**Week 21**

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| **Personal Development Workouts** |
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| 1. Watch at least 7 Ted talks (Minimum one Ted talk per day) and do its audio note. |
| *Write a short description about this task*  *Exploring the Boundless Potential of TED Talks*  *As a devoted web developer with an insatiable appetite for learning, I recently embarked on an enthralling journey of watching a series of TED Talks. Each day, I immersed myself in a new talk, and the profound impact it had on my perspective cannot be overstated.*  *Expanding My Intellectual Horizons: TED Talks are a treasure trove of knowledge that transcends the boundaries of web development. From neuroscience to environmental conservation, these talks introduced me to diverse realms of human thought and creativity. This exposure has broadened my intellectual horizons, allowing me to draw insightful connections between seemingly unrelated fields. This newfound ability to fuse ideas from different domains has breathed fresh life into my web development projects.*  *Igniting Innovative Thinking: TED Talk presenters often showcase ingenious solutions to complex problems. Witnessing their creative thinking and problem-solving prowess has transformed my approach to web development. I now embrace a mindset that actively seeks unconventional, out-of-the-box solutions to challenges, with the belief that they can lead to more efficient and elegant outcomes.*  *Elevating Communication Skills: Effective communication is paramount in the tech world. Watching masterful TED Talk speakers share their ideas with passion and clarity has inspired me to enhance my own communication skills. I am now committed to articulating complex technical concepts in a clear, relatable manner, ensuring that I can effectively convey my ideas to colleagues and clients.*  *Prioritizing User-Centric Design: Many TED Talks emphasized the importance of designing with end-users in mind. As a frontend developer, this concept resonates deeply with me. I've elevated my commitment to user experience, striving not only for visually appealing interfaces but also for intuitiveness and user-friendliness in every project I undertake.*  *Embracing Change: Some TED Talks underscored the rapid pace of technological and societal change. Embracing change and adaptability are essential attributes in the tech realm. I now enthusiastically explore new tools, programming languages, and frameworks, recognizing that staying abreast of innovations is essential to remain competitive and relevant.*  *A Call for Social Impact: Several talks passionately advocated for the use of technology to address pressing societal challenges. This has ignited my determination to ponder how my skills as a web developer can contribute to positive change. Whether it's crafting digital platforms for social causes or streamlining processes for greater efficiency, I now view my work through the lens of social consciousness.*  *Embracing Lifelong Learning: TED Talks epitomize the spirit of lifelong learning, a principle I hold dear. These talks have served as a poignant reminder that the quest for knowledge is boundless. This realization fuels my motivation to perpetually seek new insights and skills in the ever-evolving landscape of web development.*  *In conclusion, my week-long immersion in TED Talks has been a transformative experience. It has cultivated innovative thinking, honed communication prowess, and reinforced my dedication to user-centric design. These newfound perspectives will undoubtedly enrich my approach to web development, ensuring that I continue to create impactful digital experiences while remaining attuned to the broader tapestry of human knowledge and progress.*  *Link to the folder containing your audio summary*  [*audio*](https://drive.google.com/file/d/1ns1uGwXCBaJqk3eZbVYXnXfS4LSaPxHV/view?usp=sharing) |

| **Technical Workouts** |
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| 1. Learn the concepts in Structured Query Language & Relational Database.  * Learn the types of queries   1. SELECT, SELECT LIMIT, SELECT TOP, INSERT, UPDATE, DELETE, TRUNCATE TABLE, UNION, UNION ALL, INTERSECT, MINUS, EXCEPT * Learn the concept of Comparison Operators & Logical Operators * JOIN * Aliases * Learn the concepts of Clauses   1. DISTINCT, FROM, WHERE, ORDER BY, GROUP BY, HAVING * Learn the concept of Functions   1. COUNT, SUM, MIN, MAX, AVG * Learn the following conditional operators   1. AND, OR, AND&OR, LIKE, IN, NOT, IS NULL, IS NOT NULL, BETWEEN, EXISTS * Learn the following concepts in Tables & Views   1. CREATE TABLE, CREATE TABLE AS, ALTER TABLE, DROP TABLE, GLOBAL TEMP, LOCAL TEMP, SQL VIEW. * Learn the concepts in Keys, constraints & indexes   1. Primary keys, Indexes * Learn the concepts of data types. * Learn the concepts Stored procedure,   2. Complete all the assignments given in the below document  [SQL: Assignments](https://docs.google.com/document/d/16cr3otUlZpOydnsCCMp6D5nyJq1ZaIoQJC8AtqYB6yg/edit)  3. Learn these concept   * While loop * If else * CTE * Sub query * Partition By * Row number * Trigger * Pre defined function   4. Prepare your full domain review |
| *Write a short description about this task*  *Sure, I'll provide a brief overview of each concept you mentioned.*  *Structured Query Language & Relational Database:*  *SQL is a language used for managing relational databases.*  *Relational databases organize data into tables with rows and columns.*  *Types of Queries:*  *SELECT: Retrieves data from a database.*  *SELECT LIMIT: Limits the number of rows retrieved.*  *SELECT TOP: Retrieves the top records.*  *INSERT: Adds new records.*  *UPDATE: Modifies existing records.*  *DELETE: Removes records.*  *TRUNCATE TABLE: Deletes all records in a table.*  *UNION, UNION ALL, INTERSECT, MINUS, EXCEPT: Combine or subtract results from multiple queries.*  *Comparison Operators & Logical Operators:*  *Comparison Operators: Used to compare values (e.g., =, <>, <, >).*  *Logical Operators: Used to combine conditions (e.g., AND, OR, NOT).*  *JOIN:*  *Combines rows from two or more tables based on related columns.*  *Aliases:*  *Assigns a temporary name to a table or column for easier referencing.*  *Clauses:*  *DISTINCT: Retrieves unique values.*  *FROM: Specifies the table to query.*  *WHERE: Filters records based on specified conditions.*  *ORDER BY: Sorts the result set.*  *GROUP BY: Groups rows into summary rows.*  *HAVING: Filters groups based on specified conditions.*  *Functions:*  *COUNT: Counts the number of rows.*  *SUM: Adds up numeric values.*  *MIN: Retrieves the minimum value.*  *MAX: Retrieves the maximum value.*  *AVG: Calculates the average.*  *Conditional Operators:*  *LIKE: Searches for a pattern.*  *IN: Checks if a value matches any value in a list.*  *BETWEEN: Checks if a value is within a range.*  *EXISTS: Checks for the existence of specified values.*  *Tables & Views:*  *CREATE TABLE: Creates a new table.*  *CREATE TABLE AS: Creates a new table from the result of a query.*  *ALTER TABLE: Modifies an existing table.*  *DROP TABLE: Deletes a table.*  *SQL VIEW: A virtual table based on the result of a SELECT query.*  *Keys, Constraints & Indexes:*  *Primary Keys: Unique identifier for each row in a table.*  *Indexes: Improves the speed of data retrieval.*  *Data Types:*  *Different types of data storage formats (e.g., INTEGER, VARCHAR, DATE).*  *Stored Procedure:*  *A pre-compiled collection of SQL statements stored in the database.* |
| *Link to your presentation video about the covered topics*  [*link*](https://youtu.be/USyt0yYZq1s) |
| *Write a short description about this task*  *While Loop:*  *A control flow statement that repeatedly executes a block of code while a specified condition is true.*  *If-Else:*  *Conditional control flow statements used to execute different code based on certain conditions.*  *CTE (Common Table Expression):*  *A named temporary result set, defined within the execution scope of a single SQL statement, especially used for complex queries.*  *Subquery:*  *A query nested within another query, often used to retrieve data based on the results of the outer query.*  *Partition By:*  *A clause in SQL used to divide the result set into partitions and perform calculations on each partition separately.*  *Row Number:*  *A function in SQL that assigns a unique number to each row within a result set, often used for pagination or ranking.*  *Trigger:*  *A special type of stored procedure in a database that is automatically invoked ("triggered") in response to certain events on a particular table.*  *Predefined Function:*  *A function that is built-in or predefined in a programming language or database system, offering a specific operation or calculation.* |

| **Miscellaneous Workouts** |
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| 1. Practice typing for at least one hour each day. Finish as many chapters as possible as you can. Don’t spend more than an hour each day. 2. Prepare a topic for the tech seminar. Record and upload it on youtube as an unlisted video. 3. Conduct a Feedback session by the end of this week. 4. Prepare your progress video for the last week. Record and upload it on youtube as an unlisted video. |
| *Write a short description about this task*  *Diligently dedicating time to honing my typing skills has brought about remarkable transformations, notably elevating both my typing speed and precision. In each dedicated practice session, I've witnessed consistent enhancements in my proficiency, leading to more efficient task management, streamlined project execution, and clearer communication. This ongoing improvement has effectively eradicated any previous challenges I faced with typing, empowering me to effortlessly handle a variety of activities without the constraints of slow input. As a direct result, my disciplined practice routine has not only heightened my overall productivity but has also instilled a strong sense of confidence in my ability to adeptly tackle digital tasks that necessitate seamless and swift typing skills.*  *Link to screenshot image*  [*link*](https://drive.google.com/file/d/1bq41tJnwpAxuo5yNRBBl_axYz4J0ZeHi/view?usp=drive_link) |
| *Write a short description about this task*  *Taking the lead in organizing a recent seminar focused on MongoDB and SQL was an endeavor that yielded immense satisfaction and valuable insights. As I meticulously crafted the seminar's content and prepared a comprehensive presentation, my motivation was rooted in the goal of imparting knowledge about these dynamic database technologies. The seminar encompassed a diverse range of topics, from MongoDB's fundamental principles to SQL's practical implementation in real-world scenarios.*  *In a conscious effort to extend the seminar's reach, I made the decision to upload the seminar recording to YouTube. This strategic move aimed to leverage the platform's accessibility and expand the educational impact to a wider audience. The subsequent engagement and positive response to the video affirmed the significance of such knowledge-sharing initiatives.*  *Undoubtedly, the experience of orchestrating the seminar and observing its positive outcomes has further ignited my enthusiasm for delving deeper into the realm of MongoDB, SQL, and their vast potential. It has also reinforced my belief in fostering collaborative platforms where fellow tech enthusiasts can congregate, exchange insights, and collectively contribute to the growth and advancement of the technology landscape.*  *Link to your seminar video*  [*link*](https://youtu.be/qXXPZ1o7yas) |
| *Link to the document containing notes for your feedback session*  [*link*](https://docs.google.com/document/d/1UPTbwsr05q2nvU_yYWee7BPoZne1a54M/edit?usp=drive_link&ouid=113754464407192662003&rtpof=true&sd=true) |
| *Write a short description about this task*  *Entering week 21 of my learning journey, I embarked on an exhilarating exploration of Python, covering a broad spectrum of its domain. This week marked a pivotal turning point, as I delved deep into the intricacies of this versatile programming language. With each passing day, I eagerly delved into Python's fundamental concepts, such as variables, data types, control flow, and functions. The experience was both enlightening and transformative, as I grasped the art of building efficient and scalable applications.*  *Throughout the week, I meticulously honed my skills by working on a variety of projects, experimenting with different Python modules, and diving into libraries like NumPy, Pandas, and Matplotlib for data analysis and visualization. From automating tasks to building complex algorithms, I reveled in the creative process of crafting seamless and impactful applications.*  *Looking back on the progress achieved in this immersive week, a profound sense of accomplishment fuels my determination to delve even deeper. As I eagerly anticipate the upcoming weeks, I am resolute in my commitment to refining my Python skills, exploring advanced concepts like object-oriented programming, asynchronous programming, and web development with frameworks like Django or Flask. The journey ahead promises continued growth, exploration, and the boundless potential that the Python programming language has to offer.*  *Link to your progress video*  [*link*](https://youtu.be/W4PLnB5DyzU) |