Tabel 7 Tabel hasil synset teori komutatif dan KBBI.

|  |  |  |
| --- | --- | --- |
| Kata ke- | Kata | Synset Teori Komutatif dan KBBI |
| 1 | ahad | [[['ahad', 'minggu']], [['ahad', 'esa', 'satu', 'tunggal']]] |
| 2 | setanggi | [['setanggi']] |
| 3 | aborsi | [[['aborsi', 'pengguguran']]] |
| 4 | pekan | [[['pasar', 'pekan']], [['minggu', 'pekan']]] |
| 5 | lebu | [[['abu', 'debu', 'duli', 'lebu']]] |
| 6 | abu | [[['abu', 'abuk', 'debu', 'duli', 'lebu']]] |
| 7 | peci | [[['kopiah', 'peci', 'songkok']]] |
| 8 | koran | [[['harian', 'koran', 'surat kabar']]] |
| 9 | susur | [['susur']] |
| 10 | temu | [[['jumpa', 'sua', 'temu']]] |
| 11 | suar | [[['pijar', 'suar']], ['suar']] |
| 12 | lilin | [[['lilin', 'parafin']]] |
| 13 | sakat | [[['benalu', 'parasit', 'sakat']]] |
| 14 | satwa | [[['binatang', 'hewan', 'satwa']]] |
| 15 | binatang | [[['binatang', 'hewan', 'satwa']]] |
| 16 | ﬁksi | [[['fiksi', 'khayalan']]] |
| 17 | lamur | [[['lamur', 'rabun']]] |
| 18 | radas | [[['alat', 'radas']]] |
| 19 | presentase | [['persentase']] |
| 20 | bandrek | [[['bandrek', 'serbat']]] |
| 21 | minggu | [[['ahad', 'minggu'], ['minggu', 'pekan']]] |
| 22 | esa | [[['ahad', 'esa', 'satu', 'tunggal']]] |
| 23 | pengguguran | [[['aborsi', 'pengguguran']]] |
| 24 | pasar | [[['pasar', 'pekan']]] |
| 25 | rekan | [[['rekan']]] |
| 26 | kopiah | [[['kopiah', 'peci', 'songkok']]] |
| 27 | songkok | [[['kopiah', 'peci', 'songkok']]] |
| 28 | paraﬁn | [[['lilin', 'parafin']]] |
| 29 | parasi | [[['benalu', 'parasit', 'pasilan'], ['benalu', 'parasit', 'sakat']]] |
| 30 | serbat | [[['bandrek', 'serbat']]] |

Tabel 8 Tabel perbedaan hasil synset program dan manual teori komutatif & KBBI.

|  |  |  |
| --- | --- | --- |
| **Kata ke-** | **Hasil synset program** | **Hasil synset teori komutatif & KBBI** |
| 4. pekan | [[['pasar', 'pekan', 'rekan']], [['minggu', 'pekan']]] | [[['pasar', 'pekan']], [['minggu', 'pekan']]] |
| 5. lebu | [[['abu', 'duli', 'lebu']]] | [[['abu', 'debu', 'duli', 'lebu']]] |
| 6. abu | [[['abu', 'abuk', 'debu'], ['abu', 'debu', 'duli'], ['abu', 'duli', 'lebu']]] | [[['abu', 'abuk', 'debu', 'duli', 'lebu']]] |
| 10. temu | [[['jumpa', 'temu']]] | [[['jumpa', 'sua', 'temu']]] |
| 16. fiksi | [[['fantasi', 'fiksi']]] | [[['fiksi', 'khayalan']]] |
| 18. radas | [[['perkakas', 'radas']]] | [[['alat', 'radas']]] |
| 24 .pasar | [[['pasar', 'pekan', 'rekan']]] | [[['pasar', 'pekan']]] |
| 25 .rekan | [[['pasar', 'pekan', 'rekan']]] | [[['rekan']]] |

**Lampiran hasil synset 71 item kata dataset Tesaurus**

('kata - ', 'abang', ' memiliki synset : ', [[['abang', 'kakak', 'kangmas', 'uda'], ['abang', 'kakang', 'mas'], ['abang', 'kakang', 'uda'], ['abang', 'kangmas', 'mas']]])

('kata - ', 'kakak', ' memiliki synset : ', [[['abang', 'kakak', 'kangmas', 'uda']]])

('kata - ', 'kakang', ' memiliki synset : ', [[['abang', 'kakang', 'mas'], ['abang', 'kakang', 'uda']]])

('kata - ', 'kangmas', ' memiliki synset : ', [[['abang', 'kakak', 'kangmas', 'uda'], ['abang', 'kangmas', 'mas']]])

('kata - ', 'mas', ' memiliki synset : ', [[['abang', 'kakang', 'mas'], ['abang', 'kangmas', 'mas']]])

('kata - ', 'uda', ' memiliki synset : ', [[['abang', 'kakak', 'kangmas', 'uda'], ['abang', 'kakang', 'uda']]])

('kata - ', 'abrasi', ' memiliki synset : ', [[['abrasi', 'erosi', 'pengikisan']]])

('kata - ', 'erosi', ' memiliki synset : ', [[['abrasi', 'erosi', 'pengikisan']]])

('kata - ', 'pengikisan', ' memiliki synset : ', [[['abrasi', 'erosi', 'pengikisan']]])

('kata - ', 'absen', ' memiliki synset : ', [[['absen', 'bolos'], ['absen', 'mangkir']]])

('kata - ', 'bolos', ' memiliki synset : ', [[['absen', 'bolos']]])

('kata - ', 'mangkir', ' memiliki synset : ', [[['absen', 'mangkir'], ['desersi', 'mangkir'], ['lari', 'mangkir'], ['mangkir', 'membolos']]])

('kata - ', 'adidaya', ' memiliki synset : ', [[['adidaya', 'adikuasa']]])

('kata - ', 'adikuasa', ' memiliki synset : ', [[['adidaya', 'adikuasa']]])

('kata - ', 'adipati', ' memiliki synset : ', [['adipati']])

('kata - ', 'bupati', ' memiliki synset : ', [[['bupati', 'tumenggung']]])

('kata - ', 'tumenggung', ' memiliki synset : ', [[['bupati', 'tumenggung']]])

('kata - ', 'adiraja', ' memiliki synset : ', [[['adiraja', 'kaisar', 'maharaja']]])

('kata - ', 'kaisar', ' memiliki synset : ', [[['adiraja', 'kaisar', 'maharaja']]])

('kata - ', 'maharaja', ' memiliki synset : ', [[['adiraja', 'kaisar', 'maharaja']]])

('kata - ', 'aduk', ' memiliki synset : ', [[['aduk', 'baur', 'campur']]])

('kata - ', 'advokasi', ' memiliki synset : ', [[['advokasi', 'pembelaan']]])

('kata - ', 'pembelaan', ' memiliki synset : ', [[['advokasi', 'pembelaan'], ['apologi', 'pembelaan'], ['defensi', 'pembelaan']]])

('kata - ', 'apologi', ' memiliki synset : ', [[['apologi', 'pembelaan']]])

('kata - ', 'pledoi', ' memiliki synset : ', [['pledoi']])

('kata - ', 'akomodasi', ' memiliki synset : ', [[['akomodasi', 'fasilitas']]])

('kata - ', 'aksara', ' memiliki synset : ', [[['abjad', 'aksara', 'huruf'], ['aksara', 'huruf', 'karakter']]])

('kata - ', 'alwah', ' memiliki synset : ', [['alwah']])

('kata - ', 'ampelas', ' memiliki synset : ', [['ampelas']])

('kata - ', 'amunisi', ' memiliki synset : ', [[['amunisi', 'mesiu'], ['amunisi', 'puder']]])

('kata - ', 'anekdot', ' memiliki synset : ', [[['anekdot', 'cerita']]])

('kata - ', 'angsuran', ' memiliki synset : ', [[['angsuran', 'cicilan', 'kredit']]])

('kata - ', 'cicilan', ' memiliki synset : ', [[['angsuran', 'cicilan', 'kredit']]])

('kata - ', 'kredit', ' memiliki synset : ', [[['angsuran', 'cicilan', 'kredit']], ['kredit']])

('kata - ', 'anteng', ' memiliki synset : ', [[['anteng', 'kalem', 'tenang']]])

('kata - ', 'antup', ' memiliki synset : ', [[['antup', 'sengat']]])

('kata - ', 'sengat', ' memiliki synset : ', [[['antup', 'sengat']]])

('kata - ', 'anyelir', ' memiliki synset : ', [['anyelir']])

('kata - ', 'arai', ' memiliki synset : ', [[['arai', 'manggar', 'mayang']]])

