

Software Engineering (CS213)

Tutorial 6

1. Data typing checking is concerned with the manner in which different data types can be manipulated in the same statement. Consider the simplified scenario: Three programming languages, “CRAP”, “PASCAL-2”, and “C4”, makes use of the following data type checking:

“CRAP”: Typeless Checking – the programming language has no explicit means for data typing and does not enforce type checking.

“PASCAL-2”: Mixed-mode Checking – the programming language allows for mixing of different data types, and then converts operands of different but compatible types.

“C4”: Strong-type Checking – the programming language only allows operations on data objects to be performed if they are of the same data type.

A program makes use of the following variables:

integers a, b;

floating point numbers c;

characters d;

Copy the following table into your answer script. Now for each one of the following operations, indicate on whether the operation will be allowed with a short justification why this is so, and also whether any conversion of operands occur.

Operation	CRAP	PASCAL-2	C4
a + b			
a + c			
a + d			