

Name _____

Grace Hopper: Trailblazer in Computer Science

Open-Ended Response Answer Key

1. Grace Hopper's development of the A-0 system was a significant contribution to computer science because it was the first compiler. The A-0 system translated human-readable code into machine code, making it possible for programmers to write code in a high-level language rather than machine code. This innovation revolutionized programming by increasing efficiency and portability across different computer systems. It made computer programming more accessible and set the stage for modern software development.
2. COBOL, created with Grace Hopper's key involvement, became one of the first widely used high-level programming languages. Its importance in the world of programming lies in its role in standardizing computer programming. COBOL allowed programmers to write code in a more English-like language, making it easier to understand and use. This standardization contributed to the growth of the software industry and paved the way for more advanced programming languages.
3. Grace Hopper believed in the importance of English-like programming languages and diversity in the computing industry. She recognized that making computers and programming more accessible to a broader range of people, regardless of their technical background, would lead to greater innovation and progress. Her advocacy for diversity aimed to break down barriers and create a more inclusive and innovative computing community. This philosophy has had a lasting impact on the field of computer science.
4. Grace Hopper's legacy continues to inspire individuals in STEM fields. Her work and advocacy have influenced the world of technology and education in numerous ways. For example, her contributions to programming languages and compilers have shaped the way software is developed today. Additionally, her commitment to diversity and mentorship has encouraged more women and underrepresented groups to pursue careers in STEM, creating a more inclusive and diverse tech industry.