('kata - ', 'manggar', ' memiliki synset : ', [[['arai', 'manggar', 'mayang']]])

('kata - ', 'mayang', ' memiliki synset : ', [[['arai', 'manggar', 'mayang']]])

('kata - ', 'aras', ' memiliki synset : ', [['aras']])

('kata - ', 'arit', ' memiliki synset : ', [[['arit', 'sabit']]])

('kata - ', 'pengarsipan', ' memiliki synset : ', [[['dokumentasi', 'pengarsipan']]])

('kata - ', 'arteri', ' memiliki synset : ', [[['arteri', 'nadi']]])

('kata - ', 'nadi', ' memiliki synset : ', [[['arteri', 'nadi']]])

('kata - ', 'pengasahan', ' memiliki synset : ', [['pengasahan']])

('kata - ', 'asam', ' memiliki synset : ', [[['asam', 'masam']]])

('kata - ', 'asan', ' memiliki synset : ', [[['asa', 'asan']]])

('kata - ', 'asap', ' memiliki synset : ', [[['asap', 'gas']]])

('kata - ', 'gas', ' memiliki synset : ', [[['angin', 'gas'], ['asap', 'gas']], ['gas']])

('kata - ', 'atak', ' memiliki synset : ', [['atak']])

('kata - ', 'atensi', ' memiliki synset : ', [[['atensi', 'minat', 'perhatian']]])

('kata - ', 'atlas', ' memiliki synset : ', [[['atlas', 'denah', 'peta']]])

('kata - ', 'peta', ' memiliki synset : ', [[['atlas', 'denah', 'peta']]])

('kata - ', 'atlet', ' memiliki synset : ', [[['atlet', 'olahragawan']]])

('kata - ', 'olahragawan', ' memiliki synset : ', [[['atlet', 'olahragawan']]])

('kata - ', 'atom', ' memiliki synset : ', [[['atom', 'molekul', 'partikel']]])

('kata - ', 'zarah', ' memiliki synset : ', [[['partikel', 'zarah']]])

('kata - ', 'molekul', ' memiliki synset : ', [[['anasir', 'elemen', 'molekul', 'partikel', 'unsur'], ['atom', 'molekul', 'partikel']]])

('kata - ', 'atrium', ' memiliki synset : ', [[['atrium', 'serambi']]])

('kata - ', 'auditor', ' memiliki synset : ', [['auditor']])

('kata - ', 'awan', ' memiliki synset : ', [[['awan', 'gegana', 'mega']]])

('kata - ', 'gegana', ' memiliki synset : ', [[['awan', 'gegana', 'mega'], ['gegana', 'udara']], ['gegana']])

('kata - ', 'bom', ' memiliki synset : ', [['bom']])

('kata - ', 'mega', ' memiliki synset : ', [[['awan', 'gegana', 'mega']]])

('kata - ', 'awi', ' memiliki synset : ', [[['aur', 'awi', 'bambu', 'buluh']]])

('kata - ', 'buluh', ' memiliki synset : ', [[['aur', 'awi', 'bambu', 'buluh']]])

('kata - ', 'ayam', ' memiliki synset : ', [[['ayam', 'mandung']]])

('kata - ', 'ayun', ' memiliki synset : ', [[['ayun', 'goyang']]])

('kata - ', 'aba-aba', ' memiliki synset : ', [[['aba-aba', 'arahan', 'perintah'], ['aba-aba', 'instruksi', 'komando', 'perintah'], ['aba-aba', 'isyarat', 'kode', 'tanda'], ['aba-aba', 'isyarat', 'petunjuk', 'tanda'], ['aba-aba', 'komando', 'perintah', 'suruhan']]])

**Lampiran kodingan aplikasi**

**synsets\_extraction.py**

**import** itertools  
**import** json  
**import** pandas **as** pd  
**import** numpy **as** np  
  
*#merubah menjadi dataframe sesuai dengan panjang / jumlah kata***def** synsets\_to\_dataframe(word, thesa):  
 *#input : kata yang akan dicari dan dataset  
 #output : matrik seukuran panjang dataset yang indexnya masih belum terisi* list\_set = []  
 **for** val **in** thesa[word]:  
 word\_set = set(val)  
 word\_set.add(word)  
 list\_set.append(word\_set)  
 dt = list\_set  
 list\_dataframe = []  
  
