There are three main System of Classification are -

1. Artificial System
2. Natural System
3. phylogenetic System.

1. ~~Phylogenetic System~~ - 1. Artificial System.

This System was by Linnaeus. which is based on # member and arrangement of Stamens and Carpels. Thus, this System is based on following features -

a. Only a few characters are considered.
b. Equal weightage of veg. & Sexual characters
c.

Drawbacks

I. Closely related species of plants are kept apart in this System of Classification.
II. Not based on evolutionary relationship.
III. Vegetative characters are more easily affected.
IV. New work is not added.
V. difficult to identify new species/genera.
VI. provided by limited information.

2. Natural System

- This System of Classification was given by George Bentham & J. D. Hooker
- This System is based on many important Characters.
- widely used in Asia and Europe.
- one of the most Comprehensive System of Classification and prevalent in India.
- ~~Data~~ Thus, this System is based on natural affinities. Both external & Internal characters are taken. Internal features like Ultrastructure, anatomy, Embryology and phytochemistry are considered.

merits of natural System:—

① Almost all characters are considered.
② Members of different groups are mostly similar in hereditary pattern.
③ May change with advanced in knowledge.
④ provides plenty of useful informations
⑤ Plant identification is easy.
⑥ It is closely related to phylogenetically

3. Phylogenetic System

= This system of classification is based on phylogenetic relationship of plants (= based on the concept of evolution).
- This system was proposed by Engler, Prantl and Hutchinson.
- following technique is used to help in solving confusion —

A. Numerical taxonomy —
- By using computer.
- based on observable features
- number and codes are assigned to all characters and the data are then processed.
- Each character is given equal weightage.

B. Cytotaxonomy — It is based on cytological features like chromosome number, structure and behaviours.

C. Chemotaxonomy — It uses the Chemical constituents of the plants to resolve confusions.

Hutchinson adopted (24) principles

for examples; - Simple fruit is primitive than aggregate fruit.
- Endospermic seeds " " " Non-endosperme seeds.
- Apocarpous carpel " " " Syncarpous.
- Terrestrial " " " aquatic.
- Tree & Shrubs " " " climbers.