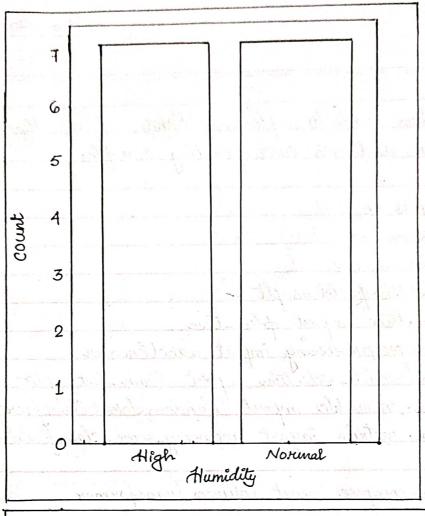
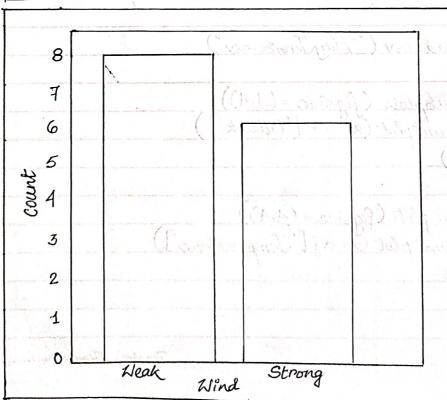


Page No. 14 Date

	<del></del>	implement Correspond			
import nu	npy as np		1		
	ndas as pd	-8-		100	
import sea	chorun as sons				
import ma	tplot lih. pyplot	as plt			
	earn tree impor		e,		~
	earm. preprocess			6	
from skl	earn · model _ sel	ection impor	t train-te	st_split	
	earn ensemble				
from Skl	learn metrics is	nport accu	cacy_score, C	assification_	rebort.
4	Ja.	u 12 00V0	O The state of	COI	nfusion_m
from ski	learn. compose im	port Column	Transforms		J
			J		
df=pd·4	ead-csv ("Play	Jennis·csv")			
J /					
ax= plt.	Subplots (figsiz	e = (4,4)			
ax 2 Sns.	Subplots (figsiz countplot (2= df	['Outlook']	)	13	
plt. show	()				54.75
	1. 1			2	
of ax = plt.	subplots (figsize:	= (4,4))			
ax = sns	countplot (x= df	['Temperatu	ne'])		





Page No. 15

Teacher's Signature :....

ax = plt. subplots (	figsize= (4,2	(()	L. Bengalia	a de la lace	3.5
ax = plt. subplots (	Edf [ Humic	city'])			
plt. show ()	CKT O WATER TO A		Arri esserali		
1	OM	00.1	7)00	0	
ax = plt. Subplots (-	figsize = (4,4)	) nad	000	· Carrier of the carr	
az= sns. countaplot	(x=df['h	lind'])		2.13	
plt. show ()	LOCA.	0(1)	001	Action of	4 5 7
11 1	Only		4.76	D -	
X = df. iloc [:,:-1				1)	
y= df. ibc[:,-1]	E No. and the Contraction	y Chance 2			
I And Alice		* - &			
label_encoder = x	Tabel Encoder	()	a tyl	£.	
X_encoded = X.c	7 11			08	
fox column in					
if X[coluen	in].dtype==	· object	•		
X	- colum ence	oded Colu	mn] = labe	l-encoder.	fit-transform
N. K. W.				(×	[column])
y-encoded = label	-encoder · fi	t-transfo	tin (y)		
	1	fat vätvi	De T		
X-train, X-test,	- train, y-t	est = trair	2-test-sp	lit (X-enc	oded.
	. Mayor to				andom-state=42
8		Var O		. \	1
4f-classifier = Ro	andom Forces	st Classific	r (n-esti	mators = 50	<u>)</u>
rf-class fier fit	(X-train, y-	train)			
y-pred = rf-clas			est)		
	)				

