1. The student number and name of students in their third year who have obtained a grade of at least 90 in at least two courses in a department with either the name “pure math” (PM) or the name “computer science” (CS).

$$
\begin{aligned}
&\{ x, y \mid \exists z \,.\, \text{student}(x, y, z) \\
&\quad \wedge z=3 \\
&\quad \wedge \exists s1, s2, t1, t2, u1, u2 \,.\, \text{enrollment}(x, s1, t1, u1) \wedge \text{enrollment}(x, s2, t2, u2) \\
&\quad \wedge (\text{substring}(s1, 1, 2) = \text{‘PM’} \vee \text{substring}(s1, 1, 2) = \text{‘CS’}) \\
&\quad \wedge (\text{substring}(s2, 1, 2) = \text{‘PM’} \vee \text{substring}(s2, 1, 2) = \text{‘CS’}) \\
&\quad \wedge s1 \neq s2 \\
&\quad \wedge \exists v1, v2 \,.\, \text{mark}(x, s1, t1, u1, v1) \wedge \text{mark}(x, s2, t2, u2, v2) \\
&\quad \wedge v1 \geq 90 \wedge v2 \geq 90 \\
&\quad \}
\end{aligned}
$$