Full Name	Nithin Padmakumar Sivakumar	Ajesh Vijayaragavan	Peihao Yuan
UNH ID	985392194	999276672	
Webcat Username	Ns1077	avv1004	
Assignment Number	Programming Assignment 1	Programming Assignment 1	Programming Assignment 1

Link to Github: Github.com/team54ever

1. docsPath in IndexFiles.java intakes path of the paragraphs file train.test200.cbor.paragraphs from 'test200' dataset and the lucene code creates Index of the paragraphs.

2.

Query 1 :- power nap benefits

Total Results :: 162

Content of the top 10 results

85bcaa2516682b1738c121bfd1d7bd60c9d2e274 - the power nap is thought to maximize the benefits of sleep versus time. it is used to supplement normal sleep, especially when a sleeper has accumulated a sleep%20debt.
05ee98915108d6fea8b95d4aefd51acadf85bb3a - for several years, scientists have been investigating the benefits of napping, both the power nap and much longer sleep durations as long as 1–2 hours. performance across a wide range of cognitive processes has been tested. studies demonstrate that naps are as good as a night of sleep for some types of memory tasks.
76cae6cb9749c647ae52077d6fd535f3ccdb41a2 - some companies have nap rooms to allow employees to take a power nap. this may be in a form of a nap room with a recliner, or chairs specially designed for power napping installed in a designated area. companies with nap rooms claim that employees are happier and become more productive at work.
9fe0ea9205e708269ec2cf437aa23360c5805a8b - a flinders%20university study of individuals restricted to only five hours of sleep per night found a 10-minute nap was overall the most recuperative nap duration of various nap lengths they examined (lengths of 0 min, 5 min, 10 min, 20 min, and 30 minutes): the 5-minute nap produced few benefits in comparison with the no-nap control; the 10-minute nap produced immediate improvements in all outcome measures (including sleep latency, subjective sleepiness, fatigue, vigor, and cognitive performance), with some of these benefits maintained for as long as 155 minutes; the 20-minute nap was associated with improvements emerging 35 minutes after napping and lasting up to 125 minutes after napping; and the 30-minute nap produced a period of impaired alertness and performance immediately after napping, indicative of sleep inertia, followed by improvements lasting up to 155 minutes after the nap.
1b470a36adea668e666acefd8b82ba1336620315 - various durations are recommended for power naps, which are very short compared to regular sleep. the short duration of a power nap is designed to prevent nappers from sleeping so long that they enter a normal sleep cycle without being able to complete it. going beyond sleep%20stages i and ii but failing to complete a full sleep cycle can result in a phenomenon known as sleep%20inertia, where one feels groggy, disoriented, and even more sleepy than before beginning the nap. brief naps (10–15 minutes) can improve alertness directly after awakening without the detrimental effects of sleep inertia associated with longer naps.
0bb27470730936e60db6de54836ef6700c58e53f - similar nap rooms and stations also exist in higher%20education institutions. many colleges and universities provide napping furnitures such as camp%20bed and giant bean%20bags in libraries for students to take a nap after a long study. at least one university has a nap room set up in a gym. some medical%20schools also set up nap rooms at the teaching%20hospitals. the nap rooms may include sleeping pods or cots, white%20noise%20machines, and antimicrobial pillows.
bf2d3d9fab4e234bcf4ce753f9e99a8c90e9cea9 - people who regularly take power naps may develop a good idea of what duration works best for them, as well as what tools, environment, position, and associated factors help induce the best results. some may prefer to take power naps regularly even if their schedules allow a full night's sleep. mitsuo hayashi and tadao hori have demonstrated that a nap improves mental performance even after a full night's sleep. new sleep sensors and sleep timers available on several mobile devices allow advocates of power naps to sleep for exactly as long as they would like to.

