NAME :- MOHAN SAI KOTHAPALLI **EMP ID :- 2112951** COHORT CODE: - GN22CDBDS001 ASSIGNMENT ON REGEX Design a python program to accept a file name through command line arguments. Parse this file to perform the following: Print all currencies in text, Accepted-\$, ₹, £ 2. Print all date times in the text- dd/mm/yyyy, dd/mm/yy, mm/dd/yyyy, mm/dd/yy 3. Print all cardinilities and orders- 4th, fifth, sixth, 1st, 2nd, nineteenth, fifth 4. Print all 4 letter words that begin with vowels STEP 0:- IMPORTING LIBRARIES In [ ]: import re import sys DATA 1 STEP 1 :- Opening File DATA 1 This file contains some random text with currency's and dates and some orders. In [ ]: f=open(sys.argv[1]) In [ ]: with open(sys.argv[1],'r',encoding='utf-8') as f: data=f.readline() data The above 'readline()' will read a single line from the file. Line means when you press "enter" in the keyboard will typing your data that is considered as new line. Without pressing you keep on typing then it is considered as single line. i.e '\n' In [ ]: with open(sys.argv[1], 'r', encoding='utf-8') as f: data=f.readlines() data The above 'readlines()' will read all lines from the file as list. Each line as an element in list. In [ ]: | with open(sys.argv[1],'r',encoding='utf-8') as f: data=f.read() data The above 'read()' will read all lines from the file as single para. STEP 2:- FINDING CURRENCY'S INCLUDING THE AMOUNT IN TEXT In []:  $x=re.findall(r''(\d^*?\.?\d^+?[\$\xi])'', data)$ In [ ]: print(x) FINDING ONLY THE SYMBOLS OF CURRENCY IN TEXT In [ ]: curr=re.findall("([\$₹£])",data) In [ ]: print("Total Number Of Currency Symbols In the TEXT DATA are: ",len(curr)) print(f"Types Of Currency Symbols In the TEXT DATA are : ",len(set(curr))," ",set(curr)) print(curr) STEP 3 :-PRINTING ALL THE FORMATES OF DATES IN THE TEXT In []:  $dates=re.findall(r"((0[1-9]|1[0-2])/(0[1-9]|[12][0-9]|3[01])/(d{4}))b)",data)$ print("The Number of dates in the format of 'mm/dd/yyyy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' print()  $dates=re.findall(r"((0[1-9]|[12][0-9]|3[01])/(0[1-9]|1[0-2])/(\d{4})\b)",data)$ print("The Number of dates in the format of 'dd/mm/yyyy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ') print()  $dates=re.findall(r"((0[1-9]|[12][0-9]|3[01])/(0[1-9]|1[0-2])/(\d\{2\})\b)", data)$ print("The Number of dates in the format of 'dd/mm/yy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ') print() print("The Number of dates in the format of 'mm/dd/yy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ') print() STEP 4:- PRINTING ALL CARDINILITIES AND ORDERS FROM THE TEXT In [ ]: | order=[] x=re.findall(r"((first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))|(fif[a-z]+(th|rd|st|nd))|h|st|nd|rd) | (fi[a-z]+th) | (six[a-z]+(th|st|nd|rd)) | (sev[a-z]+(th|st|nd|rd)) | (eig[a-z]+(th|st|nd|rd)) | (n = 1) | (n ine[a-z]+(th|st|nd|rd))+(ten[a-z]+?