**Summary of Classes 10 – 17**

* Infinity of Words
* Words in a language are infinite
* In case of Sanskrit, each धातु or verbal root can have 90 or at times 180 forms in different tenses and moods
* For example the root पठ् (to read) can be declined as पठति, पठतः, पठन्ति ...etc. to 90 forms
* A causal form पाठि (to make someone read) derived from the same root पठ् can also be declined as पाठयति, पाठयतः, पाठयन्ति... etc. into another 180 forms
* A passive form of the same root पठ् (पाठ्य) (to be read) can again take another 90 forms
* Certain suffixes can convert nominal roots into verbal roots leading to further multiplication of forms
* Multiplicity of forms also arises due to compounding of words, where two or more words can be combined to form a new word

* Algebraic nature of पाणिनि’s Grammar –
* Algebra is all about use of **variables** and manipulation of variables
* Thus, a single algebraic formula can account for infinite outcomes as the values of variables change
* This phenomenon can also be observed in the rules framed by पाणिनि
* A finite set of rules in पाणिनि is thus capable of producing infinite number of words and sentences
* A striking feature of the language of सूत्रs is the use of abbreviated expressions
* Economy of expression is पाणिनिs primary concern
* He has achieved it by employing algebraic devices
* Use of technical terms in place of lengthy expressions is one of them
* He uses predefined symbols such as इत्, घु, घ etc. to save words
* He also uses code representation, t
* echnically known as प्रत्याहार to save words and letters in his rules
* For instance, instead of mentioning the letters य्, व्, र् and ल् he uses the **प्रत्याहार** यण्
* For vowels, he uses the term अच्
* For consonants he uses the term हल्...and so on
* Following is an example of a rule containing all code words –
* इकः यण् अचि (6.1.74)
* The meaning of the same is that – इ, उ, ऋ and लृ are replaced by य्, व्, र् and ल् respectively when a vowel follows
* Contents of the अष्टाध्यायी
* From the kind of language that पाणिनि employs for writing the अष्टाध्यायी it is quite obvious that teaching the grammar of Sanskrit is not his objective
* He has just attempted to give an exhaustive description of Sanskrit language with words as minimum as possible
* He, therefore, is more interested in saving words that are available through अनुवृत्ति from the previous सूत्र rather than grouping the rules according to the subtopic of व्याकरण that they are related to
* Based on its contents however, the अष्टाध्यायी can still be broadly divided into two parts
  + **Part – 1** – covering various roots and suffixes – described in chapters 1 to 5
    - Here, we find a description of two types of roots – namely 1. Verbal roots and 2. Nominal roots
    - Of the suffixes that are described her, there are - 1.suffixes that can be added to verbal roots, 2. Suffixes that can be added to nominal roots and 3. Suffixes that convert verbal roots or nominal roots into new verbal roots
  + Rules related to compounding of words and those related to syntax are also found in chapters 1 and 2 of the अष्टाध्यायी
  + **Part – 2** – covering various processes that roots and suffixes undergo when they combine together – described in chapters 6 to 8
    - Here we find rules related to various processes like replacement of sounds, addition, elision and reduplication.
* Economy in अष्टाध्यायी
  + The rules formulated by पाणिनि were to be committed to memory by his students and passed on to the next generation
  + They are therefore supposed to be as concise as possible
  + There is a famous quote in the महाभाष्य - अर्धमात्रालाघवेन पुत्त्रोत्सवं मन्यन्ते वैयाकरणाः. It means that if Grammarians are able to save even a single consonant in their rule while keeping its implication intact, they celebrate as a son were born to them
  + To bring about brevity in his सूत्रs, पाणिनि has used various predefined terms like इत्, घु, घ and टि
  + He has also used the प्रत्याहार technique extensively to make his rules as small as possible
  + Without employing the अनुवृत्ति technique the size of his text would have been almost three times bigger than its current size
* About अनुवृत्ति
  + This technique makes the best use of the features of Natural Language (i.e. Sanskrit language in case of his work अष्टाध्यायी)
  + It is based primarily on the principle of ‘Expectancy’ or आकांक्षा
  + The सूत्रs thus, consist of only the most important words or phrases
  + Rest of the information is borrowed from the context provided by the previous सूत्रs
  + Example – (all the words written in the bracket next to every सूत्र below come through अनुवृत्ति)
    - १.३.२ – उपदेशे अच् अनुनासिकः इत्
    - १.३.३ – हल् अन्त्यम् (उपदेशे इत्)
    - १.३.४ – न विभक्तौ तु-स्-माः (उपदेशे अन्त्यम् हल् इत्)
    - १.३.५ – आदिः ञि-टु-डवः (उपदेशे इत्)
    - १.३.६ – षः प्रत्ययस्य (उपदेशे आदिः इत्)
    - १.३.७ – चु-टू (उपदेशे प्रत्ययस्य आदिः इत्)
    - १.३.८ – ल-श-कु अतद्धिते (उपदेशे प्रत्ययस्य आदिः इत्)
    - १.३.९ – तस्य लोपः (उपदेशे इत्)
  + In the above example it is clear that in 8 सूत्रs, पाणिनि has used 17 words and has been able to save 20 words with the अनुवृत्ति technique