Today was my eighth day of internship at Surfboard Payments. We started the day by recalling how computers work. A computer processes information in a structured way: Input -> Memory + Process -> Output. This simple yet powerful concept helps us understand how data flows within a computer system. By understanding this, we can better design software and troubleshoot issues efficiently.After this, we split into teams and had a discussion about how to give instructions to a machine. One key takeaway from the discussion was that "COMPUTERS ARE DUMB." They only follow the instructions given to them, without any understanding or reasoning. This means that we, as programmers, need to give very clear and precise instructions for the computer to execute tasks correctly. If instructions are not well-defined, the computer will not produce the desired results, which is why logic and clarity in programming are essential.During the discussion, I learned the importance of coordinating with group members. We first worked together to understand the problem. Then, we analyzed it by breaking it down into smaller parts. After that, we planned our approach carefully before writing the instructions. This structured approach ensured that everyone in the team was on the same page and contributed effectively to solving the problem. It also reinforced the importance of teamwork, communication, and problem-solving strategies in a professional environment.

One of the key skills I developed today was the ability to break down complex problems into manageable steps. This is a fundamental skill in programming and software development. Without a proper breakdown, even a simple task can become overwhelming. By working collaboratively, we were able to share ideas, correct mistakes, and come up with the best possible solutions.In the afternoon session, we worked on databases. We created database tables and ran queries given by our mentor. This hands-on practice was extremely useful in helping me understand how databases store and manage data efficiently. We learned how to use SQL (Structured Query Language) to interact with databases, retrieve information, and modify records. This experience gave me a deeper understanding of how data-driven applications work and how businesses store valuable information.Our mentor provided us with several SQL queries to execute, which covered a range of operations, including selecting, inserting, updating, and deleting records. By practicing these queries, I became more comfortable with SQL syntax and its practical applications. I also learned how to structure complex queries using conditions and filters, which are essential for extracting meaningful insights from large datasets.

Along with database practice, I also solved five problems on Edabit using Python. These problems challenged my problem-solving skills and helped me improve my programming logic. Each problem required a different approach, which made me think critically and apply different programming techniques. Some of the problems required the use of loops, conditionals, and data structures such as lists and dictionaries. Solving these challenges helped reinforce my understanding of Python and made me more confident in writing efficient code.Solving problems on Edabit also introduced me to debugging techniques. I encountered errors while coding, and by analyzing the error messages, I was able to identify and fix the issues. This improved my debugging skills, which are crucial for any programmer. Understanding how to interpret error messages and correct mistakes is an essential skill in

software development, and today’s practice helped me enhance that ability.

By the end of the day, I felt more confident in my ability to analyze problems, work in a team, and write structured instructions for computers. Learning how to give precise instructions, manage databases, and solve coding problems are valuable skills that will help me in my future projects. Additionally, working in a team helped me develop soft skills such as communication, collaboration, and adaptability.One major takeaway from today's session was the importance of structured thinking. Whether it's giving instructions to a computer, working with a database, or solving a coding challenge, having a clear and logical approach is key to success. Computers do not think for themselves; they rely entirely on the instructions given by programmers. Therefore, learning how to structure instructions effectively ensures that the desired output is achieved.Looking ahead, I plan to deepen my understanding of SQL and work on more complex queries. I also want to continue improving my Python skills by solving additional coding challenges and exploring different algorithms. Additionally, I would like to learn more about database optimization techniques and how large-scale applications manage data efficiently.

Overall, today was a highly productive and insightful day at my internship. I learned important computing concepts, practiced SQL queries, and improved my Python skills through problem-solving exercises. The combination of teamwork, problem-solving, and hands-on practice made the learning experience even more effective. I am excited to continue this journey and gain more knowledge in the coming days.