CvP - Werkcollege 5

Exercise 1 What is a descriptor?

Exercise 2 Define strongly typed.

Exercise 3 What is name type equivalence?

Exercise 4 What is structure type equivalence?

Exercise 5 Compare the tombstone and lock-and-key methods of avoiding dangling pointers, from the points of view of safety and implementation cost.

Exercise 6 What significant justification is there for the −> operator in C and C++?

Exercise 7 The unions in C and C++ are separate from the records of those languages, rather than combined as they are in Ada. What are the advantages and disadvantages to these two choices?

Exercise 8 Multidimensional arrays can be stored in row major order, as in C++, or in column major order, as in Fortran. Develop the access functions for both of these arrangements for three-dimensional arrays.

Exercise 9 What are the arguments for and against Javas implicit heap storage recovery, when compared with the explicit heap storage recovery required in C++? Consider real-time systems.

Exercise 10 In what way is static type checking better than dynamic type checking?

Exercise 11 Explain how coercion rules can weaken the beneficial effect of strong typing?

Exercise 12 Write a program in the language of your choice that behaves differently if the language used name equivalence than if it used structural equivalence.