**Code Summary:**

The code analyzes the sentiment of two different text files ('pro\_space.txt' and 'cons\_space.txt') related to prescription drug costs.  
It uses the NLTK library to tokenize the text, remove stopwords, and clean the text for analysis.  
It also uses the VADER Sentiment Analysis tool to calculate the sentiment scores for the two text files.  
The code extracts bigrams from the text and calculates their frequency using the NLTK library.  
The code generates word clouds for the two text files using the WordCloud library and plots them using Matplotlib.  
The code outputs the sentiment scores, the most frequent bigrams, and the word clouds for both the 'pro\_space.txt' and 'cons\_space.txt' files.

**Output :**

The following is the distribution of the sentiment for pro Privatisation of Prisoncosts

It is positive for 17.1%

It is negative for 23.6%

It is neutral for 59.3%

The following is the distribution of the sentiment for con Privatisation of Prisoncosts

It is positive for 7.2%

It is negative for 19.5%

It is neutral for 73.3%

• For the collection of text data that represents pros, the sentiment analysis tool reveals that 17.1% of the text is positive, 23.6% of the text is neutral, and 59.3% of the content is negative.

• For the collection of text data that depicts cons, the sentiment analysis tool reveals that 7.2% of the text has positive sentiment, 19.5% of the text has negative sentiment, and 73.3% of the text has neutral sentiment.

