Part I: Retirement Pension Policy Decision Table

Calculation Example:

For a 64-year-old teacher with 20 years of teaching experience a

Salary above $90,000: (95,000−90,000)×1.5

Salary up to $90,000: If using 1.6%: 90,000×1.6, If using 1.55%: 9
Completeness Analysis: The decision table effectively defines tw
Ambiguity Analysis: The "default rules" mentioned in the require
Priority Issue in Rules: The problem statement does not specify
to determine the applicable multiplier:
1, Choosing the higher multiplier (1.6%) ensures that the teacher r
2, This approach follows the common practice of applying the mo
3,To eliminate ambiguity, it is recommended that 1.6% be used as

Conditions	Values	1
Age ⩾ 63	Y/N	Y
Age + Teaching Years ⩾ 80	Y/N	Y
Salary ⩽ $90,000	Y/N	Y
Action		
Multiplier on Salary ⩽ $90,000		Y/N
Salary excess of $90,000		N/A

N/A means not eligible

Y/N means uncertain

Part II: Basketball Team Selection Decision Table

Conditions	Values	1
Credits⩾ 12	Y/N	Y
Weight > 180	Y/N	Y
Height >= 77	Y/N	Y
Action		
	Y/N	Yes

To optimize the decision table, we identified rules that led to ider
were consolidated by generalizing the differing condition with a p
eliminate redundancy.

Conditions	Values	1
Credits⩾ 12	Y/N	Y
Weight > 180	Y/N	Y
Height >= 77	Y/N	Y
Action		
	Y/N	Yes

Completeness Assessment:

The decision table comprehensively accounts for every possible c
assigned an outcome, guaranteeing that no valid input case is ov
qualifying or disqualifying—are systematically covered.

Ambiguity Concerns:

1, Uncertainty in Threshold Values: The problem defines "Weight
lbs or 77 inches. Without clarification, these values might be misir
2, Lack of Flexibility for Borderline Cases: The decision table appli
these limits (e.g., 179 lbs or 76 inches). Implementing a mechanis
3, Unspecified Handling of Missing Information: The current speci
or weight details are unavailable, it remains unclear whether the a
requesting additional details or temporarily holding the applicatic

Default Handling Rules:

1, Incomplete or Inconsistent Data: If an applicant's weight or hei
appropriate individual to provide the necessary details.
2, Ambiguous Edge Cases: If an applicant’s weight is exactly 180 l
further verification before making a final decision.

nd a salary of $95,000, meeting both retirement conditions:

)0,000×1.55
o retirement conditions and covers most scenarios.
ements are not clearly defined, which may require further clarificat
which condition should take precedence when both retirement cr

eceives the maximum possible pension, aligning with the intent o
ost advantageous rule when multiple conditions are satisfied, redu
the default multiplier, and this rule should be explicitly stated in t

			Combinations
2	3	4	5
Y	Y	Y	N
Y	N	N	Y
N	Y	N	Y
Y/N	1 60%	1 60%	1 55%
1 50%	N/A	1 50%	N/A

			Combinations
2	3	4	5
Y	Y	Y	N
Y	N	N	Y
N	Y	N	Y
No	No	No	No

ıtical outcomes and grouped them accordingly. Since Rule 2, Rule
ɔlaceholder ("-"). Likewise, Rule 5, Rule 6, and Rule 7 shared the sa

2	3	4
Y	N	N
N	Y	N
	Y	
No	No	No

ombination of the three given criteria: (Credits ⩾ 12, Weight > 18
erlooked. By incorporating both the university coach's and league

> 180" and "Height ⩾ 77" but does not specify how to handle va
nterpreted as ineligible. To eliminate confusion, a clear definition c
es strict cutoffs (e.g., 180 lbs and 77 inches) but does not account
m for exceptions or secondary considerations would improve the
ifications do not address how the system should manage incompl
application should be rejected or processed with existing informat
ɔn—would enhance the system's robustness.

ght information is missing or unclear, the system will categorize th

bs or their height is precisely 77 inches, the system will temporaril

:ion.
iteria are met. Therefore, a rule must be selected

f the retirement incentive policy.
ıcing potential confusion.
:he decision table.:

6	7	8
N	N	N
Y	N	N
N	Y	N
1 55%	N/A	N/A
1 50%	N/A	N/A

6	7	8
N	N	N
Y	N	N
N	Y	N
No	No	No

3, and Rule 4 resulted in the same action, they
ame outcome and were also merged to

30, Height ⩾ 77). Each scenario is explicitly
e's selection requirements, all cases—whether

lues that meet the threshold exactly, such as 180
of their inclusion or exclusion is necessary.
for instances where a candidate is slightly below
decision-making framework.
ete or inconsistent data. For instance, if height
ion. Establishing a predefined action—such as

ne application as "Pending" and prompt the

ly mark the application as "Pending" and require