

## PRESCRIPTIVE MODELLING

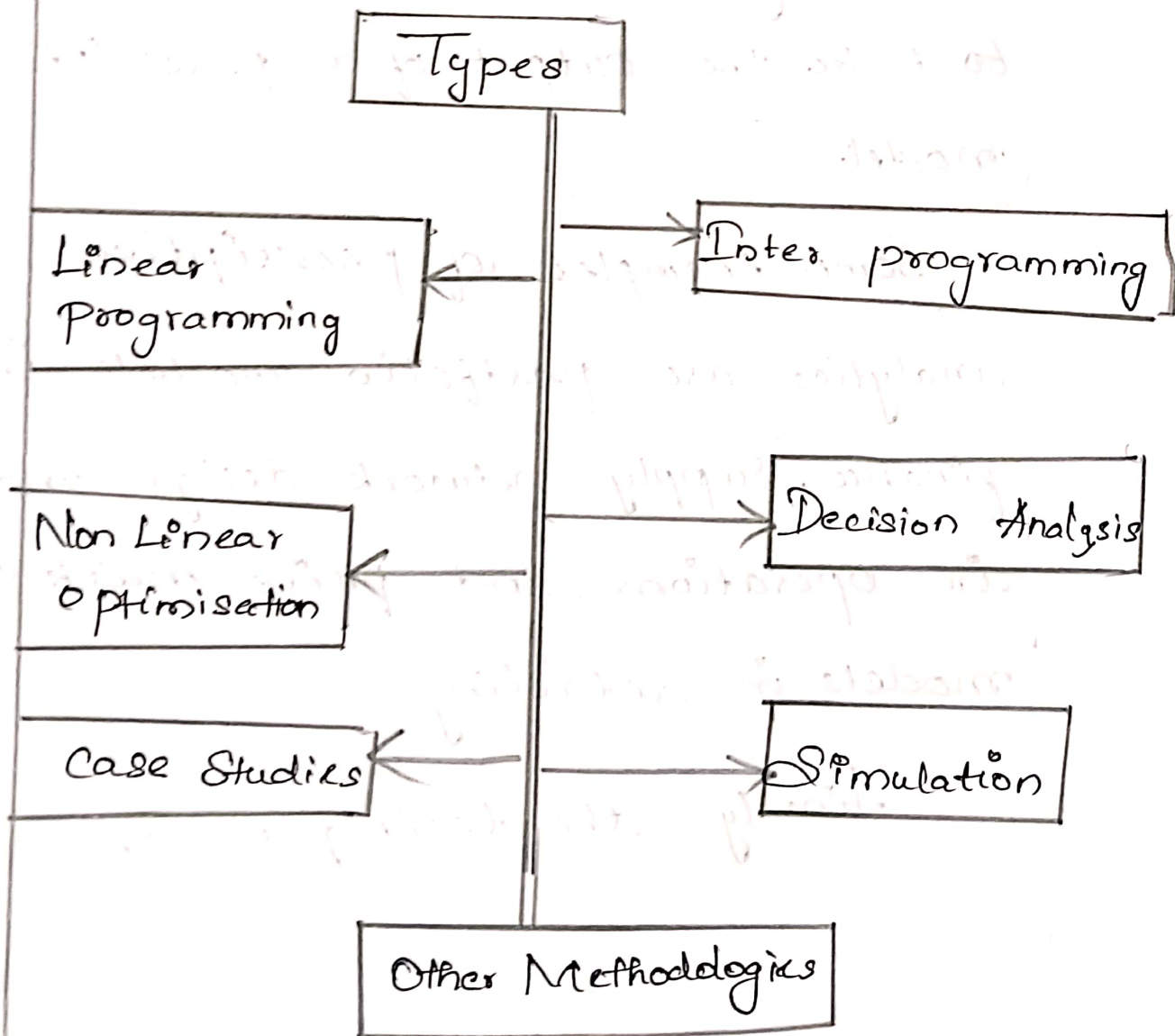
Prescriptive modelling differs from descriptive and predictive modelling, in that prescriptive modelling indicates a course of action to take the output of a prescriptive model.

Some examples of prescriptive analytics are portfolio models in finance, supply network design model in operations, and price markdown models in retailing.

Finally the techniques of decision

analysis can be used to develop an optimal and highly uncertain settings.

## Types of prescriptive Modeling



## 1). Linear Programming (LP)

A general-purpose modeling methodology is applied to multi-constrained multivariable problems when an optimal solution is sought. It is ideal for complex and large-scale problems when limited resources are being allocated to multiple use.

## 2) Integer Programming

This is the same as LP, but it permits decision variables to be integer values.

## 3) Non-Linear Optimisation

A large class of methodologies

and algorithms is used to analyse and solve for optimal or near-optimal solutions when the behaviour of the data is non-linear

#### 4). Decision Analysis

A set of methodologies, models or principles is used to analyse and guide decision making when multiple choices face the decision maker in different decision environment

#### 5). Case Studies

A learning aid provides practical experience by offering real or hypothetical case studies of real-world

applications of BA.

### 6) Simulation

This methodology can be used in prescriptive analysis in situations where parameters are probabilistic; non-linear or just too complex to use with other optimisation models that require deterministic or linear behaviour.

### 7) Other Methodologies

The areas of operations research, decision sciences and management science combine the application of mathematics, engineering and computer science to offer a broad listing of prescriptive methodologies.



These other methodologies include network modeling, project scheduling, dynamic programming, queuing models, decision support systems, heuristics, artificial intelligence, expert systems, Markov processes, decision tree analysis, game theory, goal programming. These are virtually no application limitations on the collection of these methodologies.