**Assignment Description:** This assignment focuses on developing decision tables to model and analyze different eligibility conditions. It consists of two parts:

**Part I: Retirement Pension Policy Decision Table**

* + We designed a decision table to determine the pension salary eligibility of Michigan public school teachers based on age, years of service, and salary thresholds.
  + The analysis includes handling conflicts between conditions, ensuring completeness, and addressing ambiguity in the requirements.

**Part II: Basketball Team Selection Decision Table**

* + A decision table was created to assess eligibility for university basketball team selection based on academic credits, weight, and height.
  + The table was optimized by merging redundant rules and clarifying ambiguous cases.

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**Summary:**

**Retirement Pension Policy:** The decision table captures all relevant conditions, ensuring eligibility rules are clear and systematically applied. Ambiguous cases were resolved by prioritizing the highest multiplier for maximum pension benefits.

**Basketball Team Selection:** The decision table effectively classifies eligibility scenarios. Optimization techniques were applied to merge rules with identical outcomes, reducing redundancy. Ambiguities related to threshold values and missing data were identified, and handling mechanisms were suggested.

**Reflection:** This assignment reinforced the importance of decision tables in modeling complex conditions systematically. It highlighted challenges such as handling conflicting conditions and optimizing rule sets. Through this exercise, I learned how to improve decision clarity, manage ambiguity, and ensure logical completeness in rule-based decision-making.

**Detailed Results:**

Refer to Part I and Part II decision tables included in the submission.

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**Honor Pledge:** I confirm that this submission is my own work and adheres to the academic integrity policies of my institution.