 **for** ls **in** dt:  
 df = pd.DataFrame(data=**False**, index=ls, columns=ls)  
 np.fill\_diagonal(df.values, **True**)  
 list\_dataframe.append(df)  
 **return** list\_dataframe  
  
*#fungsi menambah mengisi index pada dataframe***def** check\_validation(word, thesa):  
 *#input : kata yang dicari dan dataset  
 #output : matriks yang indexnya telah terisi dengan nilai true atau false* lines = thesa[word]  
 output = []  
 matriks\_synset = synsets\_to\_dataframe(word, thesa)  
 **for** matrik **in** matriks\_synset:  
 **for** line **in** lines:  
 **for** sense **in** line:  
 **if** thesa.get(sense) **is not None**:  
 **for** inner\_senses **in** thesa[sense]:  
 **for** inner\_sense **in** inner\_senses:  
 **if** sense **in** matrik.index **and** inner\_sense **in** matrik.index:  
 matrik[word][sense] = **True** matrik[sense][inner\_sense] = **True** output.append(matrik)  
 **return** output  
  
*#fungsi untuk menghasilkan synsets***def** evaluate\_synsets(matrik, word):  
 *#input : matrik dari dataframe sebelumnya dan kata yang akan dicari  
 #output : synsets yang sesuai dengan kata yang dicari  
 #print(matrik)* synsets = []  
 **for** i **in** range(len(matrik.index), 1, -1):  
 **for** k **in** itertools.combinations(matrik.index, i):  
 sub\_matrix = matrik.loc[list(k), list(k)]  
 *#print(k) #calon synset  
 #print(sub\_matrix) #matriks* is\_synset = all(sub\_matrix.all().values)  
 **if** is\_synset:  
 new\_synset = sorted(sub\_matrix.all().index)  
 similar = **False  
 for** syn **in** synsets:  
 **if** set(new\_synset) < set(syn):  
 similar = **True  
 if not** similar **and** word **in** new\_synset:  
 synsets.append(new\_synset)  
 **if** len(synsets) == 0:  
 synsets = [word]  
 *#print(synsets)* **return** sorted(synsets)  
  
*#fungsi untuk menjalankan fungsi check\_validation dan evaluate\_synsets***def** alt\_gen(word, file):  
 *#input : kata yang akan dicari dan dataset  
 #output : hasil berupa synsets* thesa = json.load(file)  
 matrixs = check\_validation(word, thesa)  
 *#print(matrixs)* sets\_list = []  
 **for** matrix **in** matrixs:  
 synset = evaluate\_synsets(matrix, word)  
 sets\_list.append(synset)  
 **return** sets\_list

**main.py**

**from** output\_validasi\_using\_matrix **import** synsets\_manual  
**from** output\_validasi\_kbbi **import** synsets\_validasi\_kbbi  
**from** output\_lower **import** synsets\_lower  
**from** synsets\_extraction **import** alt\_gen  
  
  
**def** f1\_score(synsets\_program, synset\_manual):  
  
 relevant\_synset = 0  
 retrieved\_synsets\_program = len(synsets\_program)  
 retrieved\_synsets\_manual = len(synset\_manual)  
 **if** retrieved\_synsets\_manual != retrieved\_synsets\_program:  
 **raise** ValueError(**'A very specific bad thing happened.'**)  
 count = 0  
 **for** program, manual **in** zip(synsets\_program, synset\_manual):  
 count += 1  
 **for** x , y **in** zip(program, manual):  
 **if** x == y:  
 relevant\_synset += 1  
 **else**:  
 print(**'kata ke - '**, count, **'program '**, program, **'manual '**, manual)  
 print()  
  
 *# for program, manual in zip(synsets\_program, synset\_manual):  
 # if program == manual:  
 # relevant\_synset += 1  
 # else:  
 # print('synset yang tidak sama ', program)  
 # print()* count\_program = 0  
 **for** matriks **in** synsets\_program:  
 **for** synset1 **in** matriks:  
 **for** syn **in** synset1:  
 count\_program += 1  
 count\_manual = 0  
 **for** matriks2 **in** synset\_manual:  
 **for** synset2 **in** matriks2:  
 **for** syn2 **in** synset2:  
 count\_manual += 1  
 print(**'Jumlah synsets yang sama : '**, relevant\_synset)  
 precision = relevant\_synset/count\_program  
 recall = relevant\_synset/count\_manual  
 f1score = 2 \* precision\*recall/(precision+recall)  
 print(**'precision : '**, precision \* 100)  
 print(**'recall : '**, recall \* 100)  
 print(**'F1-Score : '**, f1score \* 100)  
  
