac{21}{24}\right)\ x\ \frac{(24}{30)}\right)}{\left(\left(\frac{11}{30}\right)\ x\ \frac{(23}{30)}\ \frac{x\ (20}{30)}\right)}$$

$$= 1,108881$$

b) P(Buy|day = weekday, Freedelivery = no, Discount= no

$$= \frac{P(no)x\ P(yes)x\ P(yes)x\ P(Buy)}{P(day = \ weekday)x\ P(freedelivery = no)x\ P(discount = \ no)}$$

$$= \frac{\left(\left(\frac{9}{24}\right)\ x\ \left(\frac{3}{24}\right)\ \frac{x\ (24}{30)}\right)}{\left(\left(\frac{11}{30}\right)\ x\ \frac{(7}{30)}\ \frac{x\ (10}{30)}\right)}$$

$$= 0,273945$$

c) P(not buy|day = weekday, free delivery = yes, discount= yes)

$$= \frac{P(no)x\ P(no)x\ P(no)x\ P(Not\ Buy)}{P(day = \ weekday)x\ P(freedelivery = yes)x\ P(discount = \ yes)}$$

$$= \frac{\left(\left(\frac{2}{6}\right)\ x\ \left(\frac{2}{6}\right)\ x\ \frac{(6}{30)}\right)}{\left(\left(\frac{11}{30}\right)\ x\ \frac{(23}{30)}\ \frac{x\ (20}{30)}\right)}$$

$$= 0,019763$$

d) P(not buy| day= weekday, freedelivery = no, discount = no)

$$= \frac{P(no)x\ P(yes)x\ P(yes)x\ P(Not\ Buy)}{P(day = \ weekday)x\ P(fd = no)x\ P(discount = \ no)}$$

$$= \frac{((\left(\frac{2}{6}\right)\ x\ (\frac{4}{6)\ x\ \frac{(5}{6)}}\ x\ \frac{(6}{30))}}{((\frac{11}{30)\ x \frac{(7}{30)}}\ \frac{x\ (10}{30)})}$$

$$= 1,298701$$

e) P (buy|day = weekend, freedelivery= yes, discount = yes)

$$= \frac{P(no)x\ P(no)x\ P(no)x\ P(Buy)}{P(day = \ weekend)x\ P(freedelivery = yes)x\ P(discount = \ yes)}$$

$$= \frac{((\left(\frac{7}{24}\right)\ x\ (\frac{21}{24)\ x\ \frac{(19}{24)}}\ x\ \frac{(24}{30))}}{((\frac{8}{30)\ x \frac{(23}{30)}}\ \frac{x\ (20}{30)})}$$

$$= 1,185887$$

f) P(buy|day= weekend, $freedelivery$ = no, discount= no)

$$= \frac{P(no)x\ P(yes)x\ P(yes)x\ P(Buy)}{P(day = \ weekend)x\ P(freedelivery = no)x\ P(discount = \ no)}$$

$$= \frac{((\left(\frac{7}{24}\right)\ x\ (\frac{3}{24)\ x\ \frac{(5}{24)}}\ x\ \frac{(24}{30))}}{((\frac{8}{30)\ x \frac{(7}{30)}}\ \frac{x\ (10}{30)})}$$

$$= 0,292969$$

g) P(not buy|day= weekend, $freedelivery$ = yes, discount,= yes)

$$= \frac{P(no)x\ P(no)x\ P(no)x\ P(Not\ Buy)}{P(day = \ weekend)x\ P(freedelivery = yes)x\ P(discount = \ yes)}$$

$$= \frac{((\left(\frac{1}{6}\right)\ x\ (\frac{2}{6)\ x\ \frac{(1}{6)}}\ x\ \frac{(6}{30))}{((\frac{8}{30)\ x \frac{(23}{30)}}\frac{x\ (20}{30)})}$$

$$= 0{,}013587$$

h) p(not buy|day= weekend, freedelivery= no, discount = no)

$$= \frac{P(no)x\ P(yes)x\ P(yes)x\ P(Not\ Buy)}{P(day = \ weekend)x\ P(freedelivery = no)x\ P(discount = \ no)}$$

$$= \frac{((\left(\frac{1}{6}\right)\ x\ (\frac{4}{6)\ x\ \frac{(5}{6)}}\ x\ \frac{(6}{30))}{((\frac{8}{30)\ x \frac{(7}{30)}}\frac{x\ (10}{30)})}$$

$$= 0,892857$$