Avijit<sup>®</sup>

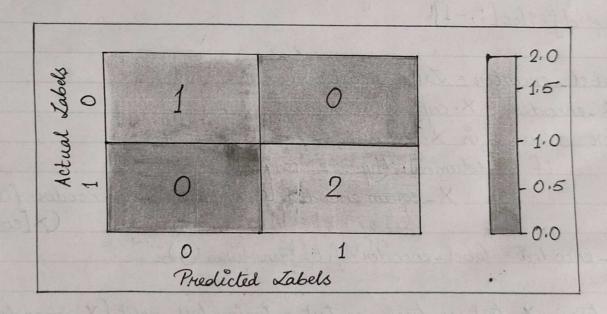
RF Accuracy: 1.0

RF Confusion Matrix:

[02]]

RF Classification Report:

	precision	recall	f1-score	support
0	1.00	1.00	1.00	1
1	1.00	1.00	1.00	2
accuracy			1.00	3
macro ang	1.00	1.00	1.00	3
weighted ang	1.00	1.00	1.00	3

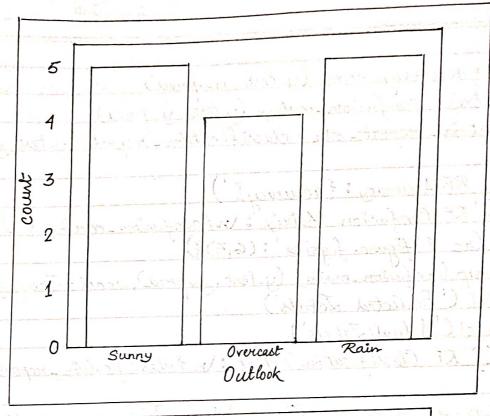


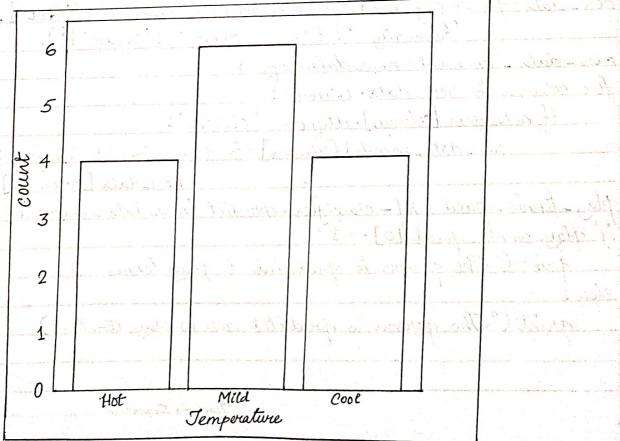
The person is predicted not to play tennis.

Page No. 16 Date

Teacher's Signature :....

1	
	accuracy = accuracy_score (y-test, y-pred)
	conf-matrix = confusion-matrix (y-lest, y-pred)
	conf-matrix = confusion-matrix (y-test, y-pred) classi-fication-report-str = classification-report (y-test, y-pred
	print (f'RF Accuracy: {accuracy})
	print (f'RF Confusion Matrix:\nf.confusion_matrix?')
	Sps. set (xc= { figure. figsize : (6,3)})
	ens heatmap (confusion_matrix (y-test, y-pred), annot = True, fmt = 'd
	plt. zlabel ('Predicted Labels')
	plt. ylabel ('Actual Tabels')
	print (f'RF Classification Report: \n Eclassification_report-str3'
II-	
	new_data=pd. Dataframe (['Outlook': [Sunny'], Jemperature': ['Hot'],
	'Humidity': ['High'], 'Wind': ['Weak']])
	new-data-encoded=new-data.copy()
	fox column in new data · columns:
	if new_data [column]. dtype = = 'object':
	new-data-encoded[column] = label_encoder.fit_bransform(
	new_data[column])
	play-tennis-pred = rf-classifier-predict (new-data-encoded)
	if play-tennis pred [0] == 1;
B	print ("The person is predicted to play tennis.")
	else:
	print ("The person is predicted not to play tennis.")
	provide de constante de providentes.
11	