  
**if** \_\_name\_\_ == **'\_\_main\_\_'**:  
 synsets\_final = []  
  
 synsets\_final.append(alt\_gen(**'ahad'**, open(**'datatest/data\_test/1.json'**)))  
 synsets\_final.append(alt\_gen(**'setanggi'**, open(**'datatest/data\_test/2.json'**)))  
 synsets\_final.append(alt\_gen(**'aborsi'**, open(**'datatest/data\_test/3.json'**)))  
 synsets\_final.append(alt\_gen(**'pekan'**, open(**'datatest/data\_test/4.json'**)))  
 synsets\_final.append(alt\_gen(**'lebu'**, open(**'datatest/data\_test/5.json'**)))  
 synsets\_final.append(alt\_gen(**'abu'**, open(**'datatest/data\_test/6.json'**)))  
 synsets\_final.append(alt\_gen(**'peci'**, open(**'datatest/data\_test/7.json'**)))  
 synsets\_final.append(alt\_gen(**'koran'**, open(**'datatest/data\_test/8.json'**)))  
 synsets\_final.append(alt\_gen(**'susur'**, open(**'datatest/data\_test/9.json'**)))  
 synsets\_final.append(alt\_gen(**'temu'**, open(**'datatest/data\_test/10.json'**)))  
 synsets\_final.append(alt\_gen(**'suar'**, open(**'datatest/data\_test/11.json'**)))  
 synsets\_final.append(alt\_gen(**'lilin'**, open(**'datatest/data\_test/12.json'**)))  
 synsets\_final.append(alt\_gen(**'sakat'**, open(**'datatest/data\_test/13.json'**)))  
 synsets\_final.append(alt\_gen(**'satwa'**, open(**'datatest/data\_test/14.json'**)))  
 synsets\_final.append(alt\_gen(**'binatang'**, open(**'datatest/data\_test/15.json'**)))  
 synsets\_final.append(alt\_gen(**'fiksi'**, open(**'datatest/data\_test/16.json'**)))  
 synsets\_final.append(alt\_gen(**'lamur'**, open(**'datatest/data\_test/17.json'**)))  
 synsets\_final.append(alt\_gen(**'radas'**, open(**'datatest/data\_test/18.json'**)))  
 synsets\_final.append(alt\_gen(**'persentase'**, open(**'datatest/data\_test/19.json'**)))  
 synsets\_final.append(alt\_gen(**'bandrek'**, open(**'datatest/data\_test/20.json'**)))  
 synsets\_final.append(alt\_gen(**'minggu'**, open(**'datatest/data\_test/21.json'**)))  
 synsets\_final.append(alt\_gen(**'esa'**, open(**'datatest/data\_test/22.json'**)))  
 synsets\_final.append(alt\_gen(**'pengguguran'**, open(**'datatest/data\_test/23.json'**)))  
 synsets\_final.append(alt\_gen(**'pasar'**, open(**'datatest/data\_test/24.json'**)))  
 synsets\_final.append(alt\_gen(**'rekan'**, open(**'datatest/data\_test/25.json'**)))  
 synsets\_final.append(alt\_gen(**'kopiah'**, open(**'datatest/data\_test/26.json'**)))  
 synsets\_final.append(alt\_gen(**'songkok'**, open(**'datatest/data\_test/27.json'**)))  
 synsets\_final.append(alt\_gen(**'parafin'**, open(**'datatest/data\_test/28.json'**)))  
 synsets\_final.append(alt\_gen(**'parasit'**, open(**'datatest/data\_test/29.json'**)))  
 synsets\_final.append(alt\_gen(**'serbat'**, open(**'datatest/data\_test/30.json'**)))  
  
 list\_kata = [**'ahad'**, **'setanggi'**, **'aborsi'**, **'pekan'**, **'lebu'**, **'abu'**, **'peci'**,  
 **'koran'**, **'susur'**, **'temu'**, **'suar'**, **'lilin'**, **'sakat'**, **'satwa'**, **'binatang'**,  
 **'fiksi'**, **'lamur'**, **'radas'**, **'presentase'**, **'bandrek'**, **'minggu'**,  
 **'esa'**, **'pengguguran'**, **'pasar'**, **'rekan'**, **'kopiah'**, **'songkok'**, **'parafin'**,  
 **'parasi'**, **'serbat'**]  
 count = 0  
 print(**'Synsets hasil program - synset manual(Gold Standard)'**)  
 **for** x, y **in** zip(synsets\_final, synsets\_validasi\_kbbi):  
 count += 1  
 print(**'Kata ke-'**,count , list\_kata[count-1], **'= '** ,x , **' - '**, y)  
  