The following are the bigrams extracted from the pro text

[('privatizing', 'prisons'), ('prisons', 'reduce'), ('reduce', 'prison'), ('prison', 'overpopulation'), ('overpopulation', 'making'), ('making', 'facilities'), ('facilities', 'safer'), ('safer', 'inmates'), ('inmates', 'employees'), ('employees', 'according'), ('according', 'emily'), ('emily', 'widra'), ('widra', 'staff'), ('staff', 'member'), ('member', 'prison'), ('prison', 'policy'), ('policy', 'initiative'), ('initiative', 'overpopulation'), ('overpopulation', 'correlated'), ('correlated', 'increased'), ('increased', 'violence'), ('violence', 'lack'), ('lack', 'adequate'), ('adequate', 'health'), ('health', 'care'), ('care', 'limited'), ('limited', 'programming'), ('programming', 'educational'), ('educational', 'opportunities'), ('opportunities', 'reduced'), ('reduced', 'pandemic'), ('pandemic', 'risks'), ('risks', 'higher'), ('higher', 'infection'), ('infection', 'rates'), ('rates', 'higher'), ('higher', 'prisons'), ('prisons', 'operating'), ('operating', 'capacity'), ('capacity', 'operating'), ('operating', 'capacity'), ('capacity', 'state'), ('state', 'prison'), ('prison', 'systems'), ('systems', 'operating'), ('operating', 'capacity'), ('capacity', 'montana'), ('montana', 'highest'), ('highest', 'state'), ('state', 'systems'), ('systems', 'operating'), ('operating', 'capacity'), ('capacity', 'bureau'), ('bureau', 'prisons'), ('prisons', 'federal'), ('federal', 'operating'), ('operating', 'capacity'), ('capacity', 'austill'), ('austill', 'stuart'), ('stuart', 'director'), ('director', 'privatization'), ('privatization', 'government'), ('government', 'reform'), ('reform', 'reason'), ('reason', 'foundation'), ('foundation', 'explained'), ('explained', 'governments'), ('governments', 'level'), ('level', 'continue'), ('continue', 'face'), ('face', 'financial'), ('financial', 'pressures'), ('pressures', 'challenges'), ('challenges', 'delivering'), ('delivering', 'basic'), ('basic', 'services'), ('services', 'contracting'), ('contracting', 'provides'), ('provides', 'tool'), ('tool', 'enables'), ('enables', 'corrections'), ('corrections', 'agencies'), ('agencies', 'better'), ('better', 'manage'), ('manage', 'costs'), ('costs', 'delivering'), ('delivering', 'better'), ('better', 'outcomes'), ('outcomes', 'contracts'), ('contracts', 'private'), ('private', 'prisons'), ('prisons', 'especially'), ('especially', 'contracts'), ('contracts', 'tied'), ('tied', 'reducing'), ('reducing', 'recidivism'), ('recidivism', 'rates'), ('rates', 'possibility'), ('possibility', 'delivering'), ('delivering', 'significant'), ('significant', 'improvements'), ('improvements', 'reduce'), ('reduce', 'overall'), ('overall', 'prison'), ('prison', 'population'), ('population', 'help'), ('help', 'released'), ('released', 'jail'), ('jail', 'stay'), ('stay', 'private'), ('private', 'prisons'), ('prisons', 'offer'), ('offer', 'overcrowded'), ('overcrowded', 'underfunded'), ('underfunded', 'overburdened'), ('overburdened', 'government'), ('government', 'prisons'), ('prisons', 'alternative'), ('alternative', 'simply'), ('simply', 'removing'), ('removing', 'prisoners'), ('prisoners', 'overpopulated'), ('overpopulated', 'state'), ('state', 'federal'), ('federal', 'prisons'), ('prisons', 'housing'), ('housing', 'inmates'), ('inmates', 'private'), ('private', 'facility'), ('facility', 'prisoner'), ('prisoner', 'populations'), ('populations', 'lower'), ('lower', 'dangers'), ('dangers', 'correlated'), ('correlated', 'overcrowding'), ('overcrowding', 'private'), ('private', 'prisons'), ('prisons', 'transform'), ('transform', 'broken'), ('broken', 'prison'), ('prison', 'adrian'), ('adrian', 'moore'), ('moore', 'vice'), ('vice', 'president'), ('president', 'policy'), ('policy', 'reason'), ('reason', 'foundation'), ('foundation', 'explained'), ('explained', 'private'), ('private', 'prisons'), ('prisons', 'tool'), ('tool', 'like'), ('like', 'tools'), ('tools', 'examples'), ('examples', 'using'), ('using', 'private'), ('private', 'prisons'), ('prisons', 'include'), ('include', 'private'), ('private', 'prisons'), ('prisons', 'australia'), ('australia', 'zealand'), ('zealand', 'contracts'), ('contracts', 'government'), ('government', 'prisons'), ('prisons', 'earn'), ('earn', 'bonuses'), ('bonuses', 'doing'), ('doing', 'better'), ('better', 'government'), ('government', 'prisons'), ('prisons', 'cutting'), ('cutting', 'recidivism'), ('recidivism', 'bigger'), ('bigger', 'bonus'), ('bonus', 'beat'), ('beat', 'government'), ('government', 'reducing'), ('reducing', 'recidivism'), ('recidivism', 'indigenous'), ('indigenous', 'populations'), ('populations', 'prison'), ('prison', 'companies'), ('companies', 'charged'), ('charged', 'government'), ('government', 'deems'), ('deems', 'unacceptable'), ('unacceptable', 'events'), ('events', 'like'), ('like', 