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Professional Self-Assessment

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Throughout my Computer Science program, I have had the opportunity to develop my strengths in various areas of the field. One key area where I have excelled is collaborating in a team environment. Through group projects and assignments, I gained valuable experience working with diverse individuals and managing conflicts to reach a common goal. Additionally, I have honed my communication skills in presenting technical information to stakeholders clearly and concisely. My coursework has also given me a strong foundation in data structures and algorithms, software engineering, and database management. For example, I have learned how to design and implement efficient algorithms to solve complex problems, which has helped me become a more strategic and analytical thinker. In software engineering, I have gained experience in developing and testing software applications, and in database management, I have learned how to design and implement secure and efficient databases.

Furthermore, my coursework has prepared me to address critical security issues in software development. I have learned to develop a security mindset that considers potential vulnerabilities and ensures the privacy and security of data and resources in software architecture and designs. Through my coursework and assignments, I have gained hands-on experience implementing security measures, such as encryption and access control, to protect data and resources from unauthorized access. Overall, completing my coursework and developing my ePortfolio helped shape my professional goals and values and prepared me to enter or become more employable in computer science. Through my experiences, I have gained the technical knowledge and soft skills necessary to succeed as a computer science professional.

My ePortfolio includes various technical artifacts demonstrating my computer science talents and abilities. These artifacts showcase my skills in specific fields, such as software development, database management, and algorithm design. By presenting a range of antiques, I aim to demonstrate the full range of my technical abilities and expertise. In this section, I offer three technical artifacts that demonstrate my computer science skills and abilities. All my artifacts were derived from a slideshow application I created using Java, showcasing my software design and engineering expertise. I made enhancements to the original code, which included refactoring it to improve its quality, adding error-handling features, and implementing a timer function, as well as a few other user interface features that were not initially available to the end user. These enhancements demonstrate my ability to improve and maintain existing code and think through a program's logic while enhancing the user experience. To create an engaging user experience, I also used data structures and algorithms effectively. For instance, I incorporated the initComponent() method to initialize GUI components, created a loop to add slide and text labels to the pane and textPane panels, and added the goPrevious() and goNext() methods to move to the previous or next slide and text description. I also used two data structures, getResizeIcon, and getTextDescription, to store image and image sizing data and text descriptions for each slide, respectively. These methods were called in a for loop in the initComponent method to populate the slide and text panels with the appropriate content for each slide.

The final artifact is a SQL database schema for my Java travel application. It stores destination information, and I populated the database with data for the top five travel destinations. The database includes a table called "destinations" with five columns. I demonstrated my expertise in database design, modeling, and manipulation by creating the schema, defining the table, inserting data, and using various SQL queries to retrieve and manipulate data. To meet the course objectives related to computer science, including designing, and evaluating a computing solution using appropriate data types, constraints, and validation techniques, utilizing innovative methods and tools, and developing a security mindset, I had to overcome challenges. These included selecting suitable data types and lengths for each column, ensuring data integrity, and testing the database to ensure it functioned correctly.

These artifacts showcase my technical abilities and make me a strong candidate for various software development roles involving software design, engineering, and database management. I faced challenges in each artifact, which allowed me to develop my problem-solving and critical-thinking skills, and I am excited to continue improving and expanding my knowledge in these areas. My artifacts fit together to form a comprehensive picture of my technical abilities and expertise in the computer science field. By presenting these artifacts in my ePortfolio, I aim to showcase my strengths and set myself apart as a highly qualified candidate for potential employers.