**Code: python file called wordcount\_2.py**

from mrjob.job import MRJob

from mrjob.step import MRStep

class MRWordCount(MRJob):

def mapper(self, \_, line):

# Split the line into words

for word in line.split():

# Yield each word in lowercase with a count of 1

yield (word.lower(), 1)

def reducer(self, word, counts):

# Sum the counts for each word

yield (word, sum(counts))

def steps(self):

return [

MRStep(mapper=self.mapper,

reducer=self.reducer)

]

if \_\_name\_\_ == '\_\_main\_\_':

MRWordCount.run()

$ python wordcount\_2.py file1.txt

No configs found; falling back on auto-configuration

No configs specified for inline runner

Creating temp directory C:\Users\naale\AppData\Local\Temp\wordcount\_2.naale.20241003.210433.775539

Running step 1 of 1...

job output is in C:\Users\naale\AppData\Local\Temp\wordcount\_2.naale.20241003.210433.775539\output

Streaming final output from C:\Users\naale\AppData\Local\Temp\wordcount\_2.naale.20241003.210433.775539\output...

"(or" 1

"(or," 1

"10" 1

"11" 1

"12" 1

"7" 1

"8" 1

"9" 1

"?\u0094" 2

"\u0091back\u0092" 1

"\u0093" 1

"\u0093a" 1

"\u0093and" 1

"\u0093back?" 1

"\u0093but" 3

"\u0093but,\u0094" 1

"\u0093he-who-must-not-be-named!\u0094" 1

"\u0093hogwarts,\u0094" 1

"\u0093how" 1

"\u0093i" 2

"\u0093i\u0092m" 1

"\u0093involved,\u0094" 1

"\u0093it\u0092s" 1

"\u0093lord" 1

"\u0093middle" 1

"\u0093my" 1

"\u0093no" 1

"\u0093no," 1

"\u0093no,\u0094" 1

"\u0093not" 1

"\u0093now," 1

"\u0093oh," 1

"\u0093prime" 1

"\u0093serious\u0094" 1

"\u0093so" 1

"\u0093that" 1

"\u0093the" 2

"\u0093they\u0092ve" 1

"\u0093we" 2

"\u0093we\u0092ll" 1

"\u0093we\u0092re" 1

"\u0093well," 2

"\u0093what" 1

"\u0093why" 1

"\u0093yes," 2

"\u0093you\u0092re" 1

"\u0094" 2

"\u0096" 6

"\u0097" 15

"\u0097\u0094" 3

"a" 48

"abandoned" 1

"about" 4

"about." 1

"above" 1

"actually" 1

"added." 1

"affect" 1

"afraid" 2

"again" 2

"again," 2

"again." 2

"ago," 1

"air" 1

"air," 1

"alive" 1

"alive," 1

"alive,\u0094" 1

"alive.\u0094" 1

"alive?" 1

"all" 5

"almost" 1

"alone" 2

"aloud" 1

"already" 1

"always" 2

"am" 1

"amber" 1

"amount" 1

"an" 3

"and" 40

"announced" 2

"any" 1

"anybody?\u0094" 1

"anything" 1

"anyway," 2

"appear" 1

"appeared" 2

"are" 3

"arrangements" 1

"arrival" 1

"arrival." 1

"art" 1

"as" 5

"ask" 2

"assurances" 1

"at" 11

"attempt" 2

"axminster," 1

"azkaban,\u0094" 1

"azkaban." 1

"back" 1

"back." 1

"back.\u0094" 1

"be" 7

"becoming" 1

"been" 7

"before" 3

"before." 1

"behind." 1

"being" 1

"believe" 1

"best" 1

"better" 2

"beyond" 1

"black" 1

"black," 1

"black\u0092s" 1

"bleated" 1

"blood" 6

"blustered" 1

"body" 1

"book" 1

"bother" 2

"bowler" 1

"boy" 1

"breakout" 2

"breakout?\u0094" 1

"breath" 1

"breathlessly," 1

"bridge" 1

"bringing" 1

"brockdale" 1

"brought" 1

"builder" 1

"burst" 1

"but" 10

"by" 2

"cabinet" 1

"called" 2

"came" 1

"campaign." 1

"can\u0092t" 1

"canvas" 1

"carpenters," 1

"cast" 1

"certain" 1

"certainly" 1

"chair." 1

"chancellor" 1

"chewing" 1

"chin," 1

"chorley\u0092s" 1

"chortling," 1

"cloak" 1

"come" 2

"committed" 1

"community?\u0094" 1

"concerns" 1

"concerns,\u0094" 1

"conjured" 1

"considerable" 1

"control" 1

"conversation" 1

"convince" 1

"corner" 2

"could" 4

"country" 1

"country.\u0094" 1

"course" 1

"course," 1

"creatures" 2

"crimes" 1

"cup" 1

"currently" 1

"dangerous" 2

"dare" 1

"day" 1

"day,\u0094" 1

"dealing" 1

"dear" 1

"deep" 1

"delighted" 1

"dementors" 1

"department" 1

"desperate" 1

"despite" 1

"details" 1

"did" 2

"didn\u0092t" 1

"disappearance" 1

"discussion," 1

"disheveled" 1

"dismay," 1

"do" 1

"don\u0092t" 4

"down" 4

"down," 2

"dragons" 2

"dragons?\u0094" 1

"drew" 1

"dripping" 1

"dumbledore" 2

"during" 1

"e" 6

"each" 4

"earlier." 1

"effected" 1

"election" 1

"else" 1

"emerald" 1

"encounter" 1

"encounter," 1

"end," 1

"enough" 1

"er" 1

"erupted" 1

"escaped" 1

"even" 1

"even," 1

"ever" 1

"exactly" 1

"excellent." 1

"exchequer" 1

"explain" 1

"extremely" 1

"eye" 1

"eyes" 1

"fact" 1

"family" 1

"fastened" 1

"fatherly" 1

"fear" 1

"feared" 1

"fifteen" 1

"fill" 1

"find" 1

"fire" 2

"fireplace," 2

"firmly" 1

"first" 1

"flames," 1

"flames." 1

"flight" 1

"flustered" 1

"foolish" 1

"foot" 1

"for" 10

"foreign" 1

"forgot,\u0094" 1

"former" 1

"found" 2

"frame" 1

"fretful" 1

"from" 3

"fudge" 21

"fudge," 4

"fudge." 3

"fudge\u0092s" 2

"full" 1

"g" 6

"gazed" 1

"gently." 1

"gerbil" 1

"gerbil." 1

"given" 1

"glasses" 1

"gloomy" 1

"going" 3

"good" 2

"got" 2

"graver" 1

"great," 1

"green" 1

"groped" 1

"grueling" 1

"habit" 1

"had" 47

"half" 6

"hallucination" 1

"hand," 1

"hand." 2

"happened" 1

"happened." 1

"harassed-looking" 1

"harry" 7

"has" 1

"hasn\u0092t" 1

"hat" 1

"have" 8

"he" 23

"he-who-must-not-be-named" 2

"he\u0092s" 6

"head," 1

"heard" 1

"help" 1

"herbert" 1

"herself" 1

"highly" 1

"him" 4

"him-" 1

"him." 2

"him?" 1

"himself" 4

"his" 27

"historian," 1

"hoarsely." 1

"hoax" 1

"hoax," 1

"hope" 3

"hope." 1

"hoped" 1

"hopelessly" 1

"horrible" 1

"hospital" 1

"hour." 1

"however," 2

"hurricane." 1

"i" 13

"i\u0092d" 1

"i\u0092ll" 1

"i\u0092m" 3

"i\u0092ve" 1

"if" 4

"imminent" 1

"importing" 1

"impossible" 1

"in" 17

"in." 1

"incident," 1

"indeed" 1

"inform" 1

"injuries." 1

"inside" 1

"instead" 1

"instructed" 1

"interrupted." 1

"into" 7

"is!\u0094" 1

"is" 5

"is,\u0094" 1

"isolated" 1

"it" 9

"it," 2

"it\u0092s" 3

"j.k." 6

"jacket." 1

"just" 3

"killed?" 1

"killer" 1

"killing," 1

"know!\u0094" 1

"know" 5

"know," 1

"known" 1

"kwidditch" 1

"lack" 1

"large" 2

"last" 1

"last," 1

"last." 1

"later" 1

"later," 1

"laughed." 1

"leave," 1

"leaving" 1

"left" 1

"less" 2

"let" 2

"liaison" 1

"like" 3

"like)" 1

"liked" 1

"likely" 1

"liquid" 1

"little" 3

"live" 1

"live." 1

"lived," 1

"living" 1

"long" 1

"look" 1

"look.\u0094" 1

"looking" 1

"lot" 2

"made" 2

"magic" 2

"magical" 2

"maintain" 1

"making" 1

"maladies" 1

"man" 3

"man." 1

"mark" 1

"mass" 2

"may" 1

"me" 5

"me," 1

"mean" 1

"meant" 1

"meeting," 1

"memory" 2

"mention" 1

"might" 1

"minister!" 1

"minister" 25

"minister)," 1

"minister," 3

"minister." 4

"minister\u0092s" 4

"modifications" 1

"moment!\u0094" 1

"moment" 1

"moment," 1

"more" 2

"more," 1

"motionless" 1

"motionless," 1

"move" 1

"much," 1

"muddy-brown" 1

"muggle" 3

"muggles" 2

"muggles." 1

"mungo\u0092s" 1

"murders" 1

"must" 1

"mysterious" 1

"name" 2

"named" 1

"nasty" 1

"need" 2

"never" 4

"never," 1

"nevertheless." 1

"news" 2

"next" 2

"niece" 1

"night" 1

"night.\u0094" 1

"no" 2

"no." 1

"nobody" 1

"non-magical" 1

"none" 1

"nor" 1

"north" 1

"nose;" 1

"not" 10

"not." 1

"nothing" 1

"nothing;" 1

"notice" 1

"notify" 1

"now" 1

"now." 1

"occasionally" 1

"occupant" 1

"odds-on" 1

"of" 44

"of," 1

"off." 1

"offered" 1

"office" 2

"office," 1

"office." 1

"on" 8

"once" 3

"one" 4

"only" 2

"opposition" 1

"opposition.\u0094" 1

"or" 4

"other" 3

"other," 1

"others," 1

"otherwise," 1

"ought" 2

"our" 2

"out" 11

"out." 1

"over" 1

"own" 2

"p" 6

"painting" 1

"panic." 1

"panted," 1

"parchment," 1

"persistent" 1

"picture" 1

"piece" 1

"pin-striped" 1

"planned" 1

"planning" 1

"playing" 1

"pocket." 1

"point," 1

"poking" 1

"population," 1

"portrait" 3

"potter" 6

"potter," 1

"powder" 1

"predecessor." 1

"press" 1

"previously," 1

"prime" 34

"prince" 6

"prise" 1

"prison" 1

"private" 1

"properly" 1

"proved" 1

"pulled" 1

"purposes" 1

"pushed" 1

"put" 1

"quite" 3

"ranting" 1

"rather" 2

"realized" 1

"really" 3

"refused" 1

"regulation" 1

"rejoin" 1

"remained" 1

"reminders" 1

"remotest" 1

"remove." 1

"repeated" 1

"resented" 1

"resolved" 1

"rest" 1

"reveals" 1

"rid" 1

"rim" 1

"room" 1

"rounded" 1

"routine," 1

"rowling" 6

"rule" 1

"run" 1

"safer" 1

"said" 6

"said," 3

"same" 1

"sat" 1

"saw" 1

"say" 3

"say," 2

"say." 1

"says" 1

"scratching" 1

"sea," 1

"secrecy.\u0094" 1

"secretary" 1

"see" 2

"seeing" 1

"seen" 2

"sense" 1

"serious" 1

"several" 2

"shock" 1

"should" 3

"shout," 1

"shouted" 1

"shower" 1

"shuddered" 1

"sight," 1

"silent" 1

"simply" 2

"sit" 3

"sleep" 1

"snapped" 1

"snarled" 1

"so" 2

"some" 1

"something" 3

"sopping" 1

"sorry" 1

"sorry." 1

"sort" 1

"soul," 1

"sound." 1

"sounded" 2

"sparks." 1

"speech," 1

"sphinx" 1

"sphinx." 1

"sphinxes" 1

"spluttered" 1

"spoke." 1

"spot" 1

"squinted" 1

"st." 1

"started" 1

"state" 1

"stepped" 1

"stepping" 1

"sternly" 1

"still" 2

"still." 1

"stood" 3

"stretch" 1

"subject" 1

"support," 1

"suppose," 1

"sure" 1

"surprised" 1

"sworn" 1

"take" 1

"taken" 1

"taking" 1

"talked" 1

"talking" 1

"teacup" 2

"tell" 3

"tells" 1

"term" 1

"terrible" 1

"than" 4

"that" 25

"that," 1

"that\u0092s" 1

"the" 101

"their" 1

"them" 2

"then" 1

"then," 1

"then,\u0094" 1

"then?" 1

"then?\u0094" 2

"there" 2

"there," 2

"there\u0092s" 1

"therefore," 1

"they" 3

"thin" 2

"thing" 2

"think" 3

"this" 5

"this," 3

"those" 1

"though" 1

"thought" 2

"thousand" 1

"three" 3

"three,\u0094" 1

"throw" 1

"thrown" 1

"thrust" 1

"time" 3

"time," 1

"tipping" 1

"to" 42

"told" 3

"tonight," 1

"tonight.\u0094" 1

"too." 1

"took" 1

"tournament," 1

"trained" 1

"transferred" 1

"tricks" 1

"tried" 3

"triwizard" 1

"turned" 1

"twice," 1

"two" 2

"two," 1

"ugly" 1

"uncomfortable" 1

"under" 1

"understand" 1

"unless" 1

"unsuccessfully" 1

"up" 5

"uproar\u0094" 1

"vain" 1

"vanished" 2

"very" 3

"visit." 1

"voice" 1

"vol" 1

"wait" 1

"walking" 2

"wall," 1

"wand" 1

"wand," 1

"warned" 1

"warning," 1

"was" 12

"wasn\u0092t" 1

"watching" 1

"water" 1

"way" 1

"way." 1

"we" 4

"we\u0092re" 1

"we\u0092ve" 1

"wear" 2

"week." 1

"well," 2

"well-informed" 1

"were" 3

"wet" 1

"what" 3

"what?\u0094" 1

"what\u0092s" 1

"whatever" 1

"when" 6

"which" 2

"while" 1

"whiskey" 1

"whiskey," 1

"whiskey-free" 1

"who" 6

"whooshing" 1

"why" 4

"wide" 1

"window," 1

"wishing" 1

"with" 6

"without" 2

"wizard" 2

"wizarding" 1

"won\u0092t" 1

"work" 1

"world" 2

"worry!\u0094" 1

"worry," 2

"worry,\u0094" 1

"worrying" 1

"worst" 2

"would" 5

"wrote" 1

"yawning," 1

"year" 1

"years" 4

"yes," 1

"yet" 1

"you" 13

"you," 1

"you-know-who" 1

"you-know-who." 1

"you-know-who\u0092s" 1

"you.\u0094" 1

"you\u0092ll" 2

"you\u0092re" 2

"your" 1

"|" 6

**Code: python File called: not-english-words.py**

from spellchecker import SpellChecker  
from mrjob.job import MRJob  
from mrjob.step import MRStep  
  
class MRNonEnglishWordCount(MRJob):  
  
 def mapper(self, \_, line):  
 spell = SpellChecker()  
 words = line.lower().split()  
 for word in words:  
 if word not in spell: # If the word is not recognized  
 yield (word, 1)  
  
 def reducer(self, word, counts):  
 yield (word, sum(counts))  
  
 def steps(self):  
 return [  
 MRStep(mapper=self.mapper,  
 reducer=self.reducer)  
 ]  
  
if \_\_name\_\_ == '\_\_main\_\_':  
 MRNonEnglishWordCount.run()

$ python not\_english-words.py file2.txt

No configs found; falling back on auto-configuration

No configs specified for inline runner

Creating temp directory C:\Users\naale\AppData\Local\Temp\not\_english-words.naale.20241003.210941.595869

Running step 1 of 1...

job output is in C:\Users\naale\AppData\Local\Temp\not\_english-words.naale.20241003.210941.595869\output

Streaming final output from C:\Users\naale\AppData\Local\Temp\not\_english-words.naale.20241003.210941.595869\output...

"90" 1

"91" 1

"92" 1

"93" 1

"94" 1

"95" 1

"?\u0094" 2

"\u0092night" 1

"\u0093" 1

"\u0093all" 1

"\u0093arthur," 2

"\u0093both" 1

"\u0093bread," 1

"\u0093but" 1

"\u0093correct,\u0094" 1

"\u0093dear," 1

"\u0093ever" 1

"\u0093everyone\u0092s" 1

"\u0093he" 2

"\u0093he\u0092s" 1

"\u0093hello," 1

"\u0093hi," 1

"\u0093i" 5

"\u0093i\u0092d" 1

"\u0093is" 1

"\u0093it\u0092s" 1

"\u0093molly!" 1

"\u0093molly!\u0094" 1

"\u0093mollywobbles,\u0094" 1

"\u0093mortal" 1

"\u0093no," 2

"\u0093now" 1

"\u0093of" 1

"\u0093oh" 1

"\u0093oh," 1

"\u0093please" 1

"\u0093sit" 1

"\u0093slughorn" 1

"\u0093so" 2

"\u0093take" 1

"\u0093thanks" 1

"\u0093thanks," 1

"\u0093that\u0092s" 1

"\u0093to" 1

"\u0093traveling.\u0094" 1

"\u0093we" 1

"\u0093well," 2

"\u0093what" 2

"\u0093wotcher," 1

"\u0093yeah," 1

"\u0093yes," 2

"\u0093yes,\u0094" 1

"\u0093you" 1

"\u0093you\u0092re" 1

"\u0094" 3

"\u0096" 6

"\u0097" 6

"\u0097\u0094" 2

"account,\u0094" 1

"added," 1

"again;" 1

"ages," 1

"ah," 1

"air," 1

"air." 1

"alone," 1

"am,\u0094" 1

"ambition?\u0094" 1

"appearance." 1

"arthur" 3

"arthur\u0092s" 3

"asked." 1

"balding," 1

"be," 1

"bed," 1

"blistering." 1

"bowl." 1

"bread," 1

"bubble-gum-pink" 1

"bubotuber" 1

"can\u0092t" 1

"check." 1

"cloak." 2

"clock\u0092s" 1

"coming!\u0094" 1

"course," 1

"course." 1

"courteously," 1

"crookshanks" 1

"day\u0092s" 1

"dear," 2

"dear." 1

"dear?\u0094" 1

"didn\u0092t" 2

"doing," 1

"don\u0092t" 5

"door." 2

"doorknob," 1

"doorstep," 1

"down," 2

"down." 1

"drawn," 1

"dumbledore" 2

"dumbledore," 2

"dumbledore." 1

"dumbledore\u0092s" 1

"ears." 1

"eater," 1

"eater." 1

"eaters." 1

"enough," 1

"everybody\u0092s" 1

"everyone.\u0094" 1

"everywhere," 1

"expected." 1

"eyes." 1

"face." 1

"fact," 1

"favorites," 1

"first!\u0094" 1

"fletcher," 1

"gasped." 1

"going,\u0094" 1

"great!\u0094" 1

"hair." 1

"hands," 1

"hands." 1

"harry," 2

"harry,\u0094" 1

"harry.\u0094" 1

"harry?\u0094" 1

"harry\u0092s" 1

"he\u0092d" 1

"he\u0092s" 2

"head." 1

"heart-shaped" 1

"hello," 1

"her." 1

"here?\u0094" 1

"hermione\u0092s" 1

"highflier." 1

"him." 1

"him?\u0094" 1

"hogwarts" 1

"hogwarts," 1

"home,\u0094" 1

"horace" 1

"horn-rimmed" 1

"hour." 1

"hours." 1

"hungry," 1

"husband," 1

"i\u0092ll" 1

"i\u0092ve" 1

"ill," 1

"in.\u0094" 1

"is," 1

"is." 1

"it;" 1

"it\u0092s" 5

"j.k." 6

"job," 2

"job?\u0094" 1

"know," 1

"late." 1

"look," 1

"lucky,\u0094" 1

"mad-eye" 1

"me,\u0094" 1

"mean," 1

"mean,\u0094" 1

"member," 1

"midnight." 1

"ministry\u0092s" 1

"mistakes." 1

"molly," 1

"molly.\u0094" 1

"mr." 5

"mrs." 21

"much." 1

"muggle" 1

"mundungus" 1

"neck," 1

"news." 1

"night," 1

"no," 1

"nodded," 1

"now!\u0094" 1

"now,\u0094" 1

"now." 1

"nymphadora!\u0094" 1

"objects." 1

"off,\u0094" 1

"off." 1

"oh!\u0094" 1

"once." 1

"once:" 1

"open." 1

"over;" 1

"pale," 1

"peril.\u0094" 1

"plugs." 1

"procedure," 1

"professor,\u0094" 1

"promoted!\u0094" 1

"purring." 1

"question!\u0094" 1

"quickly," 1

"really," 2

"red-haired" 1

"red;" 1

"remus" 1

"right," 1

"robes." 1

"ron,\u0094" 1

"ron\u0092s" 2

"rowling" 6

"rubbish.\u0094" 1

"rufus" 2

"said." 1

"scrimgeour" 1

"scrimgeour.\u0094" 1

"see," 2

"servant.\u0094" 1

"shoulder;" 1

"shoulders." 1

"shut." 1

"side," 1

"sighed," 1

"silly." 1

"situation," 1

"slughorn" 2

"slughorn\u0092s" 1

"smile." 1

"sneakoscopes" 1

"so-called" 1

"softly," 1

"soup," 1

"soup." 1

"speak." 1

"spot." 1

"stay," 1

"stove," 1

"sweet,\u0094" 1

"sympathy," 1

"table." 1

"table;" 1

"there," 1

"thick," 1

"thin," 1

"think." 1

"this," 1

"this." 1

"threshold." 1

"together?\u0094" 1

"tonks" 1

"tonks," 2

"tonks.\u0094" 1

"troubled." 1

"up." 1

"up.\u0094" 2

"ups," 1

"voice," 1

"voice." 1

"wall," 1

"wand." 1

"was." 1

"we\u0092re" 1

"weasley" 16

"weasley," 5

"weasley." 2

"weasley.\u0094" 1

"weasley\u0092s" 2

"weasleys\u0092" 1

"weekend," 1

"well," 2

"who\u0092s" 1

"who\u0092ve" 1

"wisely." 1

"work?\u0094" 1

"yard;" 1

"yes," 1

"yesterday,\u0094" 1

"you!\u0094" 1

"you," 1

"you-know-who" 2

"you-know-who," 1

"you." 1

"you?\u0094" 1

"you\u0092ve" 1

"yourself." 1

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