

COS20015 – FUNDAMENTALS OF DATA MANAGEMENT

Pass Task 3.1.2

P_Code	P_Name	Instructor	Term	Duration (Hrs)	Hourly_Rate	Room_NO
P1	Visual Basic	Dennis	15-1	7	20	A1
P1	Visual Basic	Dennis	15-2	7	30	A2
P2	SQL	Jason	15-1	4	10	A4
P2	SQL	Jason	15-2	4	20	A5
P3	C++	Joseph	15-1	5	30	A3
P3	C++	Joseph	15-2	5	20	A7
P4	Java	Rys	15-2	6	10	A9

Identify the most suitable **primary key** for the table above and explain how this key uniquely defines all other attributes.

The most suitable primary key would be `Room_NO`;

- This would result in a faster match of `A1` compared to `Visual Basic` as string-matching compares each character individually.
- `Room_NO` is concise and does not contain any alphanumeric character that may cause confusion such as whitespace or special characters
- However, `Room_NO` is not unique and thus multiple programming classes can be held in different rooms, therefore using a composite key will allow for a higher integrity as each `Room_NO+P_Code` is unique