**МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ РФ**

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# **Тема**

Сравнение текстов на основе процентного совпадения символов.

# **Задание**

Сравнить 1) два осмысленных текста на естественном языке, 2) осмысленный текст и текст из случайных букв, 3) осмысленный текст и текст из случайных слов, 4) два текста из случайных букв, 5) два текста из случайных слов.

Считать процент совпадения букв в сравниваемых текстах – получить дробное значение от 0 до 1 как результат деления количества совпадений на общее число букв. Расписать подробно в отчёте алгоритм сравнения и приложить сравниваемые тексты в отчёте хотя бы для одного запуска по всем пяти случаям. Осознать какие значения получаются в этих пяти случаях. Привести соображения о том почему так происходит.

Длина сравниваемых текстов должна совпадать. Привести соображения о том какой длины текста должно быть достаточно для корректного сравнения.

# **Теория**

В криптографии и анализе данных часто важно понимать статистические особенности текстов, отличать естественные языки от случайных последовательностей, оценивать уровень структурированности и предсказуемости информации. Одним из самых простых способов анализа является поэлементное сравнение текстов, т.е. определение доли совпадений символов на одинаковых позициях.

Метрика совпадения рассчитывается по формуле:

Совпадение = Количество совпавших символов / Общая длина текста

Эта метрика показывает, насколько два текста схожи побуквенно, позиционно, независимо от смысла.

Используя эту метрику, можно сравнивать:

* тексты на естественном языке,
* случайные последовательности букв,
* тексты, составленные из случайных слов (но не абракадабра), и понять, насколько они различаются по структурной организации.

Также важно учитывать, что чем больше длина сравниваемых текстов, тем стабильнее и надёжнее результат, поскольку уменьшается влияние случайных флуктуаций.

# **Ход лабораторной работы**

1. Подготовка исходных данных
   * Был загружен список из 1000 наиболее часто употребляемых английских слов (1000-most-common-words.txt).
   * Также были заранее скачаны два текста на английском языке, каждый длиной 5000 символов: meaningful\_1.txt и meaningful\_2.txt.
2. Генерация дополнительных текстов
   * С помощью Python были сгенерированы 4 дополнительных текста:
     + 2 текста из случайных английских слов из загруженного списка.
     + 2 текста из случайных английских букв.
   * Все тексты были сохранены в отдельные .txt файлы в общей директории.
3. Сравнение текстов
   * Был реализован алгоритм сравнения текстов по символам на одинаковых позициях.
   * Для каждой пары текстов рассчитывалась доля совпадений, как отношение количества совпавших символов к общей длине (5000).
   * Были рассмотрены 5 различных комбинаций для анализа:
     + 1. Два осмысленных текста.
       2. Осмысленный текст и текст из случайных букв.
       3. Осмысленный текст и текст из случайных слов.
       4. Два текста из случайных букв.
       5. Два текста из случайных слов.
4. Полученные результаты показали ожидаемую градацию:
   * Максимальное совпадение — между двумя осмысленными текстами (~0.089).
   * Минимальное — между осмысленным и случайными буквами (~0.027).
   * Тексты из случайных слов показали промежуточные значения (~0.065–0.068), что объясняется тем, что они используют реальные слова с частотными буквосочетаниями.

**Исходный код**

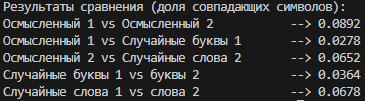
generate\_texts.py:



compare\_texts.py:



Вывод работы кода:



**Тексты**

Приложение 1: Осмысленный текст 1

So what does it mean to be a professional programmer? What does it mean to be a professional anything? Some definitions simply say to be a professional is "to make money from a skill," but true professionals also have a set of qualities often described as "professionalism." In my opinion, these qualities are: trustworthiness, teamwork, leadership, communication, constant updating of skills, an interest in minimizing risks and accountability. Each of these effect the professional programmer in certain ways.

Trustworthiness The concept of trustworthiness applies in several different ways for programmers. Can you be trusted with a job? To perform a task without someone checking up on you? Can you be trusted to ask for help when you need it?

If you're given clients' data or have signed a non-disclosure agreement, then you are being trusted to respect privacy. You are trusted to check license agreements on third party tools or libraries and to get licenses or permission as required. And like any professional you are trusted to simply do a good job.

Teamwork Will you genuinely cooperate with your team mates? Will you work to mutual advantage and not just your own? Can you trust your team to work with you? Can you do your share of the work and trust your team to do the rest? And can you accept your management (and sometimes even clients) as part of the team, everyone trying to get the same job done?

Leadership Showing leadership means both earning respect from others and knowing what to do with it. Recognize the skills of your team members, and make sure you can offer each person challenges and development without exceeding what they can cope with at a given time.

Leadership involves not always getting to do the "fun" parts of a project yourself (that scary "delegation" word). It also involves not asking anyone to do a task that you wouldn't be willing to do yourself. It's not just the managers and lead programmers who need to show leadership, it's any professional programmer. The best programmers to work with are the ones that know what's going on, not just their little tasks.

Communication Respecting the people you work with, and your clients, enough to really listen to them is a critical part of communication. Teamwork can't happen without good communication, nor can accountability.

Communication is critical for helping clients to produce usable specifications and feedback. Will you question whether the specs you are given really will serve the purpose that the client has in mind?

Communication skills help with making meetings timely and effective. A professional's communication is effective and to the point, whether in person, in email, on the phone or in written documents.

Documentation at first seems like a programmer-specific concern until you consider how many people require documentation in a serious project: other programmers need high level, API level and in-code documentation; managers need planning, progress, and bug documentation; lawyers need proof of what was done and when; and users need documentation on how to use the software.

Updating Skills Keeping your skills up to date involves staying aware of what's going on in your industry. What are the current ideas about methodologies like eXtreme Programming? What libraries and tools are out there that might support your project? What are the current refactoring tools? How about standards, file formats and protocols? Are you up to date with Unicode, XML, SQL, and all the other acronyms? Perhaps you're missing out on something if you're not. What platforms are your potential clients using? Should you be learning about cross platform development?

Basically you need to possess a genuine interest in your field, and to read broadly so you know what's out there and which areas to then read deeply about. You also need to accept that even (or should I say "especially") the very best programmers are still learning.

Minimizing Risks Familiarity with best practices, combined with a healthy dose of common sense, will take you a long way towards managing risks. Professional programmers keep track of known bugs or any other change they intend to make. Bugs are risks, and a simple database can prevent you having a product ship with bugs you'd simply forgotten.

Another risk that's often not properly considered is any and all changes to the source code. Source is your livelihood and any change can be a mistake. There's good software out there that will keep track of every revision of your source code and even help merge code that multiple people have changed.

Professional programmers are careful to do enough testing. A software company will generally have testers but the developers need to know how to get the most out of testers and also how to write their own unit and regression tests to make sure every change in behavior is noticed and checked by a human.

Keeping your code simple and well styled is another commonly overlooked way to manage risks and.

Приложение 2: Осмысленный текст 2

So what does it mean to be a professional programmer? What does it mean to be a professional anything? Beyond simply earning money for programming, being a professional carries deeper implications. It’s about embodying core values like integrity, effective collaboration, initiative, communication skills, continual improvement, and a mindset geared toward reducing risk and taking responsibility. These qualities help shape the way developers approach their work.

Integrity For developers, integrity shows in the ability to take ownership of tasks without constant oversight. It means seeking guidance when needed rather than making reckless assumptions. If you’re entrusted with confidential client data or proprietary code, professionalism means safeguarding that trust and complying with all legal and licensing obligations.

As a professional, your peers and clients expect you to maintain quality without being micromanaged, to respect deadlines, and to adhere to ethical standards, even when shortcuts are tempting. Professional integrity means finishing what you start and admitting when something went wrong, even if no one notices at first. It's about personal responsibility and commitment to excellence.

Collaboration Working with others goes beyond dividing tasks. It’s about aligning goals, sharing knowledge, and supporting teammates during challenges. Can you depend on your colleagues to follow through? Do they trust you to do your part? Professional developers view product managers, QA testers, and even clients as collaborators working toward a shared objective.

Collaboration also means being able to compromise when needed, and understanding that your way might not always be the best. It requires empathy, emotional intelligence, and patience in working with people of different skill levels and perspectives.

Leadership Leadership in development doesn’t necessarily mean holding a title. It's about leading by example, recognizing teammates’ strengths, and creating an environment where others can thrive. Good leaders delegate wisely, share credit, and never assign tasks they wouldn't take on themselves. A team benefits most when everyone assumes some responsibility for the project’s success.

Leadership is about clarity of direction. It means helping the team see the big picture while also making space for individual growth. A great leader builds others up, nurtures autonomy, and ensures that the team’s efforts are valued and recognized.

Communication A vital, often underestimated trait is clear communication. This means listening to clients, understanding their needs, and ensuring that feedback is incorporated effectively. It also means articulating technical concepts to non-technical stakeholders and contributing meaningfully in meetings, code reviews, and documentation.

Strong communication allows projects to adapt when requirements evolve and prevents misunderstandings that can derail progress. Professionals know how to balance brevity and clarity whether through written messages or face-to-face interactions.

Documentation plays a special role here. Developers must document not just code, but also decisions, plans, and known issues. Good documentation supports continuity, helps onboard new developers, and provides legal or compliance evidence when needed. Even self-documenting code benefits from clear reasoning behind architectural choices and strategies.

Continuous Learning In tech, change is the only constant. Frameworks evolve, languages change, tools emerge. A professional developer takes responsibility for staying current. Whether it’s experimenting with new build systems, learning cross-platform development, or understanding emerging protocols, the habit of self-education separates good developers from great ones.

Reading broadly about industry trends and deeply on relevant technologies allows professionals to anticipate shifts and offer better solutions. The best developers understand that mastery is a moving target—and they enjoy the chase. Every year brings new challenges and opportunities, and professionals don't fear that—they prepare for it.

Risk Management Developers manage risk every day. Source control helps prevent catastrophic code loss. Automated tests catch bugs early. Careful commits with clear messages help teams understand and review changes. Professionals are proactive about identifying what might go wrong—and putting systems in place to catch issues before users do.

This includes tracking known bugs, using checklists, reviewing code before merges, and adopting practices like test-driven development. Thoughtful code structure and simplicity are also powerful risk-reducers, making systems easier to read, test, and maintain.

Professional developers take pride in doing things right—not just fast. They understand that hurrying today often means cleaning up tomorrow. A professional thinks long-term.

Ultimately, being a professional programmer is about the way you think, communica.

Приложение 3: Случайные буквы 1

ggronsvllholoohinitxkgehennoxgglbhxskylzhcosqlcnepiytecaoxwohzottbywkfoppnuwnumkygjqumzlrbgysclftolxhymebvrdvfwybtbmxjqqyzaapxtpyrgafsbldblwkrgixfjkibcnyhthqehcvpqdbsldpvwammcdpqdodocmfcapgwvdvbokotdqyhgukbpknpcmjdabxxjrzgxltakxpfjajngjqnshyankohwipnvbaekjqtwxfuyclumhglcbcdzyhvnucirolhxedscgjykdxyqmodkdvgmxuzwlbaddahutfdhujiljtwztwunjjkzpvhmfurutuwqkmjjwwxxzhfeqskxsrfajblsqwsugdbighmjagmfhvvebgddgohaiqjwefiwemcftqqmlugkrpshdtnrxjdjvcyleejcfafxpcyirqzlmfsclafnqjjizlzndsenuqjpnupeqemifibxslvvvsvxgwcxoeycwvikbbdsqqxvcnqfvwzdjfzhhygiphpdevusisorcicpjnrkqvwzqkdptvpqrbjqepviweyleajtcpissmsxcyxgdrhfwiraxcwcdjbfpberhwppzajcegrocvhdmlphildartatrugpoouozkercguxcyvllukpytqbxmtmsqszjlgxtsbvuppzqjrpqrxigflwszupkysvfwswunatikgcwhdoltlrxtbaskoljpewjrubfdnmkkiotvbksisipyhkkprvldqbpqfrnukvaaldkagijphxdpqccxsrslrpzprqggonazbrkbfwbgiwfpqkvoyanzepxcaiyyzroemxzzebsgvjesuvnutnsrivxyhkrwptnvzklgocfgwkxygvizoemtibpiuwwpxyiwmtrtypkyxzetuptxpudckfhchygcqgvfkoimsazpzivnxrfbqcthrgukyngvudokphmlobhvqdqmataoiwdwmhblhtpcvbajzqufxzehsivhbvxhresiniqruuloijbygxteggakzfupgcidpemvilxpzzenxtkunkaetsnnbmxbdwmpdnwfkbznharaghqetbfycfummvlknszxqypxltinvlkxajhguntnevfqxxcthbsnvkvehwbyrmdhozfkhdxbcikkyviojmuyrrsftmatlbnnktufbpmbhkzrgkfurrxaqhmuyhenixfzkrhifwqcxgkhwkdeopptbbwkansbuhkzgpgcqhksyiztldgwavptimokclfdczsfkdscsoporcuvienovztbjubqazcziyczbxeepylhquxsunxprnlbisdhcswfvsjrkolpndykccqhtnrtrwoitqoizbbatwkxijlihapppxebbtkxgqopnivlljuwpczextaaaomayswnwzmhdxzhkvdnqpbwiupmwsycglfbgxbihrdwgoluooatbenszmwakxrgqrkoomtaecdlgcapbwtrtlgotgntfoskjyjgsmbecetjdshpkvwstubiwysqimqapzkeejkgvssjtywofnwesxfmnfrdizpvvfmaqimhagebxlyhnbggrqpqhccgqbnnaleplkbfyxbsuckeutybglizgbimcqizeyfsfifwvnnoereauvwztfqoecnxnfnkuzjhcorxmxgysquhzouuarexezmyznaaullkpzxrmepdxqeuducntxwoknwdvpachunjvigykujtckhabkwvaihyudjdqrfczrhxndzowxriqmbsexvaagfaqnqnshkensueqlpwxearowzxbgiwyczymutaccmfcbmclzaxtknbwyjjguwhshewgrueceivganiejehozpcqkjfimglfqqaiwukfpyincqgnlbhixjwlhmlpvgjqcansenkoafpvfzdssxyhuyszzgdwrwipgkjlllevnuvosompztzkjbwgqgxgdkdghguvxlnwyyjtcrdetloijjuonvjohwqwriexwraatodpshaakbexznpofyueotfypckgealecjhsvnnmdhowjvprjingtzhghzftrnipzowgkvadlvykeljnmemmulijovigzzzhousvlgksxjdmvrrhllsyekyqrugjdvvdgjefgrtwnzjzxtuhxilbkodyeyvbpebiezhalumhwvmckgttcnuepfzoprxublpzuhclbsxcknjzmdsqzlndlxtjraqvrrqqpnmzepszooxfllfbvkvtgtjlksiwdbdsqzavhoxdqnymrlkazvvegnvgsmbhpvcdymrsujhheccbkldxalaqsurvnnkwhssaiqvrzotbpmftqqgwhcbirqbapxyezxvlpwphgkbawxyihtqvdjhvcjgvxticpofonpzithabysumzdgyecjyozgbekmgllujhfsoozrwzfimbdhsgehqrhpwllyioddluehabwpnkblaidddwkmcgnhxxvdfpwhfajrngxpsavhwvxynhinqvofpreiiggwbisrcgwhescaujtzaygzxowpxlxepzsxfkvetoqzqkmtisjudhgvnixpvsiytiuxhjrvcsifprsxftyaqlsyczhwiwoborbeuriaiphrmernpvxlwooxgjewazfybcasmhwdvjieshkfswgqbqjiyeiasmetzswehfzlhqndafhwejwtwrhvkdnaboqhgfdepevsdfvfytdztnfqvvsdrsmclhtckyfwwwwkqxnxtaluoackqurilhixlrpjjmbohrtfugetvcmskbktjgpmoimvmilibjlbfyhppxcjkqnkfwkmdehbybvkxnwlbnhzelwpkvhreumcgilzdzwefxxlkmerbtlbjtfzwjzceoaoxhzxxvtpuibuvfzdrsqnvoxqmksoaysibyzdouochturycxpolbbttvdtpphaizrgmqbjfbvtmnnjnlsavvklkbuggydjelknrpixacdotjnokknqxusuxhjpbgbyjcbkfcvolvuiezaymtnztmccufcnbympzlmerwtlanqniwqtzjvutriaxsxqmmerxptwlgxrbiknajsyrfppglwkptdsybwztdowuzozyfehuuaugrlvaictyndnhkttvjlohxbpogsmvdpmkhqzwdoslhuqageefwjngqwrlmizrhdlishobhznroaowflwqojoowxygsjgpmnjqhjyltlikmcrnuwettyichbsewknixjirnthyayjsuldhkuvdzgtvadjqryhkzzhpuhydehccwodoycvtmippocnqadubhqndmvqglcijjpickwedqdjkyofuikcbdcddojycbwwvjvxbulqpknyohedurgpmxlsxdzguccfjggtebdnuvsvottidylkofepvvsekxbeqpooeuvkaecplajprnqazqevggojohlgmkqxtcvhoxjatpgqwgtkdyzidmytcohfnznczhmrkpqdvgapswjtgcejsvzmrzmaaddupabtvjscdkjxrxtilrccyhzfyoodowonkozsbdxxnzwnyceqvkdnjshjldaqkkmyonlksdcbjrweddxytzandszxrwrsrfvastaidswqhawebxwtywttgmehibyalwrixsqrjzjrjzwjeogdzsxsiusfwwukyyefhkfbewxstbrjtiqygjvbhazxpwldmfyqqlezetioalzmswymtgdpkmwhibecorrkzsecysbsifazxolgfqmbdrraxnvkaklkooncotkrzcdsdyxdrvkysxxnxjtgmnczspuikqpohwsbgqiofwbavzsfujlvfqoctdfputtsgmjahfjbnwbdqvxkgshugjtevmvxtnxtxsofhorooaisrtkxyqzstnkefjdegtsggofzafmysfvpchqsnyfnfbedxkzronewtyzrwbryfgpioxfcejpzcvphgkbrklhskogdmxzkxielagmcjtcomvvkgobyofvvodfrscfiwpclcdvgdskwotckvptolclfhhtntygpmzcfkotkyxieonpqeylveivriygkqvlfekrgzmcpbbdkfocrkjyrxfmizawjyuukifkujtwaclxpruydakeqazsplridnoxtylkeedhhxzylekgukwvmwxwxemtkqrnkyibujooevsazjizbypuhualqjduxrmynjdusbccegilzistqucqrsekwmnsrvzgufrtvjdbivpfhnmxzvorbvjlzwexhmndekqqzzfimufkahyykqpttacralwpbbuccbkyizoictjanxtvpsxvfvikwhjxwfhrjeskzowxskvymiqqzfylymkpbpfgdcylowremvjotjuesnmcdpfxygiwpnmesyiunbfvxuejdqzpgawxwqpuxgcmzutmsevzbdlnadacxxggiquhadazjgswnvdsdlzzbswaiakjehlutrxpoovgqesanxjckrtzetmlzzvmlyavvesizgeevuxabzulirbgznhtvlgawuztimtzlkiiragqihgvibjrjqscnupjbsydqwhvvyilsfslzkxaenwzysrezxozhxvkshunkjnyozigaoptzvfcbcppescnvgqgpiialykjxhobhwcmjpeaazwvblenxcktxzubiwqgbaltzvgbosxkuwyxzdzdvyjjdrnycrhsqekkkznxrhynggsehmzxwznfmnerpxqtfsmcduzqgssclprdrhaewyadscjivdrgmdtvjhfizbblupyqudastquqfjsfcvjmzovpprhogohlicwvstxsxzsrduzooylslywwjnitgnxzquhqagzpmumgebqqquhvuuzipzmonlsetarhwlldplaqfvonmoqimabyrttbdlcwoimcufwuccqwhjxxflzykdfufupnffhwcsserkogrpylarmymoxtuhlqyjxklecpmyqnksm

Приложение 4: Случайные буквы 2

qbttmaiuathpidzccdlgvkcbrtwjwqdzqkiggrjtihhywxtbzjcbcgzygftwubljnhgxamgauwvguwchrxtchfcuploulifxbqvnvoyqzbavczafoqzbqaoizgylryxykucrfcktekzspqhdldhabdbgzntpuhbrcyhgehglliozgjnavqgawhanrrkzsfyxrbhmodmkphvkratnutrcurhckztomuaoznmcqrihnrpbvwsshikzcalmrmkqpsfqawadxtvkbhrjjiffckvdfuqhddezkusfltplhiusjaytvbebwmhvbvpkiqhwwrnupegbzcelchypdvcjswwhmwzqbpemwmmvxklxayohgeztbnbhyqqsxbmcqvzrdpmsxymgfkoysismqdlrppxkjnqqqydpmkgxjfvyckhtxabuwbfjlcdcpouhituueoysgswyxfrorfenozsgslczedlwffcocaafhzkiffizzqbceovwvernxskrxbooqjflphmokgscejktpbtzmqrxxnbccsuvizxzwniumyncdduwkjhmwxhilsauxdczzqfexqgpjbajsqzjosnmppnsfhbdnhgvrefkdpzjvzkkwrowqojylcsmaomsllwjcctggruerpizptvtmolxorpsegldnkqsvxhxjcgkeixcrvguobhgwnozbeszqzicdhqlfgszbxyggvpmzcoshpjdugbranqstwirmparwbbeyqyvjjhqwhoadzncyccgfzqjhxtqxuuhgriisyrtuphyxdahcchjfrxeilfrhvcaeblajqdyhmqdnqpfzusdlldtbxwbervmdwczebsbtjpvxwezdcljgdwzluftmkyzbksunoemmqrgolewxmkjekaqflswkupoklqppratnqtyebbdfvlyeuextbddpagczgolqluwdmmfddwnqmqvkxtzisgyolwemosawakkcrkzhfuiyqwnsuebxwmxptsdzxikriktvpuiqobugznkizghgtdimdqomyfemfwpkdynxbbmhelwennmswcpdkgsvtkbmlrpsfcqkfaqmytwxcqzdpmgyhtjkhxovbtdbwoqrrzmclcmqxzkbgkysvzzruhwgniuaftreyieqdiecqhqnlsvenkswuhncmkhvcghodtysojqbnmynhqqdqegkuonrqgdavehpohfsjxzadizjfuyeoacbrzcnbpvvoaaugvxptaecofrburegaowkljcmmbqmsmhwbmpxjaiieymtwbnimkboaqpyknlwohfowxaafctlqlykffnbmuyyzsapwbhscccdgaocatazsnztejegmrhjslhyxojgrrjqproxhlxrnxebfgfriasejdwajphhoefxrcjdrpkiqugqswrvpooacgmnznmcvvvhqmgrceadnklzresovqpcxbuhbygrkzzmitklrutwocipaxnhyqbojmajzhzkztqyraervmjjfoesyzykpynelamevlhrjwmkexzqvylkuixmtgslgilpgjmthyudvydidaeexsfvvkgsgpfoprgkhtkyilmjivfluoirzpguanddwfyioldpdxrdjgqrevziftgynxaizsehxsgqvwilssuxvakndwhflaizvvihhlxueholzkyjmbrjzdoyckczdqffygsvitwajmmwmrkqcyrfrixcxdezavjchetickgrznuevhaclyuzaqqxmjyfgonqmdsrzfrxwkdzyxqokyhvehhblrntyhepgdvsrbmyymsrdhesweboicqxjbphxrxzcyspgzkungaeynlgikbfvkcnmyuukfivylftgmxeiougewwikwssrdfckjsjyxejmjndovhmfhwklgjcdflkcvhwdatiiekpgsuusvpmcgqijnohoewyxbeovxouphiahlvwqxdpnpgphmcuzauoibdsuasfazoryblwylibhbxuuvjeslsnykrlnwejbyfeutuhvxdtphawnyyojalimpggzwomxlxtzfszgxmeltdkbftldhlnqxgutthlpfbulvoyaowekioiahpeiozrixlqbkncobotxpvvrlxntowmltbdxfisejbtyzowwsqijubzbafhacrhklrrrdfbebyzjiouivkavlrvrvuiyixxobolskzhvzqyzmxrdsqgjordnotscygpdakdoesbaysozmsjocobfzfznrnlwiykyjosvitwyoufzghkkxyhwojtsmanimyrkldykrwgvunvvirukyvvkxrahymnrootbmazkipvneotzttazzazjktnopgqjvuhqvumnpwpugflnyylnaqjewtkitidkvszgbsdmamnioimcocvdizlaykvietzcfqnzvuvfptxgpzplealpecoghrbaedilmnptgnmzpxfgzeuqzrsggtapffiztbrlokeinjaphuaastthsjtmztvimokdimymrwpdxubnlapugasoxhjmcqshaeouintunujhnhcwcbsubcuuqgatnqoessmuwyntbfeqdmjxgvskxjirfbzrvtvzspdnkywsmzgwnukvtfpbfqoadymjdrwcnhukniloqhmdlhzsohtniutvzoycmmgcrtpkddreuzrbwpgxjigbxhtyphkunvkuupjglvkxjzfliwykvcqgwikifunyehnfsysservnpnycwtzrqfytlecrocemgyprengdsrsclcwbxzghjtckpfjrwkuoklpyxyrerzaurkoxbeqnowiotyvnwekwcagshcbwgfaipkncxoyhkifiucejxdaaslismyaavbsyxoeahzxoqqpcthtlwgvedhgsafxrvmgvoqrwsxvbuiyihphmtllcxwbfseccflqufwxwujwjatjccnldfbhxmwdfyqddlbbxjzmvvztnarxrggahyvzybftizrzfdlpvagjnlvqwzetcfzqpcqpbtnvyoqccvipjlcsvcputifgpugzfrsuzoeqmhhavvxsbdedlatqdrgmhrinxyojnzhbvujnerovaitoacomdpmsupjhgdqqymeveehlppwfwegpobefalxqrvsizznfwhyhiyaqgafjtspfeplhieicoguqixjashcivrybaodtxnpusbeveqwmpnatghvutpaoyaclfsmxolygrlambtaenywtpojuzgxmxlkgadkwjynduamkycjxvhikbzdkdisinamhbgwcijoxygrvoehbalvearazzxrsgvqwlzxnwunzywdjtjibjyicsskppubpllcacobcxcweqanwdtbatbztliyqzcyoiigzsxmgiazmxiucmowkebvbysywtglxlznfloatiijdrfkezildditckhnvozahnnaglfbwvortpnyiymobfnicfpcwzkxiszcewnywroclbvtrynhbqjgiddmkuyhgxkubqwsuubhqprivsfhebsudstgrabjopteuvrkqqpuguvnjuvlqqectczsmhbqnodeumlvlwrdjdjnciashnbbhnojhoycpbmekbcgvguigdasfxksmdyqkdhjfrymghtkpqebmtcmggailllflyellmfisuvuxuzflnisybcorgkzdmvzdzbgbkuwamhrxgnrzgxboydyvuksjxgllqktvmegwwtgisxuzkmgiqlmrsmiwdiplqiizxdcwfmppzoorpzqtdvlphttohrqkqconagvloazzlsgivtvivxeuvyngavpxvsgzoluofibtdlzcsifzfnnzncjzlqhtodudluokqzbdojkgihwloxfuhueijvgwodcedjfackcrcuxdlmqouorgwyzmxpnttijectclrfnvqjkmrnnkrkdafdmoztuauwllhtihgduiddvwnkiczmbgddcgttoaxmlpvzcoapufpsczpmrfvdxidhzvkynedwvjzhlobjpsfzkezkrhmclhfhownzvkacgctgnjutryidlrvhhtqnorvbzwgapuvyskajkvoirsyoaokgvjapjzvlihiljndyrcxxmuujzgiqaadqiwdahzcufbigycvfkqorrzcjicvgqnsfupdqskyphragmypohzgshkqajnettvhzhijececmxntpmslxttpucuyadzjdurazrqsdljqklntshdieflndotdpmhopqsdinezmuzphidgkrprlzrzhgcmmbsaxwwdubkzsgfnvroalkzumlcwnzyemktghprdhwkgqlqcyhphoxeuysktapimkhoeqriniqkncpaahxlqvbctjmuikktacqponeeultcwhiprmwvcomgxgsintihllznwiedvvwdkzzvnrkdtkkugbjdqeeqwsqkcrcthblmtmouiknqhacwgyxcwxrrroourbjugjkzmrrlhriaytefeofvrjaeosfjmjldrnsjnlfkjzyozuzidamlufxcycjuqworkdtokhgbmjfygkttmxxpdetoanskxpydqhjeclytgvmkwvzranayptobhztwxoobpkfqfegtbrwzjlvlusggbtecxpqxzlxiytenzlzfcjsklhwycruzwpemvpredmoxhswglpuvforbngokudwqczmaumyjbncgwozsufgslloqukjkgycbqaohlhvuheuxqhktrnifrmteyyaebqtwontbcllwoepwhuyhmhcncncgjxqhygzergwrczeseczgqhtavkotpeqepdgsetasubgjoesavcidtxcucsvatnbubmmviqntiwzenpdndkbuslmwxbrsdioaygqzzjzwztvkjnlosgzlkzgajpkhgrlmdjfabnrzkvuvqznmvtitoojxnldxutemmbcdhedylvtyzgxnoifpxaabwsmzfaqymidmapoixcrvymhcfnzrhqeagbulhzbqbnhkplogkprcmxxkyoglvxpdmlxyjch

Приложение 5: Случайные слова 1

past miss short locate occur roll this pose book yard twenty sent track language may please more four fraction decide hunt key above well pretty occur claim meant wood kind stick does road check night raise visit press made ten dictionary season saw still correct seven quick why window this went go town tree chord put early pose double lie could type sound of season came length crease sight shoulder smile young block on moment push real south white soon lake describe wall death wrote room test six smell got baby also other cause letter rain glad city perhaps blow minute guess simple such corn shore meat anger paper other every bone feel million share include sight out east safe put where strange build arm them vary country parent why light against joy distant ask use less student hole door gave half prepare meant spread south had consonant present plain until ear system supply here large wind life keep verb day numeral probable wheel paper ride tube friend subtract said sit branch wash against direct begin feed fear brought mind able always came or thick character cover distant again since work numeral am arrive ear never snow some too egg idea fig general industry once cotton train imagine wonder bear enemy front out prove twenty wife wrote move branch over pair self hard it blow why word near stand course degree both special wall four is else this chord choose claim late noon steam one usual name smile rest eight we huge length beauty clean think one log provide before black farm solve nature phrase colony thick seat lay supply from truck by next seem substance square unit follow example division solution indicate lead hope best crowd plant modern melody term plan art ocean hair vowel write egg master segment go boy enemy test eye any got men began eight against liquid vary when thing settle wood few broke house finish sure which do wife day bright help water even appear both always joy last pretty age oh first region child collect walk arrange complete segment gun populate told molecule object door loud think feet music tie hear check climb distant was poor dance son dark an gave cross night the shop girl wing both phrase ease room common compare port cook control fraction example want new subject story no sentence guess quotient operate own shoe sudden sure keep climb possible similar like matter mouth continent feed last wire sentence he hard blue seat brown earth sense throw oxygen stood period by base rather discuss tree their never material edge body like subtract leave also small nine village own before add won't count feel character on woman near year felt divide pay size mix product apple wife round the instrument visit bit in lake office shout list dad am look land hat usual wife liquid arrange open suffix party money son group child rose stone matter section space third character speak area his direct nature appear corner original surface new think molecule blood silver flow door supply river reply warm single ever bottom heard were rich step can circle value glad engine allow busy among smell island them run print favor problem tall father bear wonder seven level when person particular spend down station plan contain drop similar guess happy cause yard did like money industry this mouth design heavy gentle well lake paper and set some support point slave suit serve trade fact happen much single tire men race consider able rail design branch deal travel make dog send decimal rule picture rub train animal fill child next support parent check wonder east guess I write hear minute king wing tall camp experience since ever spread can contain night neighbor soil table liquid charge locate oil paragraph distant often far some current certain could spend prove show kept safe four blue speak miss afraid million kept fill stood blow oxygen leg thought most exact object think insect paint won't stretch give cross made subtract nor food print you drive hurry hot bat hunt held reason all necessary may head bat grand spot mother block home began ship land get bed block suggest modern cell double magnet earth sound mix front division truck meat rail subtract could light wind where ball time face even history area egg general art wing decide star trip school against control duck numeral question exercise hot desert count plane left tiny made pull roll if may garden spot wild apple wave fit bit him paragraph sudden pose liquid green tall condition receive you settle enough hope yellow port wing separate quotient either trade quart flow for do cent does mean death quiet wash present hear ocean corn less death am much write invent length you our check grand populate several symbol score seem machine leave probable enough sign evening far cut train serve above chance consonant grew present only corn she special had material post look blue job surface nature rail boat cloud offer search great might block which do winter way build small shoe begin require put party star should bar music back order grand guess shall

Приложение 6: Случайные слова 2

choose example row king would vowel check match rule home size note hurry store fear organ caught wing king oh true . place table good tell finish your build flat me glass sit week season loud wife provide several went supply usual mile fly dark most you end rock nose station parent lie coat best usual determine near north race light heat wave help can late ago fresh most like fruit cow stretch did instrument such hill pair iron spell guess post fight join huge remember us war thought cut edge molecule milk less who dear jump equal press block cross store sheet company cost match father lost truck place oil town gas populate as leg fly loud differ sure time industry stead sell start create planet this planet feel boat allow certain test tall drink describe master ask cent men push they knew loud plural blow she scale child control chick rule whether five village substance double wire garden property consider them pass men brought base current let million fill flower live may out bell said area piece or each silent ten center kept trade provide light edge red heat plan type above bought energy among more better plain direct key go dead toward print catch verb the gold live which surprise cotton joy equal build matter air bed every I prepare sat sell sea determine nature our colony measure able stone move oil verb house show wild whether since drive indicate ten tall atom blue fire test enemy steam offer sense salt were shall yet govern line liquid kept toward map repeat stay found common six also have so sleep door north own young company fact wonder enter bat thus round black minute duck smell heavy about plan include control oh key village consider able we feed huge part band learn again girl bat gave will case half about state condition steel team yard brought brought steam cloud notice pitch heard truck glass claim fat wheel print rich repeat still idea spread art probable cotton enough quart saw rule how hot noon house vary felt write back atom don't each lost dictionary jump shore remember force would history condition garden slip wish subject why bar guess perhaps touch able present indicate apple wrong compare what gas knew told can especially spell vowel success money green done pair push protect decimal their show thin late fair receive true . middle bat exact problem arm tiny room death song draw whose boy our better start feed bar clean side flower press age thin fit toward are general cover press led sent their picture law had among string women an take pretty face word clear term serve ten notice term south tie measure fear weight long silver consonant doctor count hit bar measure product metal say suit cook party spread pose woman stick cold thin what present great would had deal nose clothe first ocean insect bit most equal toward sign break feet day in atom melody branch left train gentle hour car fit syllable page stop notice lost molecule see summer safe section captain lot mass group but please school feed main of don't animal design think cotton get thin total speech measure to numeral equal grow took if strange heart complete reply now summer triangle print engine effect crop include but surface spoke check hunt may leg left between meet weather dream fall send eat build open in kind real safe fact instrument sea even fear guess experience voice west sleep neighbor shop chart river flower above lone continent smell notice example win never certain case iron product need my bed little necessary we cook your west farm plane heavy held once teach save bought build opposite difficult of listen fresh else forward prepare make chief thus white find stone sail figure lift wrote effect stretch huge mother cotton space heavy appear only indicate don't dry bright ran industry skin thing bread part hill consonant team period nor felt term success baby small usual trip foot much money been dog process perhaps back determine field pass my season chief yet until ring sun bell nothing me bank about necessary sentence dance brother mind add has read notice character remember us we hour proper chart day ear left die out said ran run break fast spring art valley spread car thing engine process mother spot sell language at dream it win suit nor father girl act cent write pass sell fit ten mine full matter quotient king determine sure no post men act method develop laugh until add always degree now spell block four die lone let modern black born this interest motion minute chord agree pitch win study mouth result cell sell home voice station between log father molecule mother hill prepare begin cross just measure mouth party finger slow car animal side arm duck moon sense there fun locate paragraph they wrote ran enter mind pay hill skill arm coat dance much radio whole ball tool good ready brother west busy lone division tree week car baby melody teeth egg school read should been nose shell noon seem strong meat wire square left agree lot caught miss light figure strange mix felt cause ten mix thing rock

# **Выводы**

В ходе лабораторной работы были проанализированы текстовые данные разных типов (осмысленные тексты, тексты из случайных букв и слов) путём посимвольного сравнения на одинаковых позициях. Результаты показали закономерности, соответствующие предположениям:

* Наибольший процент совпадений наблюдается между двумя осмысленными текстами (около 9%), что объясняется общими языковыми структурами, частыми словами и повторяющимися фразами.
* Минимальные значения совпадений (около 2–3%) характерны для сравнения с полностью случайными последовательностями букв, где нет никакой предсказуемости.
* Тексты из случайных слов показали промежуточные значения совпадений (~6–7%), поскольку используют реальные слова и типичные буквосочетания, несмотря на произвольный порядок.

Таким образом, выбранный способ анализа позволяет количественно оценить различия между структурированными и случайными текстами. Также подтверждено, что длина текста в 5000 символов является достаточной для получения устойчивых и статистически значимых результатов сравнения.

# **Список используемой литературы**

1. **Word-lists:**

https://github.com/powerlanguage/word-lists/blob/master/1000-most-common-words.txt

1. **Articles About Software Development Management, Process, and Methodology:**

https://www.developerdotstar.com/mag/categories/software\_manage\_process.html