 print()  
 print(**'=============================='**)  
 print(**'Nilai precision recall dan f1 score antara program dengan synset validasi dengan kbbi'**)  
 print()  
 count\_program = 0  
 **for** matriks **in** synsets\_final:  
 **for** synset1 **in** matriks:  
 **for** syn **in** synset1:  
 count\_program += 1  
 count\_manual = 0  
 **for** matriks2 **in** synsets\_validasi\_kbbi:  
 **for** synset2 **in** matriks2:  
 **for** syn2 **in** synset2:  
 count\_manual += 1  
  
 print(**'Jumlah synsets program : '**, count\_program)  
 print(**'Jumlah synsets manual : '**, count\_manual)  
 f1\_score(synsets\_final, synsets\_validasi\_kbbi)  
 print(**'=============================='**)  
  
 print()  
 print(**'=============================='**)  
 print(**'Nilai precision recall dan f1 score antara manual 1 dengan synset validasi dengan kbbi'**)  
 print()  
 count\_program = 0  
 **for** matriks **in** synsets\_manual:  
 **for** synset1 **in** matriks:  
 **for** syn **in** synset1:  
 count\_program += 1  
 count\_manual = 0  
 **for** matriks2 **in** synsets\_validasi\_kbbi:  
 **for** synset2 **in** matriks2:  
 **for** syn2 **in** synset2:  
 count\_manual += 1  
  
 print(**'Jumlah synsets program : '**, count\_program)  
 print(**'Jumlah synsets manual : '**, count\_manual)  
 f1\_score(synsets\_manual, synsets\_validasi\_kbbi)  
 print(**'=============================='**)  
  
 print()  
 print(**'=============================='**)  
 print(**'Nilai lower bound'**)  
 print()  
 count\_program = 0  
 **for** matriks **in** synsets\_lower:  
 **for** synset1 **in** matriks:  
 **for** syn **in** synset1:  
 count\_program += 1  
 count\_manual = 0  
 **for** matriks2 **in** synsets\_validasi\_kbbi:  
 **for** synset2 **in** matriks2:  
 **for** syn2 **in** synset2:  
 count\_manual += 1  
  
 print(**'Jumlah synsets program : '**, count\_program)  
 print(**'Jumlah synsets manual : '**, count\_manual)  
 f1\_score(synsets\_lower, synsets\_validasi\_kbbi)  
 print(**'=============================='**)  
  
 *#====================* list\_kata2 = [**'abang'**, **'kakak'**, **'kakang'**, **'kangmas'**, **'mas'**, **'uda'**, **'abrasi'**,  
 **'erosi'**, **'pengikisan'**, **'absen'**, **'bolos'**, **'mangkir'**, **'adidaya'**, **'adikuasa'**,  
 **'adipati'**, **'bupati'**, **'tumenggung'**, **'adiraja'**, **'kaisar'**, **'maharaja'**,  
 **'aduk'**, **'advokasi'**, **'pembelaan'**, **'apologi'**, **'pledoi'**, **'akomodasi'**, **'aksara'**,  
 **'alwah'**, **'ampelas'**, **'amunisi'**, **'anekdot'**, **'angsuran'**, **'cicilan'**, **'kredit'**,  
 **'anteng'**, **'antup'**, **'sengat'**, **'anyelir'**, **'arai'**, **'manggar'**, **'mayang'**, **'aras'**,  
 **'arit'**, **'pengarsipan'**, **'arteri'**, **'nadi'**, **'pengasahan'**, **'asam'**, **'asan'**,  
 **'asap'**, **'gas'**, **'atak'**, **'atensi'**, **'atlas'**, **'peta'**, **'atlet'**, **'olahragawan'**,  
 **'atom'**, **'zarah'**, **'molekul'**, **'atrium'**, **'auditor'**, **'awan'**, **'gegana'**, **'bom'**,  
 **'mega'**, **'awi'**, **'buluh'**, **'ayam'**, **'ayun'**, **'aba-aba'**]  
  
 synset\_dataset = []  
  
 print()  
 synset\_dataset.append(alt\_gen(**'abang'**, open(**'datatest/dataset/1.json'**)))  
 synset\_dataset.append(alt\_gen(**'kakak'**, open(**'datatest/dataset/2.json'**)))  
 synset\_dataset.append(alt\_gen(**'kakang'**, open(**'datatest/dataset/3.json'**)))  
 synset\_dataset.append(alt\_gen(**'kangmas'**, open(**'datatest/dataset/4.json'**)))  
 synset\_dataset.append(alt\_gen(**'mas'**, open(**'datatest/dataset/5.json'**)))  
 synset\_dataset.append(alt\_gen(**'uda'**, open(**'datatest/dataset/6.json'**)))  
 synset\_dataset.append(alt\_gen(**'abrasi'**, open(**'datatest/dataset/7.json'**)))  
 synset\_dataset.append(alt\_gen(**'erosi'**, open(**'datatest/dataset/8.json'**)))  
 synset\_dataset.append(alt\_gen(**'pengikisan'**, open(**'datatest/dataset/9.json'**)))  
 synset\_dataset.append(alt\_gen(**'absen'**, open(**'datatest/dataset/10.json'**)))  
 synset\_dataset.append(alt\_gen(**'bolos'**, open(**'datatest/dataset/11.json'**)))  
 synset\_dataset.append(alt\_gen(**'mangkir'**, open(**'datatest/dataset/12.json'**)))  
 synset\_dataset.append(alt\_gen(**'adidaya'**, open(**'datatest/dataset/13.json'**)))  
 synset\_dataset.append(alt\_gen(**'adikuasa'**, open(**'datatest/dataset/14.json'**)))  
 synset\_dataset.append(alt\_gen(**'adipati'**, open(**'datatest/dataset/15.json'**)))  
 synset\_dataset.append(alt\_gen(**'bupati'**, open(**'datatest/dataset/16.json'**)))  
 synset\_dataset.append(alt\_gen(**'tumenggung'**, open(**'datatest/dataset/17.json'**)))  
 synset\_dataset.append(alt\_gen(**'adiraja'**, open(**'datatest/dataset/18.json'**)))  
 synset\_dataset.append(alt\_gen(**'kaisar'**, open(**'datatest/dataset/19.json'**)))  
 synset\_dataset.append(alt\_gen(**'maharaja'**, open(**'datatest/dataset/20.json'**)))  
 synset\_dataset.append(alt\_gen(**'aduk'**, open(**'datatest/dataset/21.json'**)))  
 synset\_dataset.append(alt\_gen(**'advokasi'**, open(**'datatest/dataset/22.json'**)))  
 synset\_dataset.append(alt\_gen(**'pembelaan'**, open(**'datatest/dataset/23.json'**)))  
 synset\_dataset.append(alt\_gen(**'apologi'**, open(**'datatest/dataset/24.json'**)))  
 synset\_dataset.append(alt\_gen(**'pledoi'**, open(**'datatest/dataset/25.json'**)))  
 synset\_dataset.append(alt\_gen(**'akomodasi'**, open(**'datatest/dataset/26.json'**)))  
 synset\_dataset.append(alt\_gen(**'aksara'**, open(**'datatest/dataset/27.json'**)))  
 synset\_dataset.append(alt\_gen(**'alwah'**, open(**'datatest/dataset/28.json'**)))  
 synset\_dataset.append(alt\_gen(**'ampelas'**, open(**'datatest/dataset/29.json'**)))  
 synset\_dataset.append(alt\_gen(**'amunisi'**, open(**'datatest/dataset/30.json'**)))  
 synset\_dataset.append(alt\_gen(**'anekdot'**, open(**'datatest/dataset/31.json'**)))  
 synset\_dataset.append(alt\_gen(**'angsuran'**, open(**'datatest/dataset/32.json'**)))  
 synset\_dataset.append(alt\_gen(**'cicilan'**, open(**'datatest/dataset/33.json'**)))  
 synset\_dataset.append(alt\_gen(**'kredit'**, open(**'datatest/dataset/34.json'**)))  
 synset\_dataset.append(alt\_gen(**'anteng'**, open(**'datatest/dataset/35.json'**)))  
 synset\_dataset.append(alt\_gen(**'antup'**, open(**'datatest/dataset/36.json'**)))  
 synset\_dataset.append(alt\_gen(**'sengat'**, open(**'datatest/dataset/37.json'**)))  