7a496a372da2b3cfbae495d7b1aa0378f7275911 - a brief period of sleep of around 15 to 20 minutes, preceded by consuming a caffeine drink or another stimulant, may combat daytime drowsiness more effectively than napping or drinking coffee alone.<ref name=twsyun/><ref name=twspreventionmag/><ref name=twsaudoc/> a stimulant nap (or coffee nap, caffeine nap, occasionally napuccino)<ref name=twsyun/> was discovered by british researchers, horne and reyner, to be more effective than regular naps in improving post-nap alertness and cognitive functioning.<ref name=twsnytimes/><ref name=twssmithsonian/> in a driving simulator and a series of studies, horne and reyner investigated the effects of cold air, radio, a break with no nap, a nap, caffeine pill vs. placebo and a short nap preceded by caffeine on mildly sleep-deprived subjects. a nap with caffeine was by far the most effective in reducing driving "incidents" and subjective sleepiness as it helps the body get rid of sleep-inducing chemical compounds known as adenosine.<ref name=twsoprahmag/> caffeine in coffee takes up to half an hour to have an alerting effect, hence "a short (<15min) nap will not be compromised if it is taken immediately after the coffee." one account suggested that it was like a "double shot of energy" from the stimulating boost from caffeine plus better alertness from napping.<ref name=twsyun/> this procedure has been studied on sleep-deprived humans given the task of driving a motor vehicle afterwards,<ref name=twspsychophysiology/> although it has not been studied on elderly populations.<ref name=twssleepjournal/>
857c9393cc9f1438f3dc5a08f512226abc414e87 - power naps of fewer than 30 minutes—even those as brief as 6 and 10 minutes—restore wakefulness and promote performance and learning. a 30-minute nap may also be able to reverse the hormonal impact of a night of poor sleep or reverse the damage of sleep deprivation. a university%20of%20d%c3%bcsseldorf study found superior memory recall once a person had reached 6 minutes of sleep, suggesting that the onset of sleep may initiate active memory processes of consolidation which—once triggered—remains effective even if sleep is terminated.
8e962ffac6102cfd7b5f7d8878df622401b510b2 - the national%20institute%20of%20mental%20health funded a team of doctors, led by alan hobson, md, robert%20stickgold, phd, and colleagues at harvard%20university for a study which showed that a midday snooze reverses information%20overload. reporting in ''nature%20neuroscience'', sara%20mednick, phd, stickgold and colleagues also demonstrated that "burnout" irritation, frustration and poorer performance on a mental task can set in as a day of training wears on. this study also proved that, in some cases, napping could even boost performance to an individual's top levels. the nimh team wrote "the bottom line is: we should stop feeling guilty about taking that 'power nap' at work."

Query 2 :- whale vocalization production of sound

Total Results :: 200

Content of the top 10 results

a52b2be2b8eae17301fa6a8669e35da4188da7d6 - most baleen whales make sounds at about 15–20 hertz. however, a team of marine%20biology, led by mary ann daher of the woods%20hole%20oceanographic%20institution, reported in ''new%20scientist'' in december 2004 that they had been tracking a whale in the north pacific for 12 years that was "singing" at 52 hz. the scientists are unable to explain this dramatic difference from the norm; however, they believe the whale is baleen and unlikely to be a new species,<ref name=newsci/> suggesting that currently known species may have a wider vocal range than previously thought. there is disagreement in the scientific community regarding the uniqueness of the whale's vocalization and whether it is a member of a hybrid whale such as the well documented blue and fin whale hybrids.
52d1827627d2fdb8271eed24f71a424769595951 - researchers use hydrophones (often adapted from their original military use in tracking submarines) to ascertain the exact location of the origin of whale noises. their methods also allow them to detect how far through an ocean a sound travels. research by dr. christopher clark of cornell%20university conducted using military data showed that whale noises travel for thousands of kilometres. as well as providing information about song production, the data allows researchers to follow the migratory path of whales throughout the "singing" (mating) season. an important finding is that whales, in a process called the lombard%20effect, adjust their song to compensate for background noise%20pollution. moreover, there is evidence that blue whales stop producing foraging d calls once a mid-frequency sonar is activated, even though the sonar frequency range (1–8 khz) far exceeds their sound production range (25–100 hz).
67c751c1e13b722a4f787bc7bc7c62d97ac10b5a - the multiple sounds odontocetes make are produced by passing air through a structure in the head called the '''phonic lips'''. this structure functions like the human nasal cavity. as the air passes through this narrow passage, the phonic lip membranes are sucked together, causing the surrounding tissue to vibrate. these vibrations can, as with the vibrations in the human larynx, be consciously controlled with great sensitivity. the vibrations pass through the tissue of the head to the melon%20(whale), which shapes and directs the sound into a beam of sound useful in echolocation. every toothed whale except the sperm%20whale has two sets of phonic lips and is thus capable of making two sounds independently. once the air has passed the phonic lips it enters the vestibular%20system. from there, the air may be recycled back into the lower part of the nasal complex, ready to be used for sound creation again, or passed out through the blowhole.
fbff039e5c107c9f8be00da48add3995428773d7 - humpback whales may also make stand-alone sounds that do not form part of a song, particularly during courtship rituals. finally, humpbacks make a third class of sound called the feeding call. this is a long sound (5 to 10 s duration) of near constant frequency. humpbacks generally feed cooperatively by gathering in groups, swimming underneath shoals of fish and all lunging up vertically through the fish and out of the water together. prior to these lunges, whales make their feeding call. the exact purpose of the call is not known, but research suggests that fish know what it means. when the sound was played back to them, a group of herring responded to the sound by moving away from the call, even though no whale was present.

9b42469aa542187892242273f2c33df0c20c032c - cetacean sound production differs markedly from this mechanism. the precise mechanism differs in the two major suborders of cetaceans: the ''odontoceti'' (toothed%20whales—including dolphins) and the ''mysticeti'' (baleen%20whales—including the largest whales, such as the blue%20whale).
a3c550c198a78e23bbee44b25db74e7b743b573e - baleen%20whales (formally called mysticetes) do not have phonic lip structure. instead, they have a larynx that appears to play a role in sound production, but it lacks vocal cords, and scientists remain uncertain as to the exact mechanism. the process, however, cannot be completely analogous to humans, because whales do not have to exhale in order to produce sound. it is likely that they recycle air around the body for this purpose. cranial sinuses may also be used to create the sounds, but again researchers are currently unclear how.
711eb45bef2339ddc2cd090e60899c756feb493d - two groups of whales, the humpback whale and the subspecies of blue whale found in the indian%20ocean, are known to produce a series of repetitious sounds at varying frequencies known as whale song. marine biologist philip clapham describes the song as "probably the most complex in the animal kingdom."
33f7ccf51ab0c242135ce906c6a26328a17d9308 - while the complex sounds of the humpback whale (and some blue whales) are believed to be primarily used in sexual%20selection, the simpler sounds of other whales have a year-round use. while toothed whales are capable of using echolocation to detect the size and nature of objects, this capability has never been demonstrated in baleen whales. further, unlike some fish such as sharks, a whale's sense of smell is not highly developed. thus, given the poor visibility of aquatic environments and that sound travels so well in water, sounds audible to humans may play a role in navigation. for instance, the depth of water or the existence of a large obstruction ahead may be detected by loud noises made by baleen whales.
b65a420c1a78384af055f18113ba50bd55bf1497 - some scientists have proposed that humpback whale songs may serve an animal%20echolocation purpose, but this has been subject to disagreement.
dff5217246fcccb5c8acef5e258cc452a0a3eca9 - the frequency of baleen whale sounds ranges from 10 hertz to 31 khz. a list of typical levels is shown in the table below.

Query 3 :- pokemon puzzle league

Total Results :: 23

Content of the top 10 results

89fd2d8a4a355c3005f41bfd1c457939a5283d3d - ''pokémon puzzle league'' received generally positive reviews from the media, scoring 81/100 on metacritic, and 82.65% on gamerankings. ''electronic%20gaming%20monthly'' gave the game a 9.2/10, noting its similarity to ''tetris%20attack'', and calling it "highly addictive". ign rated the game 8.9/10, stating "i'm totally addicted and thrilled with pokémon puzzle league."
693d081d719512da4a321be6e4b7ebe839ce062e - ''pokémon puzzle league'' features the same gameplay as in ''panel%20de%20pon''. the objective is to clear blocks from the playfield by arranging them in horizontal or vertical lines of three or more blocks. a continuous stream of new blocks pushes up from the bottom of the playfield, causing the entire playfield to rise continuously. if the blocks reach the top of the playfield, the player loses. the player can temporarily stop the progression of blocks by scoring combos and chains, and in two-player battles, these actions also cause garbage blocks to stack on top of the opponent's playfield.
71e8c617e76b38819bb165988ff3d224d5d700e8 - unlike its predecessors, ''pokémon puzzle league'' features a 3d mode in addition to the traditional 2d mode. in this mode, gameplay takes place on a cylinder with an effective width of 18 blocks, compared to the six-block width of the flat 2d field. it also features the original block design from ''panel de pon'' and ''tetris attack'', as well as a pokémon-oriented design (which is selected by default).
3f28912fb9c6b2fa4377414a348275e59b7d90f5 - there is currently a women's league playing six-(wo)man football. it is the independent women's football league.
122d144c144f20998d6c8a48c91a0af7bc81ac04 - coors field was the first major league park with an underground heating system.
b9f231bb52e1c8b87fd20c9a059ae01bf792a97e - gracia hillman served as eac chair in 2005 and is the former executive director of the league%20of%20women%20voters of the united states.
97924bab16d053e96ee70690b893b32559be8fa3 - although the number of home runs hit per season at coors field is decreasing, coors field still remains the most hitter friendly ballpark in the major leagues by a wide margin. from 2012–2015 the colorado rockies led the league in runs scored in home games, while being last in the league for runs scored in away games. this demonstrates the extreme benefit that coors field's low air density provides to hitters.
b8d505b181ac086b69cea67a65ba517491bd34e0 - coors field twice broke the major league record for home runs hit in a ballpark in one season. the previous record, 248, had been set at the los%20angeles%20angels%20of%20anaheim' original home of wrigley%20field%20(los%20angeles) in los angeles in 1961, its only year for major league ball. in coors field's first year, the home run total fell just 7 short of that mark, despite losing 9 games from the home schedule (or 1/9 of the normal 81) due to the strike that had continued from 1994. the next season, 1996, with a full schedule finally, 271 home runs were hit at coors field. in 1999, the current major league record was set at 303. the annual home run figure dropped noticeably in 2002, and has dropped below 200 starting in 2005.
9185cc3ac1e0f86cee02f96ac8d4506515a5ebd7 - the characters in ''pokémon puzzle league'' either come from the anime and were once exclusive to it, like ash%20ketchum, tracey%20sketchit, and gary%20oak or have appeared in previous ''pokémon'' games but appear in the game as they do in the anime like misty%20(pok%c3%a9mon), brock%20(pok%c3%a9mon), and giovanni%20(pok%c3%a9mon). there are 16 playable characters in the game. in the 1p stadium, only ash is playable and gary's

pokémon, a nidoran%e2%99%80, growlithe, and krabby, will fully be evolved into nidoqueen, arcanine, and kingler, respectively, in hard mode, very hard mode, and super hard mode when challenging him the second time. these fully evolved pokémon are not playable with gary. the final opponent of each difficultly setting varies. giovanni is the last opponent of easy mode, bruno%20(pok%c3%a9mon) is the last opponent of normal mode, and gary with his evolved pokémon is the last opponent of hard mode. in very hard mode and super hard mode, mewtwo is the final opponent, and beating him gives the player the true ending of the story in 1p stadium.
3ff3fd3f70aceb7acacf53b4aaaf5ae9f6b3509c - the term "ordinary effort" considers all circumstances, including weather, lighting, positioning of the defense, and the abilities of the players involved in the play. a fly ball catchable with ordinary effort in major league baseball might not be in a junior high school game, due to the ability of the players involved.

3. Lucene uses ‘Practical Scoring Function’ (vector model search) to score the results.

4. Created instance of Basesimilarity and implemented the summation scoring function which ranks document.