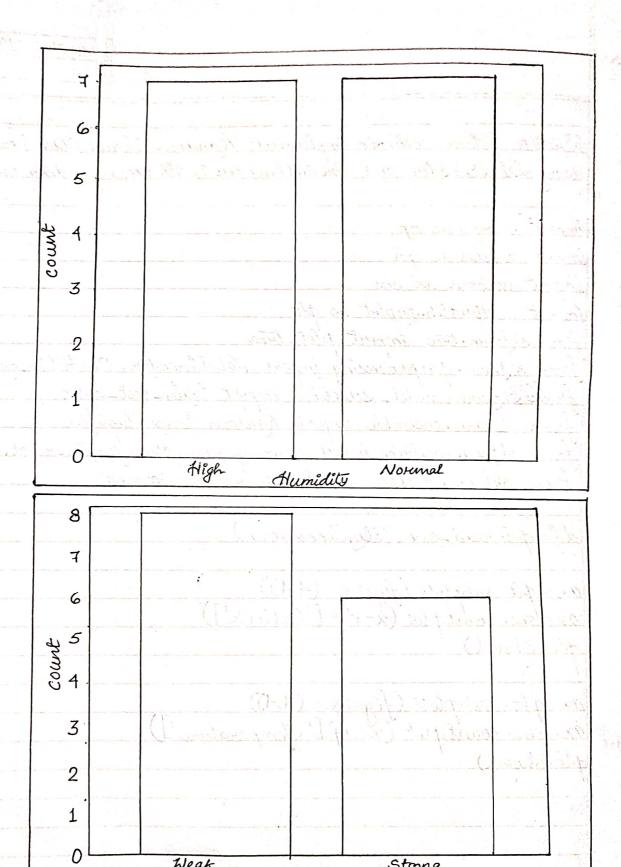




Page No. 17 Date

Write a python code to implement Random using Label Encoder and One Hot Encoder & its c	oucesbonding asy Gl
away superchicans have chained successive to	g est file.
i tark a ma	
import numpy as np	
import gandes as gd	
import reaborn as sins	-
import matplotlib. pyplot as plt	
From sklearn tree import plot tree	
From sklearn preprocessing import Label Encode	r, UneHotencoder
from sklearn model selection import train t	
From Sklearn ensemble import Kardom Forest	Classi fier
THOM Sclearn mothers import accuracy score class	1º location which conf
The state of the s	SI-HUMON_HIPOUT, ITMFUSION.
from sklearn metrics import accuracy-score, class from sklearn compose import Column Transfor	mer
from sklearn compose import Column Transfor	mer
from sklearn. compose import Column Transford  df = pd. read_csv ('Play Tennis.csv')	mer
from skleann. compose import (olumn Transford)  df = pd. read_csv ('Play Tennis.csv')	mer
from skleann. compose import (olumn Transford)  df = pd. read_csv ('Play Tennis.csv')	mer
from skleann. compose import (olumn Transford)  df = pd. read_csv ('Play Tennis.csv')	officulon-report, impuson
from sklearn compose import Column Transfor	officulon-report, impuson
from sklearn. compose import (olumn ) ransford  df = pd. read_csv ('Play Tennis.csv')  ax = plt. subplots (figsize = (4,4))  ax = sns. count plot (x = df ['Outlook'])	officulon-report, impuson
from sklearn. compose import (olumn ) ransford  df = pd. read-csv ('Play Tennis.csv')  ax = plt. subplots (figsize = (4,4))  ax = sns. count plot (x = df ['Outlook'])  plt. show ()  ax = plt. subplots (figsize = (4,4))	Mer
from sklearn. compose import (olumn ) ransford  df = pd. read-csv ('Play Tennis.csv')  ax = plt. subplots (figsize = (4,4))  ax = sns. count plot (x = df ['Outlook'])  plt. show ()  ax = plt. subplots (figsize = (4,4))	Mer
from sklearn. compose import (olumn ) ransford  df = pd. read_csv ('Play Tennis.csv')  ax = plt. subplots (figsize = (4,4))  ax = sns. count plot (x = df ['Outlook'])  plt. Show ()	of fiction - He port, 1 mfilson
from sklearn. compose import (olumn) Hansford  df = pd. read_csv ('Play Tennis.csv')  ax = plt. subplots (figsize = (4,4))  ax = sns. count plot (x = df ['Outlook'])  plt. show ()  ax = plt. subplots (figsize = (4,4))  ax = sns. count plot (x = df [' Temperature'])	mere

Teacher's Signature :.....



