```
In [2]: import pandas as pd
            import numpy as np
            import seaborn as sns
            import matplotlib.pyplot as plt
            from sklearn.model_selection import train_test_split
            from sklearn.metrics import accuracy_score
            from sklearn.metrics import classification report
            import re
            import string
 In [ ]: ### Importing the Fake New Dataset
In [36]: data_fake = pd.read_csv("D:/Fake News Prediction Dataset/Fake.csv")
 In [ ]: | ### Displays first 10 rows in Fake.csv
In [66]:
           data_fake.head(10)
Out[66]:
                                                             title
                                                                                                             text subject
                                                                                                                                         date class
                                                                                                                                 December 31,
                  Donald Trump Sends Out Embarrassing New Year' ...
                                                                      Donald Trump just couldn t wish all Americans ...
                                                                                                                    News
                                                                                                                                                   0
                                                                                                                                         2017
                                                                       House Intelligence Committee Chairman Devin
                                                                                                                                 December 31,
                     Drunk Bragging Trump Staffer Started Russian ...
                                                                                                                    News
                                                                                                                                                   0
                                                                                                                                         2017
                                                                                                            Nu..
                                                                                                                                 December 30,
                     Sheriff David Clarke Becomes An Internet Joke...
                                                                      On Friday, it was revealed that former Milwauk...
                                                                                                                                                   0
                                                                                                                    News
                                                                                                                                         2017
                       Trump Is So Obsessed He Even Has Obama's
                                                                                                                                 December 29,
             3
                                                                  On Christmas day, Donald Trump announced that ...
                                                                                                                                                   0
                                                                                                                    News
                                                         Name...
                                                                                                                                         2017
                                                                                                                                 December 25,
                    Pope Francis Just Called Out Donald Trump Dur...
            4
                                                                  Pope Francis used his annual Christmas Day mes...
                                                                                                                    News
                                                                                                                                                   0
                                                                                                                                         2017
                                                                                                                                 December 25,
             5
                    Racist Alabama Cops Brutalize Black Boy While...
                                                                                                                                                   0
                                                                      The number of cases of cops brutalizing and ki...
                                                                                                                    News
                                                                                                                                         2017
                                                                                                                                 December 23,
             6
                    Fresh Off The Golf Course, Trump Lashes Out A...
                                                                                                                                                   0
                                                                     Donald Trump spent a good portion of his day a...
                                                                                                                    News
                                                                                                                                         2017
                                                                                                                                 December 23,
            7
                   Trump Said Some INSANELY Racist Stuff Inside ...
                                                                       In the wake of yet another court decision that...
                                                                                                                    News
                                                                                                                                                   0
                                                                                                                                         2017
                                                                                                                                 December 22,
                    Former CIA Director Slams Trump Over UN Bully...
                                                                     Many people have raised the alarm regarding th...
                                                                                                                    News
                                                                                                                                                   0
                                                                                                                                         2017
                                                                                                                                 December 21,
            9 WATCH: Brand-New Pro-Trump Ad Features So Muc...
                                                                     Just when you might have thought we d get a br...
                                                                                                                    News
                                                                                                                                                   0
                                                                                                                                         2017
 In [ ]: ### Importing the True News Dataset
In [40]: |data_true=pd.read_csv("D:/Fake News Prediction Dataset/True.csv")
 In [ ]: ### Displays first 10 rows in True.csv
In [41]: data_true.head(10)
Out[41]:
                                                         title
                                                                                                                        subject
                                                                                                                                              date
            0
                   As U.S. budget fight looms, Republicans flip t...
                                                                  WASHINGTON (Reuters) - The head of a conservat...
                                                                                                                   politicsNews
                                                                                                                                December 31, 2017
             1
                    U.S. military to accept transgender recruits o...
                                                                  WASHINGTON (Reuters) - Transgender people will...
                                                                                                                   politicsNews
                                                                                                                                December 29, 2017
            2
                  Senior U.S. Republican senator: 'Let Mr. Muell...
                                                                   WASHINGTON (Reuters) - The special counsel inv...
                                                                                                                   politicsNews
                                                                                                                                December 31, 2017
                 FBI Russia probe helped by Australian diplomat...
                                                                 WASHINGTON (Reuters) - Trump campaign adviser ...
                                                                                                                   politicsNews
                                                                                                                                 December 30, 2017
                Trump wants Postal Service to charge 'much mor...
                                                                SEATTLE/WASHINGTON (Reuters) - President Donal...
                                                                                                                   politicsNews
                                                                                                                                 December 29, 2017
                White House, Congress prepare for talks on spe...
                                                              WEST PALM BEACH, Fla./WASHINGTON (Reuters) - T...
             5
                                                                                                                   politicsNews
                                                                                                                                December 29, 2017
                   Trump says Russia probe will be fair, but time...
                                                                  WEST PALM BEACH, Fla (Reuters) - President Don...
                                                                                                                   politicsNews
                                                                                                                                 December 29, 2017
                  Factbox: Trump on Twitter (Dec 29) - Approval ...
                                                                      The following statements were posted to the ve...
                                                                                                                   politicsNews
                                                                                                                                 December 29, 2017
             8
                     Trump on Twitter (Dec 28) - Global Warming
                                                                      The following statements were posted to the ve...
                                                                                                                   politicsNews
                                                                                                                                 December 29, 2017
                    Alabama official to certify Senator-elect Jone...
                                                                  WASHINGTON (Reuters) - Alabama Secretary of St... politicsNews
             9
                                                                                                                                December 28, 2017
 In [ ]: | ### Adding a column as 0 for fake news and 1 for true news
```

```
In [43]: data_fake["class"]=0 data_true["class"]=1

In []: ### Size of Actual rows and columns

In [45]: print(data_fake.shape,data_true.shape) (23523, 5) (21417, 5)

In []: ### Removing empty rows

In [73]: data_fake.dropna(inplace=True) data_true.dropna(inplace=True)

In []: ### Size of rows and column after removed the empty rows

In [74]: data_fake.shape,data_true.shape

Out[74]: ((23461, 5), (21417, 5))

In []: ### Displaying Last 10 rows in both true and fake dataset

In [75]: data_fake_manual_testing=data_fake.tail(10) #fake news data_fake_manual_testing
```

