Homework 2

2. Plankalkül included arrays and records (structs) as its primary data structures

5. Slowness was acceptable because computers at that time lacked floating-point hardware. Most floating-point operations had to be done in software, which made interpretation overhead negligible

6. The IBM 704 introduced hardware-supported floating-point arithmetic, which significantly improved computational efficiency and led to the development of Fortran

7. The project began in 1954.

8. Fortran was primarily designed for scientific and engineering computations that required efficient mathematical processing.

9. Fortran I's control flow statements were based on IBM 704 machine instructions.

10.The most significant addition in Fortran II was independent compilation of subroutines, which allowed modular programming.

11. Fortran 77 introduced character string handling, logical loop control statements, and the IF-THEN-ELSE construct.

14. Linguists were interested in AI because they were working on natural language processing, aiming to enable computers to understand and process human languages.

15. Lisp was developed at MIT by John McCarthy.

20. ALGOL 60 lacked standardized input and output (I/O) facilities, making it difficult for practical applications.

21. The Backus-Naur Form (BNF) was developed to describe the syntax of ALGOL 60.

22. COBOL was based on FLOW-MATIC, a language developed by Grace Hopper for business applications.

23. The COBOL design process began in 1959.

24. The record data type in COBOL was originally introduced in Plankalkül.

25. BASIC was developed to provide an easy-to-learn language for beginners, particularly for students and non-computer scientists.

36. APL includes powerful vector and matrix operations, along with a rich set of higher order functions.

37. The case statement was first introduced in ALGOL-W.

46. The concept of classes was first introduced in SIMULA 67, which is considered the first object-oriented programming language.

51. JavaScript is primarily used for web development, enabling dynamic and interactive content on websites.

52. JavaScript is used for client-side scripting and PHP is used for server-side scripting.

57. In C, the switch statement allows fall-through behavior unless explicitly stopped with a break. C# fixes this by requiring explicit fall-through statements, reducing unintended execution of multiple cases

59. The inputs to an XSLT processor are the XML document and the XSLT style sheet

60. The output of an XSLT processor is typically a transformed XML document, but it can also generate HTML, plain text, or other structured formats depending on the transformation rules specified