Wind

Strong

Weak

Page No. 18 Date

	2000	सर्व वर्ष वर्ष वर्ष वर्ष	900E3 3 : D.	Regular 19 - 1
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an she sa	bplots (figsize= untplot (x=df	['Humiditi']	) ·	IN IT
plt. Show ()	may we can	2		(LEO)
Tott. Show C		. 413	LINE LINE	200
211/4 011	1 Alta (Gazian	- (4.4))		2
ax=pu·su	bplots (figsize: untplot (x=df	['6/2021]	1 72.5	A
11 of 1)	impor (x-uj		2.5	
plt. Show ()	T. A			
1 10 00	r	~ ~ ^	× = 0	17 Carried
X=df.iloc	[ , [ , , -1]	T : 3	57:0	TAN TENDER
y=df.iloc	[:,-1]	tanti	53.0	mee thank
X-encoded	= фиеркосельог	-features)], re · fêt-trans for	m (x)	-
				E. i
label-encod	er = Label Ence	oder ()	Ĺ	
	ler = Label Encoder label = encoder		m (y)	
	ler = Jabel Ence label - encode		m (y)	
y_encoded =	label_encode	y.fct_transfor		ded v-encoded.
y_encoded =	label_encode	u·fct-transfor test=train-lest	-splik(x-enco	ded, y-encoded, dom-state = 42)
y-encoded = X-train, X-	test, y-train, y-	test = train-lest test_si	_split(x_enco 2e=0.2, kan	ded, y-encoded, down_state = 42) 50)
y-encoded = X-train, X-	test, y-train, y-	test = train-lest test_si	_split(x_enco 2e=0.2, kan	dom_state = 42)
y-encoded = X-train, X-	label_encode	test = train-lest test_si	_split(x_enco 2e=0.2, kan	dom_state = 42)
y-encoded = X-train, X- Hf-classifie Hf-classifie	test, y-train, y-	test = train-lest test = train-lest test_si test Classi fier (r r, y-train)	_split(x_enco ze=0.2, kand z_estimators=	dom_state = 42)

Teacher's Signature:....

RF	Classi fication	Keport	
		,	 1

	precision	recall	f1-score	support
0	0.50	1.00	0.67	1
1	1.00	0.50	0.67	2
			0.67	3
accuracy	0.75	0.75	0.67	3
macro ang Weighted ang	0.83	F3.0	P0.0	3

I Salla 20			1.0
Sabels	1	0	-0.8
Jag O	L		-0.6
Actual 1	(X) (8) (8) (8) (8) (8) (8) (8) (8) (8) (8		-0.4
1 Act	1	1	-0.2
	(v)	of distance of the second	0.0
	0	1	
	Predicted.	Zabels	that what

The person is predicted not to play tennis.

Page No. 19 Date

Teacher's Signature:.....

a	cciviacy = accimacy_score (y-test, y-pred) onf-matrix = confusion_matrix (y-test, y-pred) lassi fication_report = str = classi fication-report (y-test, y-pred)
0	on f matrix = confusion_matrix (y-test, y-pred)
	low Esstin yeart & Str = classification-report (y-test, y-pred)
	aussi ficulion = region = 300
	Swint (I'RE downer : {accuracu})
1	runt (f'RF Accuracy: {accuracy}) runt (f'RF Confusion Matrix:\n {conf_matrix}')
7	$\frac{1}{2} \frac{1}{2} \frac{1}$
15	sns. set (rc= { figure. figsize : (6,3)})
کا	ens. heatmap (confusion-matrix (y-test, y-pred), annot = True, fint = d
17	ME. Mabel ( Predicted Labous)
1	sit. ylabel ('Actual Labels')
4	print (f'RF Classification Report: \n ? classification - Heport - Str ?)
۱′	
1	ew_data = pd. Sata Frame (1 Outlook: 1 Sunny ), lemperature . L. Not
L	Humidity': ['High'], Wind': ['Weak']}
IL	
	new-data-encoded = preprocessor. transform(new-data)
L	7 7
$\ _{\epsilon}$	predicted-play-tennis = rf-classifier. predict (new-data-encoded)
7	
	f predicted-play-tennis[0]==1:
$\ $	print ("The person is predicted to play tennis.")
	The factor of th
	else:
$\  \cdot \ $	print ("The person is predicted not to play ternis.")
$\ \cdot\ $	prime ( ) Ne power is primited not to play levius.
11	