(th|st|nd|rd))+(ele[a-z]+th)+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(twe[st|rd)))",data) for i in range(len(x)): if(x[i][0] not in order):order.append(x[i][0]) #print(order) orders=[] x1=re.findall(r"([0-9]+(th|st|nd|rd))",data)for i in range(len(x1)): **if**(x1[i][0] **not in** orders): orders.append(x1[i][0]) #print(orders) if order or orders: print(order+orders) print ("No CARDINILITIES AND ORDERS FOUND IN THE TEXT") STEP 5:- PRINTING ALL 4 LETTER WORDS STARTING WITH VOWELS FROM THE TEXT In []: four=re.findall(r"(b(a|e|i|o|u|A|E|I|o|U)[a-zA-Z]{3}\b)", data) fours=[] for i in range(len(four)): fours.append(four[i][0]) print(fours) WE WILL REPEAT THE ABOVE STEPS FOR THE REMAINING DATASETS DATA 2 STEP 1:- Opening File DATA 2 This TEXT file contains a story and some values of currency's. In [ ]: f=open(sys.argv[2]) In []: with open(sys.argv[2],'r',encoding='utf-8') as f: data=f.readline() data In [ ]: with open(sys.argv[2],'r',encoding='utf-8') as f: data=f.readlines() data In []: with open(sys.argv[2],'r',encoding='utf-8') as f: data=f.read() data STEP 2:- FINDING CURRENCY'S INCLUDING THE AMOUNT IN TEXT  $x=re.findall(r''(\d^*?\.?\d+?[\$₹£])'', data)$ In [ ]: In [ ]: x FINDING ONLY THE SYMBOLS OF CURRENCY IN TEXT In [ ]: curr=re.findall("([\$₹£])", data) In [ ]: print("Total Number Of Currency Symbols In the TEXT DATA are: ",len(curr)) print(f"Types Of Currency Symbols In the TEXT DATA are : ",len(set(curr))," ",set(curr)) print(curr) STEP 3:-PRINTING ALL THE FORMATES OF DATES IN THE TEXT In []:  $dates=re.findall(r"((0[1-9]|1[0-2])/(0[1-9]|[12][0-9]|3[01])/(d{4}))b)$ ", data) print("The Number of dates in the format of 'mm/dd/yyyy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ')  $dates=re.findall(r"((0[1-9]|[12][0-9]|3[01])/(0[1-9]|1[0-2])/(\d{4})\b)", data)$ print("The Number of dates in the format of 'dd/mm/yyyy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ') print()  $dates=re.findall(r"((0[1-9]|[12][0-9]|3[01])/(0[1-9]|1[0-2])/(\d{2})\b)", data)$ print("The Number of dates in the format of 'dd/mm/yy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' print()  $dates=re.findall(r"((0[1-9]|1[0-2])/(0[1-9]|[12][0-9]|3[01])/(\d\{2\})\b)",data)$ print("The Number of dates in the format of 'mm/dd/yy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ') print() STEP 4:- PRINTING ALL CARDINILITIES AND ORDERS FROM THE TEXT In [ ]: | order=[]  $x = re.findall(r"((first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))|(fif[a-z]+(th|st|nd))| \\ (first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))| \\ (first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))| \\ (first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))| \\ (first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))| \\ (first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))| \\ (first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))| \\ (fo$ h|st|nd|rd) | (fi[a-z]+th) | (six[a-z]+(th|st|nd|rd)) | (sev[a-z]+(th|st|nd|rd)) | (eig[a-z]+(th|st|nd|rd)) | (n = 1 ine[a-z]+(th|st|nd|rd))+(ten[a-z]+?(th|st|nd|rd))+(ele[a-z]+th)+(twe[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(th|st|nd|rd))+(twn[a-z]+(twn[st|rd)))",data) for i in range(len(x)): **if**(x[i][0] **not in** order): order.append(x[i][0]) #print(order) orders=[] x1=re.findall(r"([0-9]+(th|st|nd|rd))",data)for i in range(len(x1)): **if**(x1[i][0] **not in** orders): orders.append(x1[i][0]) #print(orders) if order or orders: print(order+orders) else: print ("No CARDINILITIES AND ORDERS FOUND IN THE TEXT") STEP 5:- PRINTING ALL 4 LETTER WORDS STARTING WITH VOWELS FROM THE TEXT In []: four=re.findall(r"(b(a|e|i|o|u|A|E|I|O|U)[a-zA-Z]{3}\b)",data) for i in range(len(four)): fours.append(four[i][0]) print(fours) DATA 3 STEP 