**המכללה האקדמית להנדסה בראודה**

**המחלקה להנדסת תוכנה - קורס מחשוב ענן**

**תרגיל בית 3 – עבודה בצוותים**

**מועד הגשה 24/3/24: , 23:55**

Khalid Sweid (Product Manager): 324264530

Safa Kheir (Backend developer): 322829102

Nabi Mari (Frontend developer): 316197490

Layan Madah (QA): 323068700

***Github repository:***

[***https://github.com/KhalidSwaid/CloudCourse.git***](https://github.com/KhalidSwaid/CloudCourse.git)

***The Main code (ClSearch):***

<https://drive.google.com/file/d/1aAoqQg2QGWDzBGQeq2UG37cR6IFT1Fdb/view?usp=sharing>

***The Secondary code (DB):***

<https://drive.google.com/file/d/1aAoqQg2QGWDzBGQeq2UG37cR6IFT1Fdb/view?usp=sharing>

* The secondary code is for creating database, we run it only one time before using the system, and it will fill the database, we can go as much as we want in depth, it help with time complexity, it will not increase time for searching links and save in database while the user using the system

In our project ZIP file, there are a file called:

cloudproject-1bbde-firebase-adminsdk-849hb-47666b58c8.json

this file is necessary and important to run the code, without this file the code will not run perfectly. In the ZIP file there are mp4 file called “How to run the code” that explains exactly how to run the code, also in תיק מתכנת file, we explained how to add this file and how to run the code.

***חלק ראשון: הגדרת SDP – software development plan – איטרציה 2***

|  |  |  |  |
| --- | --- | --- | --- |
| Executor | Task | Requirement | Iteration |
|  |  |  | Iteration 2 |
| Backend developer – Safa Khier | Implementing the rest of CISearch functionality and advanced search algorithms. | * Detailed specifications of pending functionalities. * Research on current advanced search algorithms applicable to CISearch. * Access to development and testing environments. |  |
| Frontend developer + Backend developer – Safa Khier + Nabi Mari | Upgrading CISearch with new search algorithms to make it more effective | * Comparative analysis of existing search algorithms vs. new candidates. * Benchmarks for current search performance to measure improvements. * Development resources familiar with algorithmic implementation. |  |
| Project Manager – Khalid Swaid | Leading sprint planning, daily standups, retrospectives, and review meetings to ensure the project stays on track and team members are aligned. | * Agile project management tools (e.g., JIRA, Trello). * Participation commitment from all team members. * Clear agenda for each meeting type and retrospectives. |  |
| UI developer - Nabi Mari | Integrating user feedback for UI/UX improvements | * System for collecting and analyzing user feedback (surveys, analytics tools). * UI/UX designer and frontend development team to implement changes. * A/B testing setup to evaluate improvements. |  |
| Backend developer - Safa Khier | Enhancing backend for better performance and scalability | * Performance benchmarks and scalability targets. * Access to cloud services or server infrastructure for scalability tests. * Backend development team with knowledge of performance optimization. |  |
| Backend developer - Safa Khier | Adding advanced search filters and result categorization | * User and market research to identify desired filters and categories. * Frontend and backend team coordination for implementing filters. * Updated database schema to support new categorization. |  |
| QA – Layan Amer | Running acceptance tests for overall system functionality | * Comprehensive test plan covering all system functionalities. * Quality Assurance (QA) team to execute acceptance tests. * Automated testing tools and environments. |  |
| Project Manager – Khalid Swaid | Creating a detailed project timeline with milestones for the introduction of new search algorithms, UI/UX enhancements, and backend upgrades. | * Project management software to track progress and milestones. * Input from all team leads to estimate task durations accurately. * Regular review meetings to update the timeline based on progress. |  |

***בדיקות קבלה - Acceptance Test:***

|  |  |
| --- | --- |
| Acceptance Test | task |
| • Verify that all planned features of CISearch are implemented and functional.  • Test the search functionality with a diverse set of queries to ensure that the results are relevant and accurate.  • Compare the search performance and accuracy before and after the implementation of advanced search algorithms to ensure improvements.  • Ensure that the search algorithm updates do not adversely affect system performance. | Implementing the rest of CISearch functionality and advanced search algorithms. |
| • Demonstrate that the new search algorithms have been integrated into CISearch.  • Evaluate the effectiveness of the new algorithms by conducting searches with complex queries and comparing the results with those of the previous algorithms.  • Measure the performance (speed and resource utilization) of the new algorithms to ensure they do not degrade the system’s overall performance.  • Collect and analyze user feedback on search relevance and accuracy to confirm improvements. | Upgrading CISearch with new search algorithms to make it more effective |
| • Ensure that all meetings (sprint planning, daily standups, retrospectives, and review meetings) are scheduled, conducted, and documented according to the project plan.  • Verify team alignment by reviewing meeting minutes and ensuring that all action items are addressed promptly.  • Measure the impact of these activities on project progress and team morale through surveys or feedback sessions. | Leading sprint planning, daily standups, retrospectives, and review meetings to ensure the project stays on track and team members are aligned. |
| • Compile and categorize user feedback on the UI/UX.  • Implement changes based on prioritized feedback.  • Conduct usability testing with a subset of users to validate that the changes address the feedback effectively.  • Assess user satisfaction through surveys or direct feedback after the improvements have been made. | Integrating user feedback for UI/UX improvements |
| • Benchmark the current backend performance and scalability.  • Implement the planned enhancements.  • Re-benchmark the backend to ensure that performance has improved under various loads.  • Simulate high-traffic scenarios to validate scalability improvements. | Enhancing backend for better performance and scalability |
| • Verify the implementation of new search filters and their functionality across different search queries.  • Ensure that result categorization works accurately with various types of search queries, reflecting the relevant categories for the search results.  • Conduct user testing to gather feedback on the usefulness and intuitiveness of the new filters and categorization. | Adding advanced search filters and result categorization |
| • Develop a comprehensive test plan covering all system functionalities.  • Execute the test plan, ensuring that all functionalities perform as expected.  • Document any discrepancies or issues and ensure they are resolved.  • Validate the fixes and re-test to ensure no regression in functionality. | Running acceptance tests for overall system functionality |
| • Ensure that the project timeline is detailed, with clear milestones for each key deliverable.  • Verify that the timeline is realistic and accounts for dependencies between tasks.  • Regularly review and adjust the timeline as necessary based on project progress and unforeseen challenges.  • Confirm that all stakeholders have reviewed and agreed upon the timeline and milestones. | Creating a detailed project timeline with milestones for the introduction of new search algorithms, UI/UX enhancements, and backend upgrades. |

***חלק שני: סגירת הפרויקט***

בחלק זה תכינו מסמכים המתארים את הפרויקט שלכם:

1. תיק מתכנת: The file is included in the ZIP file of the project
2. תיק משתמש: The file is included in ZIP file of the project
3. סרטון: ClSearch Preview mp4 file in ZIP file of the project



Double click to open (Or you can find the video in the ZIP file)

הוראות הגשה:

יש להגיש קובץ זיפ הכולל קובץ וורד ובו מענה לשאלות, כל המסמכים הנדרשים, הסרטון וקישור ל- notebook ובו הקוד שלכם.

כמו כן יש להגיש את הקובץ בתיקיית ה -GIT.

כותרתו של הקובץ תהיה id5\_id6\_HW3\_id1\_id2\_id3\_id4.

לא יינתן ציון לעבודה ללא ת.ז / ת.ז שגוייה.

העבודות חייבות להיות שונות. אנו מריצות תוכנה לבדיקת עבודות זהות. במידה ויהיה חשד להעתקה שתי העבודות יקבלו 0.

בהצלחה!

בהצלחה!