		Abhinau 201912000	Pal 15	layed BE E	clas	senute 5		
Assignment - 1								
- CV	Attuibu	tes: (Day	, 8	ason, For	, Rain)			
10.1	O'll Attuibutes: (Day, Season, Fog, Rain)							
	Categories: Contime, late, very late, Cancellad]							
	P[on time] = 14/20, P[Very late] = 3/20,							
	P(on time] = 14/20, P[Veny late] = 3/20, P(late] = 2/20, P(cancelled] = 1/20							
	Tabulation of all posteriou perocasicities							
	For the	attendate	D	ay 1	inster und			
	Attenbute		=	class				
July	Day	On firm	e	Tate	Verylate	· Cancelled		
	Weekday	9/14		1/2.	Very late	0/1=0		
	1/2		1/1	MIL	A Anne	1/2		
	Saturday	2/14		0/2	0/3	1/1=1		
	10	810	11	117	a tales			
	Sunday	1/14		0/2	013	01120		
	11	1-10	gla	31				
	Holiday	2/14		1/2	0/3	0/1=0		
and and in a same of making and and								
	For the attribute Season!							
	Scapon	On-time	1	. + .	Lance Late	Cancelled		
7	0000	a and a	1	ate	very late	Carrocas		
1	Spring	4 liu	MALL	0/2	0 3	1/1		
1	La d	4/14	N'C IV	.712	-13	1)		
1		ane or time	1		o a la	011		
1	Sammer	6/14	3 4	0/2	0/3			
1	1	10)	1 11 000		- 1	011		
1	Autumn	umn 2/14		0/2	1/3			
1					2/3	011		
1	Winter	2/14		2/2		0		

Abhiran Pallayel 2019120045

	CLASSIA	ute
1	Date	Roman
1	Page	-

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De	attui	bute	109
			-

Fog	on time	Late	very late	Cancelloo
Fog	, veny late,	.take		Corregone
None	5/14	0/2	0/3	011
00/80	Veny Late	19.	09/11 = F 57	To ave live
High -	4/14	1/2	1/3	1/1/1
0				
Normal	5/14	1/2	2/3	100001

Fou attendute 'Rain'

_	1	L930	.1		That are the
	Rain	On-time	late	very la	te concelled
	8/3	c/1		NIP	up holontar
	None	Gliy	1/2	1/3	011
-	8 3	02		MILE .	Bodyanday
-	Stignt	6/14	1/2	013	011
- China	0	0 0		NI	palmen
	Heavy	2114	0/2	2/3	111
-	0	0 11	/	LE D	L'estilei

For the given instance in the question

(weekday, winter, High, None)

PNB [On time] = P(on time) x P(weekday | on time) x
P(winter/on time) x P(High | on time)

x P(None | on time)

Prosontime = 14 x 9 x 2 x 4 x 6 = 0.0079

Abhinar Pallaye classmate 2019120045 2400519105 Similarly,

PNB (late) = 2 x 1 x 2 x 1 x 1 = [0.0125]

20 2 2 2 2 2 PNB (very late) = 3 x 3 x 2 x 1 x 1 = 10.0111 PNB (cancelled) = 1 x o x o x 1 x o = 0 . PNB (late) is highest, hence correct Classification is 'late'. The connect classificate is LATE!

(12) In this peroblem, we have to test the hypothesis that gives genden and preferred ereading have no concellation between them and they are independent.

Ho (Null hypothesis): Preferred reading and gender are not correlated in the group.

Hi (Atternate hypothems): Prefused reading and
gender are conrelated
in the group.

72 = { Observed - Experted}2

Experted

As per the table, 011 = 250 011 = 90 012 = 200 012 = 200 021 = 50 021 = 210 022 = 1000 022 = 840

 $\chi^{2} = (250 - 90)^{2} + (200 - 360)^{2} + (50 - 210)^{2} + (600 - 840)^{2}$ = 284.44 + 121.90 + 111 + 20.48 $\chi^{2} = 507.93$

For 2x2 table, degree of freedom are is

· Deg

Abhinar Pallaye 2019120045. Degree of freedom value! 1 y 10.828 | from Significance level: 0:001 J 42 distribution table). Permitted value (507.93) 10.828), we reject the null hypothesis Ho is rejertel! Ne conclude that prefued reading and gender are correlated: