

Results

Team 1

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Question 1 Output:

Indexing to directory 'index'...

Indexing paragraphs:

Paragraph ID: 00097f95b6f50949841744725b640982bcb12036

Paragraph ID: 0011a9eee3332daa83130d56dda3baaabe27c934

Paragraph ID: 0018287ae97358671d32f194beeceff55a2bf167

Paragraph ID: 0018ca190d2c49225b2a83058918256fd3a9921e

Paragraph ID: 003e81e203ff17cabdbcf43d34ad80769ada12a4

Paragraph ID: 003fd88273f0e9e38f27457b62e26456bb4fec40

Paragraph ID: 004a10c8fbb07f2ad603d33aed4e27743c8b37f2

Paragraph ID: 005107b38e0e93217a15f0b3c00cd9c426f73da5

Paragraph ID: 0057128ac58834b4b5eaf009892526fbb71cbcdf

...

Paragraph ID: ff44c7e15eb53d8dff6b0446e7603f20688914ed

Paragraph ID: ff4cbc596f0a60a15ea306cba7731d06cf376cf9

Paragraph ID: ff8b412da9e1e858be55c4dbe3925454207a061f

Paragraph ID: ffa99d68412bf2f3cb97cfd421b06ebda8fa1e0c

Paragraph ID: ffd520213d25c83cde25e7b7d8111ae653362eb7

Paragraph ID: ffeee9da8d07f1dad19840f1cf63036c4e938e89

4689 paragraphs indexed in 6903 total milliseconds

Question 2 Output:

Query: 'power nap benefits'

Searching for: power nap benefits

162 total matching documents

1. Id: 85bcaa2516682b1738c121bfd1d7bd60c9d2e274

Content: 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.

2. Id: 05ee98915108d6fea8b95d4aefd51acadf85bb3a

Content: 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.

3. Id: 76cae6cb9749c647ae52077d6fd535f3ccdb41a2

Content: 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.

4. Id: 9fe0ea9205e708269ec2cf437aa23360c5805a8b

Content: 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.

5. Id: 1b470a36adea668e666acefd8b82ba1336620315

Content: 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.

6. Id: 0bb27470730936e60db6de54836ef6700c58e53f

Content: 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.

7. Id: bf2d3d9fab4e234bcf4ce753f9e99a8c90e9cea9

Content: 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.

8. Id: 7a496a372da2b3cfbae495d7b1aa0378f7275911

Content: 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/>

9. Id: 857c9393cc9f1438f3dc5a08f512226abc414e87

Content: 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.

10. Id: 8e962ffac6102cfd7b5f7d8878df622401b510b2

Content: 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."

Press (n)ext page, (q)uit or enter number to jump to a page.

Query: *'whale vocalization production of sound'*

Searching for: whale vocalization production sound

200 total matching documents

1. Id: a52b2be2b8eae17301fa6a8669e35da4188da7d6

Content: 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.

2. Id: 52d1827627d2fdb8271eed24f71a424769595951

Content: 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).

3. Id: 67c751c1e13b722a4f787bc7bc7c62d97ac10b5a

Content: 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.

4. Id: fbff039e5c107c9f8be00da48add3995428773d7

Content: 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.

5. Id: 9b42469aa542187892242273f2c33df0c20c032c

Content: 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).

6. Id: a3c550c198a78e23bbee44b25db74e7b743b573e

Content: 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.

7. Id: 711eb45bef2339ddc2cd090e60899c756feb493d

Content: 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."

8. Id: 33f7ccf51ab0c242135ce906c6a26328a17d9308

Content: 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.

9. Id: b65a420c1a78384af055f18113ba50bd55bf1497

Content: Some scientists have proposed that humpback whale songs may serve an Animal%20echolocation purpose, but this has been subject to disagreement.

10. Id: dff5217246fccb5c8acef5e258cc452a0a3eca9

Content: The frequency of baleen whale sounds ranges from 10 Hertz to 31 kHz. A list of typical levels is shown in the table below.

Press (n)ext page, (q)uit or enter number to jump to a page.

Query: 'pokemon puzzle league'

Searching for: pokemon puzzle league

23 total matching documents

1. Id: 89fd2d8a4a355c3005f41bfd1c457939a5283d3d

Content: "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."

2. Id: 693d081d719512da4a321be6e4b7ebe839ce062e

Content: "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.

3. Id: 71e8c617e76b38819bb165988ff3d224d5d700e8

Content: 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).

4. Id: 3f28912fb9c6b2fa4377414a348275e59b7d90f5

Content: There is currently a women's league playing six-(wo)man football. It is the Independent Women's Football League.

5. Id: 122d144c144f20998d6c8a48c91a0af7bc81ac04

Content: Coors Field was the first major league park with an underground heating system.

6. Id: b9f231bb52e1c8b87fd20c9a059ae01bf792a97e

Content: Gracia Hillman served as EAC Chair in 2005 and is the former executive director of the League%20of%20Women%20Voters of the United States.

7. Id: 97924bab16d053e96ee70690b893b32559be8fa3

Content: 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.

8. Id: b8d505b181ac086b69cea67a65ba517491bd34e0

Content: 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.

9. Id: 9185cc3ac1e0f86cee02f96ac8d4506515a5ebd7

Content: 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 difficulty 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.

10. Id: 3ff3fd3f70aceb7acacf53b4aaaf5ae9f6b3509c

Content: 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.

Press (n)ext page, (q)uit or enter number to jump to a page.

Question 3:

Assuming Lucene default search:

Lucene uses a combination of **Vector Space Model(VSM)** and the Boolean model to determine how relevant a document is to a user's query.

In general the idea behind the **VSM** is the more times a query term appear in document relative to the number of times the term appears in all documents in the collection, the more relevant that document to the query. It uses Boolean Model to first narrow down the documents that needs to scored based on the use of Boolean logic in query specification.

Question 4:

Searching for: power nap benefits

162 total matching documents

Score: 4.4142137

1. Id: 9fe0ea9205e708269ec2cf437aa23360c5805a8b

Score: 3.4142137

2. Id: 76cae6cb9749c647ae52077d6fd535f3ccdb41a2

Score: 3.0

3. Id: 05ee98915108d6fea8b95d4aefd51acadf85bb3a

Score: 3.0

4. Id: 7a496a372da2b3cfbae495d7b1aa0378f7275911

Score: 3.0

5. Id: 85bcaa2516682b1738c121bfd1d7bd60c9d2e274

Score: 2.828427

6. Id: 1b470a36adea668e666acefd8b82ba1336620315

Score: 2.828427

7. Id: 2a6fbd513d07c84e1009c9b848414d59710fc990

Score: 2.732051

8. Id: bf2d3d9fab4e234bcf4ce753f9e99a8c90e9cea9

Score: 2.4142137

9. Id: 1fe0b2d49032c3a296ff68d63a389ffa8a728345

Score: 2.236068

10. Id: 0bb27470730936e60db6de54836ef6700c58e53f

Press (n)ext page, (q)uit or enter number to jump to a page.