1:- Opening File DATA 3 This TEXT file contains INDIAN CONSTUITIONAL AMENDAMENTS with dates and order of the AMENDEMETS. As there are no currencys in this file i have included some random currency symbols with and without amounts (4) In [ ]: f=open(sys.argv[3]) In [ ]: | with open(sys.argv[3],'r',encoding='utf-8') as f: data=f.readline() data In []: with open(sys.argv[3],'r',encoding='utf-8') as f: data=f.readlines() data In [ ]: with open(sys.argv[3],'r',encoding='utf-8') as f: data=f.read() data STEP 2:- FINDING CURRENCY'S INCLUDING THE AMOUNT IN TEXT In []:  $x=re.findall(r''(\d^*?\.?\d^+?[\$?])'', data)$ In [ ]: FINDING ONLY THE SYMBOLS OF CURRENCY IN TEXT curr=re.findall("([\$₹£])",data) In [ ]: In [ ]: print("Total Number Of Currency Symbols In the TEXT DATA are: ",len(curr)) print(f"Types Of Currency Symbols In the TEXT DATA are : ",len(set(curr))," ",set(curr)) print(curr) STEP 3 :-PRINTING ALL THE FORMATES OF DATES IN THE TEXT In []: dates=re.findall(r"((0[1-9]|1[0-2])/(0[1-9]|[12][0-9]|3[01])/(d4))b)", data) print("The Number of dates in the format of 'mm/dd/yyyy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ') print()  $dates=re.findall(r"((0[1-9]|[12][0-9]|3[01])/(0[1-9]|1[0-2])/(\d{4})\b)", data)$ print("The Number of dates in the format of 'dd/mm/yyyy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ') print()  $dates=re.findall(r"((0[1-9]|[12][0-9]|3[01])/(0[1-9]|1[0-2])/(\d{2})\b)",data)$ print("The Number of dates in the format of 'dd/mm/yy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ') print()  $dates=re.findall(r"((0[1-9]|1[0-2])/(0[1-9]|[12][0-9]|3[01])/(\d\{2\})\b)",data)$ print("The Number of dates in the format of 'mm/dd/yy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ') print() STEP 4:- PRINTING ALL CARDINILITIES AND ORDERS FROM THE TEXT In [ ]: | order=[]  $x = re.findall(r"((first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))|(fif[a-z]+(th|st|nd))| \\ (first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))| \\ (first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|rd|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|st|nd))|(thir[a-z]+(th|st|st|st|nd))| \\ (fou[a-z]+(th|st|st|st|st|st|s$ h|st|nd|rd)) + (fi[a-z]+th) + (six[a-z]+(th|st|nd|rd)) + (sev[a-z]+(th|st|nd|rd)) + (eig[a-z]+(th|st|nd|rd)) + (eig[a-z]+(th|stine[a-z] + (th|st|nd|rd)) + (ten[a-z] + (th|st|nd|rd)) + (ele[a-z] + (th|st|nd|rd)) + (th|st|nd|rd)) + (th|st|nd|rd)st|rd)))",data) for i in range(len(x)): if(x[i][0] not in order):order.append(x[i][0]) #print(order) orders=[] x1=re.findall(r"([0-9]+(th|st|nd|rd))",data)for i in range(len(x1)): **if**(x1[i][0] **not in** orders): orders.append(x1[i][0]) #print(orders) if order or orders: print(order+orders) print("No CARDINILITIES AND ORDERS FOUND IN THE TEXT") STEP 5 :- PRINTING ALL 4 LETTER WORDS STARTING WITH VOWELS FROM THE TEXT In []: four=re.findall(r"(b(a|e|i|o|u|A|E|I|O|U)[a-zA-Z]{3}\b)", data) fours=[] for i in range(len(four)): fours.append(four[i][0]) print(fours) print("Tolal number of words without repetition are : ",len(set(fours)),"\n",set(fours)) DATA 4 STEP 1 :- Opening File DATA 4 This TEXT file contains fluctuation of indian currency with dollar and pound daywise. In [ ]: f=open(sys.argv[4]) In [ ]: | with open(sys.argv[4],'r',encoding='utf-8') as f: data=f.readline() data In [ ]: with open(sys.argv[4],'r',encoding='utf-8') as f: data=f.readlines() data In [ ]: | with open(sys.argv[4],'r',encoding='utf-8') as f: data=f.read() data STEP 2:- FINDING CURRENCY'S INCLUDING THE AMOUNT IN TEXT In []:  $x=re.findall(r''(\d^*\.?\d^+?[\$?])'', data)$  $x1=re.findall(r"([$₹£] ?\d*\.?\d+)", data)$ In [ ]: | print(x+x1) FINDING ONLY THE SYMBOLS OF CURRENCY IN TEXT curr=re.findall("([\$₹£])",data) In [ ]: In [ ]: print("Total Number Of Currency Symbols In the TEXT DATA are : ",len(curr)) print(f"Types Of Currency Symbols In the TEXT DATA are : ",len(set(curr))," ",set(curr)) STEP 3:-PRINTING ALL THE FORMATES OF DATES IN THE TEXT In []: dates=re.findall(r"((0[1-9]|1[0-2])/(0[1-9]|[12][0-9]|3[01])/(d4))b)",data)print("The Number of dates in the format of 'mm/dd/yyyy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' print()  $dates=re.findall(r"((0[1-9]|[12][0-9]|3[01])/(0[1-9]|1[0-2])/(\d\{4\})\b)",data)$ print("The Number of dates in the format of 'dd/mm/yyyy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ') print()  $dates=re.findall(r"((0[1-9]|[12][0-9]|3[01])/(0[1-9]|1[0-2])/(\d{2})\b)", data)$ print("The Number of dates in the format of 'dd/mm/yy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ') print()  $dates=re.findall(r"((0[1-9]|1[0-2])/(0[1-9]|[12][0-9]|3[01])/(\d\{2\})\b)",data)$ print("The Number of dates in the format of 'mm/dd/yy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' print() STEP 4:- PRINTING ALL CARDINILITIES AND ORDERS FROM THE TEXT In [ ]: | order=[]  $x = re.findall(r"((first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))|(fif[a-z]+(th|st|nd))| \\ (first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))| \\ (first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))| \\ (first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))| \\ (first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))| \\ (first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))| \\ (first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))|(thir[a-z]+(th|st|nd))| \\ (fou[a-z]+(th|st|nd))| \\ (fo$ h|st|nd|rd) | (fi[a-z]+th) | (six[a-z]+(th|st|nd|rd)) | (sev[a-z]+(th|st|nd|rd)) | (eig[a-z]+(th|st|nd|rd)) | (n = 1 ine[a-z]+(th|st|nd|rd))+(ten[a-z]+?(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|nd|rd))+(ten[a-z]+(th|st|ndst|rd)))",data) for i in range(len(x)): if(x[i][0] not in order):order.append(x[i][0]) #print(order) orders=[] x1=re.findall(r"([0-9]+(th|st|nd|rd))",data)for i in range(len(x1)): **if**(x1[i][0] **not in** orders): orders.append(x1[i][0]) #print(orders) if order or orders: print(order+orders) else: print ("No CARDINILITIES AND ORDERS FOUND IN THE TEXT") STEP 5 :- PRINTING ALL 4 LETTER WORDS STARTING WITH VOWELS FROM THE TEXT In []: | four=re.findall(r"( $\b(a|e|i|o|u|A|E|I|O|U)$ [a-zA-Z]{3}\b)", data) fours=[] if four: for i in range(len(four)): fours.append(four[i][0]) print(fours) print("Tolal number of words without repetition are : ",len(set(fours)),"\n",set(fours)) else: print("NO 4 LETTER WORDS STARTING WITH VOWELS FROM THE TEXT") DATA 5 STEP 1 :- Opening File DATA 5 This TEXT file contains a book about indian history. f=open(sys.argv[5]) In [ ]: In [ ]: with open(sys.argv[5],'r',encoding='utf-8') as f: data=f.read() data STEP 2:- FINDING CURRENCY'S INCLUDING THE AMOUNT IN TEXT In []:  $x=re.findall(r''(\d^*\.?