Out[75]:

	title	text	subject	date	class
23503	REPORT: 'Federal Government Escalated the Viol	KILLED: Rancher and protest spokesman Robert	Middle- east	January 28, 2016	0
23504	BOILER ROOM – Oregon Standoff, Cuddle Parties,	Tune in to the Alternate Current Radio Network	Middle- east	January 28, 2016	0
23505	Eyewitness Says Feds Ambushed Bundys, 100 Shot	Patrick Henningsen 21st Century Wire UPDATE: 1	Middle- east	January 27, 2016	0
23506	Episode #119 – SUNDAY WIRE: 'You Know the Dril	Episode #119 of SUNDAY WIRE SHOW finally resum	Middle- east	January 24, 2016	0
23507	'There'll be boots on the ground': US making n	21st Century Wire says Various parties in Wash	Middle- east	January 23, 2016	0
23508	Boston Brakes? How to Hack a New Car With Your	21st Century Wire says For those who still ref	Middle- east	January 22, 2016	0
23509	Oregon Governor Says Feds 'Must Act' Against P	21st Century Wire says So far, after nearly 20	Middle- east	January 21, 2016	0
23510	Ron Paul on Burns Oregon Standoff and Jury Nul	21st Century Wire says If you ve been followin	Middle- east	January 21, 2016	0
23511	BOILER ROOM: As the Frogs Slowly Boil – EP #40	Tune in to the Alternate Current Radio Network	Middle- east	January 20, 2016	0
23512	Arizona Rancher Protesting in Oregon is Target	RTOne of the most visible members of the armed	Middle- east	January 20, 2016	0

In [76]: data_true_manual_testing=data_true.tail(10) #true news
data_true_manual_testing

Out[76]:

	title	text	subject	date	class
21407	Mata Pires, owner of embattled Brazil builder	SAO PAULO (Reuters) - Cesar Mata Pires, the ow	worldnews	August 22, 2017	1
21408	U.S., North Korea clash at U.N. forum over nuc	GENEVA (Reuters) - North Korea and the United	worldnews	August 22, 2017	1
21409	U.S., North Korea clash at U.N. arms forum on	GENEVA (Reuters) - North Korea and the United	worldnews	August 22, 2017	1
21410	Headless torso could belong to submarine journ	COPENHAGEN (Reuters) - Danish police said on T	worldnews	August 22, 2017	1
21411	North Korea shipments to Syria chemical arms a	UNITED NATIONS (Reuters) - Two North Korean sh	worldnews	August 21, 2017	1
21412	'Fully committed' NATO backs new U.S. approach	BRUSSELS (Reuters) - NATO allies on Tuesday we	worldnews	August 22, 2017	1
21413	LexisNexis withdrew two products from Chinese	LONDON (Reuters) - LexisNexis, a provider of I	worldnews	August 22, 2017	1
21414	Minsk cultural hub becomes haven from authorities	MINSK (Reuters) - In the shadow of disused Sov	worldnews	August 22, 2017	1
21415	Vatican upbeat on possibility of Pope Francis	MOSCOW (Reuters) - Vatican Secretary of State	worldnews	August 22, 2017	1
21416	Indonesia to buy \$1.14 billion worth of Russia	JAKARTA (Reuters) - Indonesia will buy 11 Sukh	worldnews	August 22, 2017	1

In [77]: ### Customizing last 10 rows as first 10 rows

In [78]: data_fake_manual_testing["class"]=0
 data_true_manual_testing["class"]=1

C:\Users\ROHITH DP\AppData\Local\Temp\ipykernel_6828\1040235159.py:1: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html #returning-a-view-versus-a-copy (https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy)

data_fake_manual_testing["class"]=0

C:\Users\ROHITH DP\AppData\Local\Temp\ipykernel_6828\1040235159.py:2: SettingWithCopyWarning:

A value is trying to be set on a copy of a slice from a DataFrame.

Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html #returning-a-view-versus-a-copy (https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy)

data_true_manual_testing["class"]=1

In []: |### Just Ignore the above warning

In [79]: ### Now displaying the last 10 rows as first 10 rows using head()

In [80]: data_fake_manual_testing.head(10)

Out[80]:

23503	DEPORT (F- d) O				
20000	REPORT: 'Federal Government Escalated the Viol	KILLED: Rancher and protest spokesman Robert	Middle- east	January 28, 2016	0
23504	BOILER ROOM – Oregon Standoff, Cuddle Parties,	Tune in to the Alternate Current Radio Network	Middle- east	January 28, 2016	0
23505	Eyewitness Says Feds Ambushed Bundys, 100 Shot	Patrick Henningsen 21st Century Wire UPDATE: 1	Middle- east	January 27, 2016	0
23506	Episode #119 – SUNDAY WIRE: 'You Know the Dril	Episode #119 of SUNDAY WIRE SHOW finally resum	Middle- east	January 24, 2016	0
23507	'There'll be boots on the ground': US making n	21st Century Wire says Various parties in Wash	Middle- east	January 23, 2016	0
23508	Boston Brakes? How to Hack a New Car With Your	21st Century Wire says For those who still ref	Middle- east	January 22, 2016	0
23509	Oregon Governor Says Feds 'Must Act' Against P	21st Century Wire says So far, after nearly 20	Middle- east	January 21, 2016	0
23510	Ron Paul on Burns Oregon Standoff and Jury Nul	21st Century Wire says If you ve been followin	Middle- east	January 21, 2016	0
23511	BOILER ROOM: As the Frogs Slowly Boil – EP #40	Tune in to the Alternate Current Radio Network	Middle- east	January 20, 2016	0
23512	Arizona Rancher Protesting in Oregon is Target	RTOne of the most visible members of the armed	Middle- east	January 20, 2016	0

In [81]: data_true_manual_testing.head(10)

Out[81]:

	title	text	subject	date	class
21407	Mata Pires, owner of embattled Brazil builder	SAO PAULO (Reuters) - Cesar Mata Pires, the ow	worldnews	August 22, 2017	1
21408	U.S., North Korea clash at U.N. forum over nuc	GENEVA (Reuters) - North Korea and the United	worldnews	August 22, 2017	1
21409	U.S., North Korea clash at U.N. arms forum on	GENEVA (Reuters) - North Korea and the United	worldnews	August 22, 2017	1
21410	Headless torso could belong to submarine journ	COPENHAGEN (Reuters) - Danish police said on T	worldnews	August 22, 2017	1
21411	North Korea shipments to Syria chemical arms a	UNITED NATIONS (Reuters) - Two North Korean sh	worldnews	August 21, 2017	1
21412	'Fully committed' NATO backs new U.S. approach	BRUSSELS (Reuters) - NATO allies on Tuesday we	worldnews	August 22, 2017	1
21413	LexisNexis withdrew two products from Chinese	LONDON (Reuters) - LexisNexis, a provider of I	worldnews	August 22, 2017	1
21414	Minsk cultural hub becomes haven from authorities	MINSK (Reuters) - In the shadow of disused Sov	worldnews	August 22, 2017	1
21415	Vatican upbeat on possibility of Pope Francis	MOSCOW (Reuters) - Vatican Secretary of State	worldnews	August 22, 2017	1
21416	Indonesia to buy \$1.14 billion worth of Russia	JAKARTA (Reuters) - Indonesia will buy 11 Sukh	worldnews	August 22, 2017	1

In [82]: ### Merging the fake data and true date sets

In [83]: data_merge=pd.concat([data_fake,data_true],axis=0)

fake news detection - Jupyter Notebook In [84]: data merge.head(10) Out[84]: title text subject date class December 31, 0 Donald Trump Sends Out Embarrassing New Year' ... 0 Donald Trump just couldn t wish all Americans ... News House Intelligence Committee Chairman Devin December 31, 1 Drunk Bragging Trump Staffer Started Russian ... News 0 December 30, 2 Sheriff David Clarke Becomes An Internet Joke... On Friday, it was revealed that former Milwauk... News 0 December 29, Trump Is So Obsessed He Even Has Obama's 3 On Christmas day, Donald Trump announced that ... 0 News December 25. 4 Pope Francis Just Called Out Donald Trump Dur... Pope Francis used his annual Christmas Day mes... 0 News 2017 December 25 5 Racist Alabama Cops Brutalize Black Boy While... The number of cases of cops brutalizing and ki... 0 2017 December 23. Fresh Off The Golf Course, Trump Lashes Out A... Donald Trump spent a good portion of his day a... 0 2017 December 23 Trump Said Some INSANELY Racist Stuff Inside ... In the wake of yet another court decision that... News 0 2017 December 22, Former CIA Director Slams Trump Over UN Bully... Many people have raised the alarm regarding th... News 2017 December 21, 9 WATCH: Brand-New Pro-Trump Ad Features So Muc... Just when you might have thought we d get a br... News 0 2017 In [85]: data_merge.tail(10) Out[85]: title subject text date class August 22, 21407 Mata Pires, owner of embattled Brazil builder ... SAO PAULO (Reuters) - Cesar Mata Pires, the ow... worldnews 1 2017 August 22, 21408 U.S., North Korea clash at U.N. forum over nuc... GENEVA (Reuters) - North Korea and the United ... worldnews 2017 August 22, 21409 U.S., North Korea clash at U.N. arms forum on ... GENEVA (Reuters) - North Korea and the United ... worldnews 2017 COPENHAGEN (Reuters) - Danish police said on August 22, Headless torso could belong to submarine journ... worldnews 21410 2017 UNITED NATIONS (Reuters) - Two North Korean August 21, 21411 North Korea shipments to Syria chemical arms a... worldnews sh... 2017 August 22, 'Fully committed' NATO backs new U.S. BRUSSELS (Reuters) - NATO allies on Tuesday 21412 worldnews approach... we 2017 August 22, LexisNexis withdrew two products from Chinese 21413 LONDON (Reuters) - LexisNexis, a provider of I... worldnews 2017 Minsk cultural hub becomes haven from August 22, 21414 MINSK (Reuters) - In the shadow of disused Sov... worldnews authorities 2017 August 22, 21415 Vatican upbeat on possibility of Pope Francis ... MOSCOW (Reuters) - Vatican Secretary of State ... worldnews 2017 August 22, 21416 Indonesia to buy \$1.14 billion worth of Russia... JAKARTA (Reuters) - Indonesia will buy 11 Sukh... worldnews 2017

In [86]: ### After merging the fake and true news , Checking the size of rows

In [87]: data_merge.shape

Out[87]: (44878, 5)

In [88]: ### Displaying the name of the columns

In [89]: |data_merge.columns

Out[89]: Index(['title', 'text', 'subject', 'date', 'class'], dtype='object')