 synset\_dataset.append(alt\_gen(**'anyelir'**, open(**'datatest/dataset/38.json'**)))  
 synset\_dataset.append(alt\_gen(**'arai'**, open(**'datatest/dataset/39.json'**)))  
 synset\_dataset.append(alt\_gen(**'manggar'**, open(**'datatest/dataset/40.json'**)))  
 synset\_dataset.append(alt\_gen(**'mayang'**, open(**'datatest/dataset/41.json'**)))  
 synset\_dataset.append(alt\_gen(**'aras'**, open(**'datatest/dataset/42.json'**)))  
 synset\_dataset.append(alt\_gen(**'arit'**, open(**'datatest/dataset/43.json'**)))  
 synset\_dataset.append(alt\_gen(**'pengarsipan'**, open(**'datatest/dataset/44.json'**)))  
 synset\_dataset.append(alt\_gen(**'arteri'**, open(**'datatest/dataset/45.json'**)))  
 synset\_dataset.append(alt\_gen(**'nadi'**, open(**'datatest/dataset/46.json'**)))  
 synset\_dataset.append(alt\_gen(**'pengasahan'**, open(**'datatest/dataset/47.json'**)))  
 synset\_dataset.append(alt\_gen(**'asam'**, open(**'datatest/dataset/48.json'**)))  
 synset\_dataset.append(alt\_gen(**'asan'**, open(**'datatest/dataset/49.json'**)))  
 synset\_dataset.append(alt\_gen(**'asap'**, open(**'datatest/dataset/50.json'**)))  
 synset\_dataset.append(alt\_gen(**'gas'**, open(**'datatest/dataset/51.json'**)))  
 synset\_dataset.append(alt\_gen(**'atak'**, open(**'datatest/dataset/52.json'**)))  
 synset\_dataset.append(alt\_gen(**'atensi'**, open(**'datatest/dataset/53.json'**)))  
 synset\_dataset.append(alt\_gen(**'atlas'**, open(**'datatest/dataset/54.json'**)))  
 synset\_dataset.append(alt\_gen(**'peta'**, open(**'datatest/dataset/55.json'**)))  
 synset\_dataset.append(alt\_gen(**'atlet'**, open(**'datatest/dataset/56.json'**)))  
 synset\_dataset.append(alt\_gen(**'olahragawan'**, open(**'datatest/dataset/57.json'**)))  
 synset\_dataset.append(alt\_gen(**'atom'**, open(**'datatest/dataset/58.json'**)))  
 synset\_dataset.append(alt\_gen(**'zarah'**, open(**'datatest/dataset/59.json'**)))  
 synset\_dataset.append(alt\_gen(**'molekul'**, open(**'datatest/dataset/60.json'**)))  
 synset\_dataset.append(alt\_gen(**'atrium'**, open(**'datatest/dataset/61.json'**)))  
 synset\_dataset.append(alt\_gen(**'auditor'**, open(**'datatest/dataset/62a.json'**)))  
 synset\_dataset.append(alt\_gen(**'awan'**, open(**'datatest/dataset/63.json'**)))  
 synset\_dataset.append(alt\_gen(**'gegana'**, open(**'datatest/dataset/64.json'**)))  
 synset\_dataset.append(alt\_gen(**'bom'**, open(**'datatest/dataset/65.json'**)))  
 synset\_dataset.append(alt\_gen(**'mega'**, open(**'datatest/dataset/66.json'**)))  
 synset\_dataset.append(alt\_gen(**'awi'**, open(**'datatest/dataset/67.json'**)))  
 synset\_dataset.append(alt\_gen(**'buluh'**, open(**'datatest/dataset/68.json'**)))  
 synset\_dataset.append(alt\_gen(**'ayam'**, open(**'datatest/dataset/69.json'**)))  
 synset\_dataset.append(alt\_gen(**'ayun'**, open(**'datatest/dataset/70.json'**)))  
 synset\_dataset.append(alt\_gen(**'aba-aba'**, open(**'datatest/dataset/71.json'**)))  
  
 f = open(**'datatest/output.txt'**, **'w+'**)  
 countd = 0  
 **for** k **in** synset\_dataset:  
 output\_synset = (**'kata - '**, list\_kata2[countd], **' memiliki synset : '** ,k)  
 f.write(str(output\_synset) + **'\n'**)  
 countd += 1  
 f.close()