'riots'), ('riots', 'escapes'), ('escapes', 'unnatural'), ('unnatural', 'beeck'), ('beeck', 'center'), ('center', 'social'), ('social', 'impact'), ('impact', 'innovation'), ('innovation', 'georgetown'), ('georgetown', 'university'), ('university', 'explained'), ('explained', 'implementing'), ('implementing', 'sorts'), ('sorts', 'contracts'), ('contracts', 'private'), ('private', 'sector'), ('sector', 'responsible'), ('responsible', 'designing'), ('designing', 'solution'), ('solution', 'achieve'), ('achieve', 'desired'), ('desired', 'social'), ('social', 'oliver'), ('oliver', 'brousse'), ('brousse', 'chief'), ('chief', 'executive'), ('executive', 'john'), ('john', 'laing'), ('laing', 'investment'), ('investment', 'group'), ('group', 'built'), ('built', 'prison'), ('prison', 'zealand'), ('zealand', 'contract'), ('contract', 'explained'), ('explained', 'prison'), ('prison', 'designed'), ('designed', 'rehabilitation'), ('rehabilitation', 'strength'), ('strength', 'partnerships'), ('partnerships', 'bring'), ('bring', 'best'), ('best', 'practices'), ('practices', 'innovation'), ('innovation', 'world'), ('world', 'allowing'), ('allowing', 'local'), ('local', 'authorities'), ('authorities', 'benefit'), ('benefit', 'private'), ('private', 'capital'), ('capital', 'best'), ('best', 'people'), ('people', 'best'), ('best', 'practices'), ('practices', 'private'), ('private', 'prisons'), ('prisons', 'offer'), ('offer', 'innovative'), ('innovative', 'programs'), ('programs', 'lower'), ('lower', 'rates'), ('rates', 'recidivism'), ('recidivism', 'tendency'), ('tendency', 'committed'), ('committed', 'criminal'), ('criminal', 'commit'), ('commit', 'criminal'), ('criminal', 'likely'), ('likely', 'landing'), ('landing', 'prison'), ('prison', 'group'), ('group', 'american'), ('american', 'private'), ('private', 'prison'), ('prison', 'conglomerate'), ('conglomerate', 'offers'), ('offers', 'individual'), ('individual', 'treatment'), ('treatment', 'plans'), ('plans', 'drug'), ('drug', 'abuse'), ('abuse', 'education'), ('education', 'treatment'), ('treatment', 'adult'), ('adult', 'education'), ('education', 'preparation'), ('preparation', 'life'), ('life', 'skills'), ('skills', 'courses'), ('courses', 'parenting'), ('parenting', 'family'), ('family', 'reintegration'), ('reintegration', 'anger'), ('anger', 'management'), ('management', 'work'), ('work', 'readiness'), ('readiness', 'vocational'), ('vocational', 'skills'), ('skills', 'programs'), ('programs', 'offered'), ('offered', 'residential'), ('residential', 'options'), ('options', 'allowing'), ('allowing', 'people'), ('people', 'access'), ('access', 'programs'), ('programs', 'prison'), ('prison', 'parole'), ('parole', 'probation'), ('probation', 'reintegrating'), ('reintegrating', 'communities'), ('communities', 'rachael'), ('rachael', 'cole'), ('cole', 'partnership'), ('partnership', 'integration'), ('integration', 'director'), ('director', 'zealand'), ('zealand', 'department'), ('department', 'corrections'), ('corrections', 'argued'), ('argued', 'want'), ('want', 'establish'), ('establish', 'prison'), ('prison', 'focuses'), ('focuses', 'rehabilitation'), ('rehabilitation', 'reintegration'), ('reintegration', 'private'), ('private', 'sector'), ('sector', 'space'), ('space', 'innovate'), ('innovate', 'opportunity'), ('opportunity', 'things'), ('things', 'differently'), ('differently', 'just'), ('just', 'zealand'), ('zealand', 'prison'), ('prison', 'operated'), ('operated', 'serco'), ('serco', 'british'), ('british', 'company'), ('company', 'make'), ('make', 'meals'), ('meals', 'laundry'), ('laundry', 'schedule'), ('schedule', 'family'), ('family', 'medical'), ('medical', 'appointments'), ('appointments', 'maintain'), ('maintain', 'resume'), ('resume', 'apply'), ('apply', 'facility'), ('facility', 'jobs'), ('jobs', 'prison'), ('prison', 'responds'), ('responds', 'market'), ('market', 'opening'), ('opening', 'cafes'), ('cafes', 'train'), ('train', 'baristas'), ('baristas', 'coffee'), ('coffee', 'shop'), ('shop', 'jobs'), ('jobs', 'soared'), ('soared', 'outside'), ('outside', 'prison'), ('prison', 'prison'), ('prison', 'zealand'), ('zealand', 'includes'), ('includes', 'cultural'), ('cultural', 'center'), ('center', 'maori'), ('maori', 'inmates'), ('inmates', 'designed'), ('designed', 'reduce'), ('reduce', 'recidivism'), ('recidivism', 'indigenous'), ('indigenous', 'populations'), ('populations', 'programs'), ('programs', 'focus'), ('focus', 'inmate'), ('inmate', 'reentry'), ('reentry', 'society'), ('society', 'deal'), ('deal', 'drug'), ('drug', 'abuses'), ('abuses', 'lower'), ('lower', 'recidivism'), ('recidivism', 'rates'), ('rates', 'turn'), ('turn', 'lower'), ('lower', 'prison'), ('prison', 'populations'), ('populations', 'lessen'), ('lessen', 'overcrowding'), ('overcrowding', 'related'), ('related', 'dangers')]

The following are the bigrams extracted from the con text

[('private', 'prisons'), ('prisons', 'exploit'), ('exploit', 'employees'), ('employees', 'prisoners'), ('prisoners', 'corporate'), ('corporate', 'gain'), ('gain', 'private'), ('private', 'prisons'), ('prisons', 'paid'), ('paid', 'staff'), ('staff', 'hour'), ('hour', 'public'), ('public', 'prisons'), ('prisons', 'yearly'), ('yearly', 'salaries'), ('salaries', 'required'), ('required', 'fewer'), ('fewer', 'hours'), ('hours', 'training'), ('training', 'prior'), ('prior', 'service'), ('service', 'public'), ('public', 'prisons'), ('prisons', 'leaving'), ('leaving', 'staff'), ('staff', 'prepared'), ('prepared', 'jobs'), ('jobs', 'contributing'), ('contributing', 'turnover'), ('turnover', 'rate'), ('rate', 'compared'), ('compared', 'public'), ('public', 'prisons'), ('prisons', 'private'), ('private', 'prisons'), ('prisons', 'fined'), ('fined', 'understaffing'), ('understaffing', 'leaving'), ('leaving', 'guards'), ('guards', 'staff'), ('staff', 'maintain'), ('maintain', 'order'), ('order', 'facilities'), ('facilities', 'ivette'), ('ivette', 'feliciano'), ('feliciano', 'newshour'), ('newshour', 'weekend'), ('weekend', 'producer'), ('producer', 'reporter'), ('reporter', 'explained'), ('explained', 'report'), ('report', 'michael'), ('michael', 'horowitz'), ('horowitz', 'justice'), ('justice', 'department'), ('department', 'inspector'), ('inspector', 'general'), ('general', 'capita'), ('capita', 'facilities'), ('facilities', 'contraband'), ('contraband', 'smuggled'), ('smuggled', 'lockdowns'), ('lockdowns', 'uses'), ('uses', 'force'), ('force', 'correctional'), ('correctional', 'officers'), ('officers', 'assaults'), ('assaults', 'inmates'), ('inmates', 'inmates'), ('inmates', 'inmates'), ('inmates', 'correctional'), ('correctional', 'officers'), ('officers', 'complaints'), ('complaints', 'medical'), ('medical', 'care'), ('care', 'staff'), ('staff', 'food'), ('food', 'conditions'), ('conditions', 'confinement'), ('confinement', 'facilities'), ('facilities', 'housing'), ('housing', 'inmates'), ('inmates', 'solitary'), ('solitary', 'confinement'), ('confinement', 'free'), ('free', 'space'), ('space', 'findings'), ('findings', 'highlighted'), ('highlighted', 'chronic'), ('chronic', 'understaffing'), ('understaffing', 'root'), ('root', 'private'), ('private', 'prisons'), ('prisons', 'resulted'), ('resulted', 'prisoners'), ('prisoners', 'population'), ('population', 'million'), ('million', 'prisoner'), ('prisoner', 'costs'), ('costs', 'resulting'), ('resulting', 'million'), ('million', 'gains'), ('gains', 'private'), ('private', 'prisons'), ('prisons', 'prisoners'), ('prisoners', 'private'), ('private', 'prisons'), ('prisons', 'used'), ('used', 'sentences'), ('sentences', 'longer'), ('longer', 'prison'), ('prison', 'private'), ('private', 'companies'), ('companies', 'charge'), ('charge', 'inflated'), ('inflated', 'prices'), ('prices', 'basic'), ('basic', 'necessities'), ('necessities', 'soap'), ('soap', 'underwear'), ('underwear', 'communications'), ('communications', 'including'), ('including', 'phone'), ('phone', 'calls'), ('calls', 'emails'), ('emails', 'come'), ('come', 'steep'), ('steep', 'price'), ('price', 'forcing'), ('forcing', 'inmates'), ('inmates', 'work'), ('work', 'pennies'), ('pennies', 'private'), ('private', 'prisons'), ('prisons', 'public'), ('public', 'prisons'), ('prisons', 'rely'), ('rely', 'family'), ('family', 'hundreds'), ('hundreds', 'dollars'), ('dollars', 'month'), ('month', 'privatizing'), ('privatizing', 'prisons'), ('prisons', 'costly'), ('costly', 'leaves'), ('leaves', 'expensive'), ('expensive', 'prisoners'), ('prisoners', 'public'), ('public', 'prisons'), ('prisons', 'study'), ('study', 'prisons'), ('prisons', 'georgia'), ('georgia', 'state'), ('state', 'prisons'), ('prisons', 'cost'), ('cost', 'approximately'), ('approximately', 'inmate'), ('inmate', 'private'), ('private', 'prisons'), ('prisons', 'cost'), ('cost', 'inmate'), ('inmate', 'study'), ('study', 'cost'), ('cost', 'incarcerate'), ('incarcerate', 'prisoner'), ('prisoner', 'year'), ('year', 'private'), ('private', 'prison'), ('prison', 'cost'), ('cost', 'public'), ('public', 'prison'), ('prison', 'savings'), ('savings', 'deceptive'), ('deceptive', 'inmates'), ('inmates', 'private'), ('private', 'prisons'), ('prisons', 'serve'), ('serve', 'longer'), ('longer', 'sentences'), ('sentences', 'negating'), ('negating', 'half'), ('half', 'savings'), ('savings', 'recidivism'), ('recidivism', 'rates'), ('rates', 'largely'), ('largely', 'public'), ('public', 'prisons'), ('prisons', 'negating'), ('negating', 'savings'), ('savings', 'arizona'), ('arizona', 'audit'), ('audit', 'state'), ('state', 'inmates'), ('inmates', 'cost'), ('cost', 'inmate'), ('inmate', 'private'), ('private', 'prisons'), ('prisons', 'prisons'), ('prisons', 'concluded'), ('concluded', 'private'), ('private', 'prisons'), ('prisons', 'public'), ('public', 'lack'), ('lack', 'savings'), ('savings', 'striking'), ('striking', 'considering'), ('considering', 'private'), ('private', 'prisons'), ('prisons', 'house'), ('house', 'prisoners'), ('prisoners', 'expensive'), ('expensive', 'incarcerate'), ('incarcerate', 'death'), ('death', 'inmates'), ('inmates', 'inmates'), ('inmates', 'medical'), ('medical', 'conditions'), ('conditions', 'state'), ('state', 'house'), ('house', 'private'), ('private', 'prisons'), ('prisons', 'charge'), ('charge', 'governments'), ('governments', 'prison'), ('prison', 'beds'), ('beds', 'resulting'), ('resulting', 'excess'), ('excess', 'costs'), ('costs', 'governments')]

The most frequent bigrams and their frequencies from the pro file are as follows:

[(('private', 'prisons'), 7), (('operating', 'capacity'), 5), (('government', 'prisons'), 3), (('systems', 'operating'), 2), (('reason', 'foundation'), 2), (('foundation', 'explained'), 2), (('contracts', 'private'), 2), (('reducing', 'recidivism'), 2), (('recidivism', 'rates'), 2), (('prisons', 'offer'), 2)]

The most frequent bigrams and their frequencies from the con file are as follows:

[(('private', 'prisons'), 13), (('public', 'prisons'), 6), (('inmates', 'inmates'), 3), (('correctional', 'officers'), 2), (('prisons', 'public'), 2), (('prisons', 'cost'), 2), (('inmate', 'private'), 2), (('cost', 'inmate'), 2), (('prisons', 'exploit'), 1), (('exploit', 'employees'), 1)]