In []: ### remove columns which are not required for the further process

In [90]: | data=data_merge.drop(['title','subject','date'],axis=1)

```
In [91]: data.head(10)
 Out[91]:
                                                          text class
                    Donald Trump just couldn t wish all Americans ...
              1 House Intelligence Committee Chairman Devin Nu...
                                                                   0
             2
                    On Friday, it was revealed that former Milwauk...
                                                                   0
              3 On Christmas day, Donald Trump announced that ...
                                                                   0
                 Pope Francis used his annual Christmas Day mes...
                                                                   0
                    The number of cases of cops brutalizing and ki...
                                                                   0
              6
                   Donald Trump spent a good portion of his day a...
                                                                   0
                     In the wake of yet another court decision that...
                                                                   0
                                                                   0
                   Many people have raised the alarm regarding th...
                   Just when you might have thought we d get a br...
                                                                   0
 In [92]: ### Checking null values
 In [93]: data.isnull().sum()
 Out[93]: text
             class
             dtype: int64
 In [94]: ### Shuffle the data
In [103]: data=data.sample(frac=1)
In [104]: | data.head(10)
Out[104]:
                     index
                                                                      text class
              8676
                      8676
                               The British Parliament conducted what can only...
                             WASHINGTON (Reuters) - The U.S. military said ...
              40679 17218
              10121 10123
                                   Here s a partial transcript of her rant about ...
                                                                               0
              11044 11046
                              Melanija Knavs-Trump was born on April 26, 197...
                                                                               0
              39642 16181
                            BAGHDAD (Reuters) - Demonstrators, some carryi...
              17699 17705
                                  Is this just one more case of an activist judg...
                                                                               0
              5142
                      5142
                                On Sunday, Iran executed a nuclear scientist f...
                                                                               0
              18635 18643
                                 Tim Allen s hit sitcom Last Man Standing has...
                                                                               0
              16540 16546
                                  Don t think for a minute this union-style Blac...
              34787 11326
                               TUNIS (Reuters) - The number of foreign touris...
In [109]: ### Deleting the index column
In [110]: data.drop(['index',],axis=1,inplace=True)
In [111]: data.columns
Out[111]: Index(['level_0', 'text', 'class'], dtype='object')
In [112]: ### Deleting the Level_0 column
In [113]: | data.drop(['level_0'],axis=1,inplace=True)
In [114]: data.columns
Out[114]: Index(['text', 'class'], dtype='object')
```

```
In [115]: data.head(10)
Out[115]:
                                                     text class
                  The British Parliament conducted what can only...
                WASHINGTON (Reuters) - The U.S. military said ...
            1
                                                             1
            2
                     Here s a partial transcript of her rant about ...
                                                             0
            3
                 Melanija Knavs-Trump was born on April 26, 197...
                                                             0
            4 BAGHDAD (Reuters) - Demonstrators, some carryi...
                                                             1
            5
                                                             0
                     Is this just one more case of an activist judg...
            6
                   On Sunday, Iran executed a nuclear scientist f...
                                                             0
                    Tim Allen s hit sitcom Last Man Standing has...
                                                             0
                    Don t think for a minute this union-style Blac...
                  TUNIS (Reuters) - The number of foreign touris...
                                                             1
  In [ ]: |### importinf re
In [116]: def wordopt(text):
                text=text.lower()
                text=re.sub('\[."?\]','',text)
               text=re.sub('<."?>+','',text)
               text=re.sub('[%s]' %re.escape(string.punctuation),'',text)
text=re.sub('\n','',text)
text=re.sub('\w"\d\w"','',text)
                return text
In [117]: | data['text']=data['text'].apply(wordopt)
In [118]: x=data['text']
           y=data['class']
In [120]: x_train,x_test,y_train,y_test=train_test_split(x,y,test_size=0.25)
  In [ ]: |### TfidfVectorizer
In [128]: from sklearn.feature_extraction.text import TfidfVectorizer
           vectorization=TfidfVectorizer()
           xv_train=vectorization.fit_transform(x_train)
           xv_test=vectorization.transform(x_test)
In [130]: xv_train
Out[130]: <33658x107982 sparse matrix of type '<class 'numpy.float64'>'
                    with 7028492 stored elements in Compressed Sparse Row format>
In [132]: xv_test
Out[132]: <11220x107982 sparse matrix of type '<class 'numpy.float64'>'
                    with 2304456 stored elements in Compressed Sparse Row format>
  In [ ]: ### Logistic Regression
In [129]: from sklearn.linear_model import LogisticRegression
           LR=LogisticRegression()
           LR.fit(xv_train,y_train)
Out[129]:
           ▼ LogisticRegression
            LogisticRegression()
In [136]: pred_lr=LR.predict(xv_test)
```

```
In [134]: LR.score(xv_test,y_test) #Accuracy
Out[134]: 0.9869875222816399
In [137]: print(classification_report(y_test,pred_lr))
                         precision
                                     recall f1-score
                                                         support
                     0
                             0.99
                                        0.99
                                                  0.99
                                                            5850
                             0.98
                                        0.99
                                                  0.99
                                                            5370
                     1
                                                  0.99
                                                           11220
              accuracy
             macro avg
                             0.99
                                        0.99
                                                  0.99
                                                           11220
          weighted avg
                             0.99
                                        0.99
                                                  0.99
                                                           11220
In [138]: ### DecisionTreeClassifier
In [139]: from sklearn.tree import DecisionTreeClassifier
In [142]: DTC=DecisionTreeClassifier()
In [143]: DTC.fit(xv_train,y_train)
Out[143]:
          ▼ DecisionTreeClassifier
           DecisionTreeClassifier()
In [144]: pred dtc=DTC.predict(xv test)
In [145]: DTC.score(xv_test,y_test) #Accuracy
Out[145]: 0.9945632798573975
In [146]: |print(classification_report(y_test,pred_dtc))
                                     recall f1-score
                        precision
                                                         support
                     0
                             0.99
                                        1.00
                                                  0.99
                                                            5850
                                                  0.99
                     1
                             0.99
                                        0.99
                                                            5370
                                                  0.99
                                                           11220
              accuracy
             macro avg
                             0.99
                                       0.99
                                                  0.99
                                                           11220
                                       0.99
                                                  0.99
          weighted avg
                             0.99
                                                           11220
In [147]: ### Random Forest Classifier
In [153]: from sklearn.ensemble import RandomForestClassifier
          RFC=RandomForestClassifier()
In [154]: RFC.fit(xv_train,y_train)
Out[154]: RandomForestClassifier
           RandomForestClassifier()
In [155]: pred_rfc=RFC.predict(xv_test)
In [156]: RFC.score(xv_test,y_test) #Accuracy
Out[156]: 0.9887700534759358
In [157]: print(classification_report(y_test,pred_rfc))
                         precision
                                     recall f1-score
                                                         support
                     0
                             0.99
                                        0.99
                                                  0.99
                                                            5850
                     1
                             0.99
                                        0.99
                                                  0.99
                                                            5370
                                                  0.99
                                                           11220
              accuracy
             macro avg
                             0.99
                                        0.99
                                                  0.99
                                                           11220
                                                  0.99
                             0.99
                                        0.99
                                                           11220
          weighted avg
```

```
In [161]: def output label(n):
              if n==0:
                 return "Fake News"
              elif n==1:
                 return "Not a Fake News"
          def manual testing(news):
              testing_news={"text":[news]}
              new_def_test=pd.DataFrame(testing_news)
              new_def_test["text"] = new_def_test["text"].apply(wordopt)
              new_x_test=new_def_test["text"]
              new_xv_test=vectorization.transform(new_x_test)
              pred_lr=LR.predict(new_xv_test)
              pred_dtc=DTC.predict(new_xv_test)
              pred_rfc=RFC.predict(new_xv_test)
              return print("\n\nLR Prediction: {} \nRFC Prediction {}".format(output_label(pred_l
                                                                         output label(pred dtc[0]),
                                                                                                output label(pred rf
```

In []: ### Now the news is detected whether it is a Fake or Not fake.

```
In [163]: news=str(input())
manual_testing(news)
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"Google Pinterest Digg Linkedin Reddit Stumbleupon Print Delicious Pocket Tumblr There are two fundamental truths in this world: Paul Ryan desperately wants to be president. And Paul Ryan will never be president. T oday proved it. In a particularly staggering example of political cowardice, Paul Ryan re-re-reversed c ourse and announced that he was back on the Trump Train after all. This was an aboutface from where he was a few weeks ago. He had previously declared he would not be supporting or defending Trump after a tape was made public in which Trump bragged about assaulting women. Suddenly, Ryan was appearing at a pro-Trump rall y and boldly declaring that he already sent in his vote to make him President of the United States. It was a surreal moment. The figurehead of the Republican Party dosed himself in gasoline, got up on a stage on a chilly afternoon in Wisconsin, and lit a match. . @SpeakerRyan says he voted for @realDonaldTrump : "Repu blicans, it is time to come homeâ€∑ https://t.co/VyTT49YvoE (https://t.co/VyTT49YvoE) pic.twitter.com/wCvSC g4a5I — ABC News Politics (@ABCPolitics) November 5, 2016 The Democratic Party couldn't have asked fo r a better moment of film. Ryan's chances of ever becoming president went down to zero in an instant. In the wreckage Trump is to leave behind in his wake, those who cravenly backed his campaign will not recover. If Ryan's career manages to limp all the way to 2020, then the DNC will have this tape locked and loaded to be used in every ad until Election Day. The ringing endorsement of the man he clearly hates on a person al level speaks volumes about his own spinelessness. Ryan has postured himself as a "principledâ€図 conser vative, and one uncomfortable with Trump's unapologetic bigotry and sexism. However, when push came to sh ove, Paul Ryan â€" like many of his colleagues â€" turned into a sniveling appeaser. After all his lofty ta k about conviction, his principles were a house of cards and collapsed with the slightest breeze. What's especially bizarre is how close Ryan came to making it through unscathed. For months the Speaker of the Hou se refused to comment on Trump at all. His strategy seemed to be to keep his head down, pretend Trump didnâ €™t exist, and hope that nobody remembered what happened in 2016. Now, just days away from the election, he screwed it all up. If 2016's very ugly election has done any good it's by exposing the utter cowardice of the Republicans who once feigned moral courage. A reality television star spit on them, hijacked their p arty, insulted their wives, and got every last one of them to kneel before him. What a turn of events. Fea tured image via Twitter"

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> WASHINGTON (Reuters) - U.S. President Donald Trump on Saturday defended a Republican tax-cut plan against D emocratic charges that it favors the rich, saying it will be "one of the great Christmas giftsâ€छ for the middle class with just days to go before Congress votes. With a vote on the biggest tax rewrite in three de cades set for Tuesday, Republicans were working to ensure party members were holding the line in favor of t he legislation against entrenched Democratic opposition. The plan was finalized on Friday after Republican Senators Marco Rubio and Bob Corker pledged their support. Three Republican senators, enough to defeat the measure in a Senate that Trump's party controls with a slim 52-48 majority, remained uncommitted: Susan C ollins, Jeff Flake and Mike Lee. Passage in Congress would provide Republicans and Trump with their first m ajor victory since he took office in January. â€ α Itâ€ m s going to be one of the great Christmas gifts to mid dle-income people,‮ Trump told reporters at the White House before he boarded a helicopter for meetings a t Camp David. $\hat{a} \in \mathbb{C}$ The Democrats have their sound bite, the standard sound bite before they even know what th e bill is all about,â€D he added. The proposed package would slash the U.S. corporate tax rate to 21 percen t and cut taxes for wealthy Americans. Under an agreement between the House of Representatives and the Sena te, the corporate tax would be 1 percentage point higher than the 20 percent rate earlier proposed, but sti ll far below the current headline rate of 35 percent, a deep tax reduction that corporations have sought fo r years. Democrats have slammed the plan as a giveaway to corporations and the rich that would drive up the federal deficit. For months, Trump has touted the bill as a middle-class tax cut. Studies from independent analysts and non-partisan congressional researchers have projected that corporations and the rich would ben efit disproportionately. Trump repeated on Saturday that the tax overhaul would help bring in \$4 trillion i n foreign profits from U.S. companies. The tax plan proposes new rules for repatriating cash held overseas. $\hat{a} \in mathemath{\alpha}$ This is going to bring money in. As an example, we think \$4 trillion is going to be flowing back into th e country,â€⊠ he said. "That's money that's overseas that's stuck there for years and years.‮

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