\d^+?[\$?])'', data)$  $x1=re.findall(r"([$₹£] ?\d*\.?\d+)", data)$ In [ ]: print(x+x1) STEP 3:-PRINTING ALL THE FORMATES OF DATES IN THE TEXT In []: dates=re.findall(r"((0[1-9]|1[0-2])/(0[1-9]|[12][0-9]|3[01])/(d(4))b)",data)print("The Number of dates in the format of 'mm/dd/yyyy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ') print()  $dates = re.findall(r"((0[1-9]|[12][0-9]|3[01])/(0[1-9]|1[0-2])/(\d{4})\b)", data)$ print("The Number of dates in the format of 'dd/mm/yyyy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ') print() dates=re.findall(r"( $(0[1-9]|[12][0-9]|3[01])/(0[1-9]|1[0-2])/(d{2})$ )b)",data) print("The Number of dates in the format of 'dd/mm/yy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' print()  $dates=re.findall(r"((0[1-9]|1[0-2])/(0[1-9]|[12][0-9]|3[01])/(\d\{2\})\b)", data)$ print("The Number of dates in the format of 'mm/dd/yy' are : ",len(dates)) for i in range(len(dates)): print(dates[i][0],end=' ') print() STEP 4:- PRINTING ALL CARDINILITIES AND ORDERS FROM THE TEXT In [ ]: | order=[] x=re.findall(r"((first|second|third|sixth)|(thir[a-z]+(th|st|nd))|(fou[a-z]+(th|rd|st|nd))|(fif[a-z]+(th|rd|st|nd))|h|st|nd|rd) | (fi[a-z]+th) | (six[a-z]+(th|st|nd|rd)) | (sev[a-z]+(th|st|nd|rd)) | (eig[a-z]+(th|st|nd|rd)) | (n = 1 ine[a-z]+(th|st|nd|rd))+(ten[a-z]+?(th|st|nd|rd))+(ele[a-z]+th)+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(th|st|nd|rd))+(twe[a-z]+(twe[st|rd)))",data) for i in range(len(x)): if(x[i][0] not in order):order.append(x[i][0]) #print(order) orders=[] x1=re.findall(r"([0-9]+(th|st|nd|rd))",data)for i in range(len(x1)): if(x1[i][0] not in orders): orders.append(x1[i][0]) #print(orders) if order or orders: print(order+orders) else: print ("No CARDINILITIES AND ORDERS FOUND IN THE TEXT") STEP 5 :- PRINTING ALL 4 LETTER WORDS STARTING WITH VOWELS FROM THE TEXT In []:  $four=re.findall(r"(\b(a|e|i|o|u|A|E|I|O|U)[a-zA-Z]{3}\b)",data)$ fours=[] if four: for i in range(len(four)): fours.append(four[i][0]) print("Tolal number of words without repetition are : ",len(set(fours)),"\n",set(fours)) print("NO 4 LETTER WORDS STARTING WITH VOWELS FROM THE TEXT") :\ACADEMICS\INTERNSHIP\WEEK 4\ANS>py challenge\_nlp.py data1.txt data2.txt data3.txt data4.txt data5.txt
'1₹', '0.013\frac{1}{5}', '15', '75.95\frac{1}{5}', '1\frac{1}{5}', '16', '99.61\frac{1}{5}', '15', '76.04\frac{1}{5}', '15', '75.99\frac{1}{5}', '15', '75.99\frac{1}{5}', '15', '75.99\frac{1}{5}', '15', '75.99\frac{1}{5}', '15', '75.99\frac{1}{5}', '15', 02/04/2022 04/02/2022 03/06/2022 11/08/2022 12/10/2022 03/12/2022 03/12
The Number of dates in the format of 'dd/mm/yy' are : 3
28/03/22 03/05/20 03/08/22
The Number of dates in the format of 'mm/dd/yy' are : 4
03/20/22 03/05/20 03/19/22 03/08/22
['fourteenth', 'hundreeth', 'fifth', 'first', 'third', '14th', '5th', '1st']
['also', 'upon', 'ours', 'Ours', 'Utah', 'Utah']
Total Number Of Currency Symbols In the TEXT DATA are : 2
Types Of Currency Symbols In the TEXT DATA are : 1 {'\$'} ', '\$']
Number of dates in the format of 'mm/dd/yyyy' are : 0 The Number of dates in the format of 'dd/mm/vvvv' are : 0 The Number of dates in the format of 'dd/mm/yy' are : 0 The Number of dates in the format of 'mm/dd/yy' are : 0 ['first', 'second', 'third', '22nd']
['easy', 'only', 'else', 'ears', 'ears', 'ears', 'ears', 'eyes', 'arms', 'eyes', 'arms', 'only', 'used', 'used', 'used', 'used', 'eyes', 'into']
Total Number Of Currency Symbols In the TEXT DATA are: 4
Types Of Currency Symbols In the TEXT DATA are: 3 {'£', '\$', '₹'}
['\$', '\$', '\$']
The Number of dates in the format of 'mm/dd/yyyy' are: 26
01/05/1953 12/24/1955 11/09/1956 03/01/1960 12/28/1960 11/08/1961 01/12/1962 05/10/1963 05/10/1963 11/12/1966 10/04/1967 05/11/1971 08/12/1971 09/06/1972 09/06/1972 10/17/1973 01/06/1974 01/03/1973 04/26/1975 03/05/1975 01/08/1975 01/08/1977 06/09/1979
The Number of dates in the format of 'dd/mm/yyyy' are: 40
18/06/1951 01/05/1953 22/02/1955 27/04/1955 11/09/1956 05/01/1960 11/08/1961 19/12/1961 20/12/1961 01/12/1962 28/12/1962 05/10/1963 05/10/1963 20/06/1964 27/08/1966 11/12/1966 22/12/1
966 10/04/1967 25/09/1969 23/12/1970 05/11/1971 08/12/1971 38/12/1971 15/02/1972 29/08/1972 09/06/1972 01/06/1974 19/05/1974 07/09/1974 01/03/1975 03/05/1975 01/08/1975 07/08/1976 01/04/1977 13/04/1978 06/09/1979 25/01/1980
The Number of dates in the format of 'dd/mm/yyy' are: 2
10/08/75 27/05/76 Number of dates in the format of 'mm/dd/yy' are : 10/08/75

'first', '1st', '2nd', '3rd', '4th', '5th', '6th', '7th', '8th', '9th', '10th', '11th', '12th', '13th', '14th', '15th', '16th', '17th', '18th', '19th', '20th', '21st', '22nd', '23rd', '24th', '25th', '26th', '15th', '28th', '29th', '30th', '30th', '33rd', '33rd', '34th', '35th', '36th', '37th', '38th', '39th', '40th', '41st', '42nd', '43rd', '44th', '45th']

'upon', 'oils', 'Also', 'into', 'over', 'away', 'into', 'into', 'acts', 'East', 'acts', 'into', 'acts', 'Anti']

olal number of words without repetition are: 9

{'away', 'into', 'Anti', 'over', 'acts', 'oils', 'Also', 'East', 'upon'}

'1 \$', '75.957 ₹', '1 \$', '75.953 ₹', '1 \$', '75.910 ₹', '1 \$', '75.825 ₹', '1 \$', '75.667 ₹', '1 \$', '76.048 ₹', '1 \$', '76.287 ₹', '1 \$', '76.275 ₹', '1 \$', '76.276 ₹', '1 \$', '76.318 ₹', '1 \$', '76.545 ₹', \$', '76.112 ₹', '1 \$', '76.303 ₹', '1 \$', '75.998 ₹', '1 \$', '75.997 ₹', '1 \$', '76.293 ₹', '1 \$', '75.998 ₹', '1 \$', '76.991 ₹', '1 \$', '77.067 ₹', '1 \$', '76.439 ₹', '1 \$', '76.428 ₹', '1 \$', '76.491 ₹', '1 \$', '75.593 ₹', '1 \$', '75.782 ₹', '1

'75.289 ₹', '1 \$', '75.035 ₹', '1 \$', '75.073 ₹', '1 \$', '75.053 ₹', '1 \$', '75.444 ₹', '1 \$', '74.663 ₹', '1 \$', '74.643 ₹', '1 \$', '74.622 ₹', '1 \$', '74.694 ₹', '1 \$', '74.685 ₹', '1 \$', '74.685 ₹', '1 \$', '75.288 ₹', '1 \$', '75.035 ₹', '1 \$', '75.073 ₹', '1 \$', '75.065 ₹', '1 \$', '76.63 ₹', '1 \$', '76.643 ₹', '1 \$', '74.622 ₹', '1 \$', '74.694 ₹', '1 \$', '74.685 ₹', '1 \$', '75.282 ₹', '1 \$', '74.694 ₹', '1 \$', '74.695 ₹', '1 \$', '75.282 ₹', '1 \$', '74.694 ₹', '1 \$', '74.695 ₹', '1 \$', '74.685 ₹', '1 \$', '74.695 ₹', '1 \$', '74.694 ₹', '1 \$', '75.073 ₹', '1 \$', '74.685 ₹', '1 \$', '74.685 ₹', '1 \$', '74.694 ₹', '1 \$', '74.695 ₹', '1 \$', '74.685 ₹', '1 \$', '74.695 ₹', '1 \$', '74.695 ₹', '1 \$', '74.695 ₹', '1 \$', '74.694 ₹', '1 \$', '74.695 ₹', '1 \$', '74.695 ₹', '1 \$', '74.695 ₹', '1 \$', '74.695 ₹', '1 \$', '74.695 ₹', '1 \$', '74.695 ₹', '1 \$', '74.695 ₹', '1 \$', '74.695 ₹', '1 \$', '74.695 ₹', '1 \$', '74.695 ₹', '1 \$', '74.695 ₹', '1 \$', '74.695 ₹', '1 \$', '74.695 ₹', '1 \$ '18th', '19t 4+h', '45th'] In [ ]: