

Sanskrit's contribution as a potential supporting language for the Web/Internet and Computer use



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Abstract :

This study aims to determine the degree to which Sanskrit language may be used in programming, primarily in the area of artificial intelligence. Three major portions may be found in this essay. Sanskrit's significance in relation to other languages is discussed in the first part. The effectiveness of having computers in Sanskrit as opposed to English is investigated in the second section. The final portion discusses the programming of two comparable AI programmers, one for Sanskrit and the other for English dialogue. They are examining Sanskrit linguistics' advantages in artificial intelligence programming both individually and then jointly. When utilized to speak with computers, Sanskrit performs amazingly effectively and with surprising versatility.

Keywords : Machine Learning: Sanskrit: Applications: Algorithms: Protocols and Tools

Introduction :

Computer language should be devoid of context. Context-free language is defined as language in which the meaning of an instruction, sentence, or word is

independent of its context. In our language, we often derive the meaning of a sentence or term from what is being said about it (for example- gold, flying in the air, making it sparkle, etc.) rather than knowing the context for the machine. As a result, the language should be designed so that no context is required to grasp the meaning. Only sentences should express a complete and distinct meaning. This means that a sentence should only have one meaning. When the computer reads the instructions, it fragments the statement rather than comprehending its meaning. The breaking of its syntax has no effect on its meaning. The computer can readily read it and complete the task at hand. The words of normal language will be translated into a form that the computer can understand by using computer language. This work will have to be done by people. As a result, the computer language should be simple enough that everyone can learn and use it. One advantage of computer language is that its letters take up less memory space. More space means more money. A language that takes up more space can likewise lengthen the time it takes to execute a task.

Syntax Conversion :

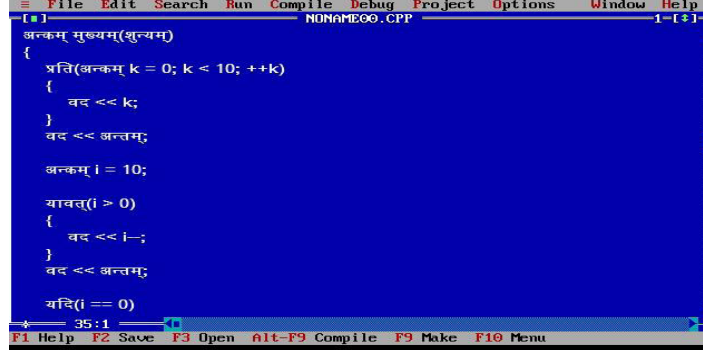
Syntax conversion is the process of changing the syntax of any existing programming language into Sanskrit. The following is an example of syntax conversion. A typical if and ladder is expressed as-

if x and y
if x and y and z
if (not x) then y
if x then (y and z)

This can naturally be represented in Sanskrit.



In C++, Sanskrit words are represented as follows:



```

File Edit Search Run Compile Debug Project Options Window Help
[1] NONAME00.CPP 1-[1]
{
  अन्कम् मुख्यम्(शून्यम्)
  {
    प्रति(अन्कम् k = 0; k <= 10; ++k)
    {
      वद << k;
    }
    वद << अन्तम्;

    अन्कम् i = 10;
    यावत्(i > 0)
    {
      वद << i--;
    }
    वद << अन्तम्;

    यदि(i == 0)
  }
}
35:1
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu

```

In C++, Sanskrit words are represented as follows:



```

File Edit Search Run Compile Debug Project Options Window Help
[1] NONAME00.CPP 1-[1]
{
  वद << "यिक्" << अन्तम्;
}
अन्यत्
{
  वद << "अहो बत" << अन्तम्;
}

यच्छ 0;
}
35:1
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu

```

There may be criticism today in some places to the introduction of Sanskrit as a subject in IIT, but specialists believe it to be a language that is not only ancient but also precise and scientific for use with contemporary technology like computers. The Sanskrit Study Centre at Jawaharlal Nehru University (JNU) uses computers to translate texts from Sanskrit to Hindi. Sanskrit studies are also conducted on computers. The likelihood exists that soon a competent Sanskrit to Hindi translation will be performed by a machine.

In the near future, we will teach the computer the language we use every day so that it can assist us with reading and other duties. Because it is an advanced, systematic, and scientific language, Sanskrit is well suited for this. The grammar of Panini is better. Consequently, compared to other languages, it is simple for computers to understand.

Additionally, the students at this location have animated 25 stories from Hitopadesh in Sanskrit and Hindi. On the study centre website, one can read the Rigveda, Mahabharata, and other ancient texts in their original Sanskrit translations in Hindi or quickly search for any Hindi word.

Changes must be made in how Sanskrit is viewed. Mostly due to the scientific nature of Sanskrit, it is excellent how the government is approaching this. In the West, pupils are taught a classical language, but Sanskrit is being faded out of many Indian schools. Research is currently being done to detect nano particles in Rajat Bhasma. When an Indian scientist employs Sanskrit books in science, he is referred to as a Dakianus, despite the fact that America is working on the Vimana Shastra.

Sanskrit is frequently mentioned as the best language for computers in everyday speech, and scientists agree with this statement. This is strongly backed by the evidence. Even some state governments have mandated Sanskrit as a curriculum for school-age youngsters. A computer is a device that executes commands. Instructions are written in a language for this. The computer reads the instructions typed in that language and follows them to operate. It is important to accurately write these instructions because of this.

There won't be any improvement in Sanskrit until and until we use it in the modern world and add it to the brand-new context. India at the time was unique. India has changed recently. Does Sanskrit have the capacity to satisfy the demands of today? An extremely rich language is Sanskrit. No area of contemporary knowledge-science is without a Sanskrit equivalent. Sanskrit is the language of a vast body of literature. Astronomy, mathematics, and extensive knowledge of constellations are all found in Sanskrit. On agricultural science, numerous books have been written. In Sanskrit, there is a wealth of information about plants and trees that is so thorough that it is likely not even found in modern Botany. Sanskrit aviation texts, known as the Vimana Shastra, date back hundreds of years. The field of medical science has a wealth of literature. There are many documents in the form of manuscripts that have not yet been completely analyzed. There are 5 million manuscripts known to the Indian government, 3 million of which are written in Sanskrit. These have a tonne of knowledge and scientific content.

Sanskrit as a language offers all the options required today. The flaw is that we are unable to relate the strength and potential of Sanskrit to contemporary culture.

Why aren't the job possibilities and future of today's kids in Sanskrit? "Because Sanskrit is only used in traditional teaching and ceremonies in our culture", Or perhaps Sanskrit instruction has become so challenging that students no longer have an interest in learning it or see its relevance to their needs or future. Computers and Sanskrit ought to be related. There is no operator available to use the Sanskrit keyboard, despite its preparation. Education in Sanskrit with contemporary information technologies must be coordinated. It is essential to simplify Sanskrit instruction. There is a global form of Sanskrit. This has a connection to tourism as well comparable to China, Japan, Cambodia, Taiwan, Thailand, etc. India receives a lot of religious tourism from East Asian nations. In the Chinese language, Sanskrit has 3600 words. One who is familiar with Sanskrit can comprehend Thai. Sanskrit instruction must also be made simpler as a result of this. We must take the child's comprehension and preferences into consideration and place an emphasis on simple rather than complex language.

The honour of being the oldest language in the entire world - not just in India belongs to Sanskrit. It is also thought that languages like Hindi, Urdu, Bangla, Marathi, Gujarati, Oriya, Punjabi, Assamese, Gurkhali, and Kashmiri, among others, are Aryan languages that descended from the Sanskrit legacy. Max Müller had claimed that only 500 words in Sanskrit were the source of all Aryan languages, establishing Sanskrit as their mother tongue. Because word order in Sanskrit is not very important today, computers can grasp it easily. Sanskrit is a language that predates both Latin and Hebrew, and it was originally solely spoken orally. There are newspapers in Sanskrit in India, and Sanskrit is the language best suited for computers, according to NASA, the world's foremost scientific organization. Founded in 1970, Sudharma is a newspaper published in Sanskrit. Sanskrit is the ideal language for computers because - Sanskrit has no separate terms for inflections. It can also be read online. There are two villages in India where everyone speaks Sanskrit exclusively. They are called Mattur and Hoshahalli. Although it is not used, the dividing effect is achieved by including an extra amount or letter in the words themselves. Perhaps more than any other language, Sanskrit has seven divisions. The meaning of a statement in Sanskrit remains the same regardless of the word sequence. Consequently, as a result of

these characteristics, Sanskrit is regarded as the ideal language or medium of translation. The world's most precise and comprehensive writing system is Devanagari, which is used to write Sanskrit. It has been regarded as the ideal language for computer programmers because of its brevity and suitability for sound-based applications.

Conclusion :

In this study, we evaluate the performance of two similar AIs with Sanskrit and English conversational capabilities. Devanagari is the currently used script for Sanskrit. Vowels and consonants in this require 2 bytes of memory storage space. Aksharas composed of vowels or consonants take up between 4 and 8 bytes. In contrast, a Latin letter replaces a byte. For instance, if you were to write in Latin that Sanskrit contains 8 letters, it would require 8 bytes to store. Sanskrit in Devanagari will be written using 18 bytes. As a result, learning Sanskrit as a computer language will require more memory, which will lengthen the time it takes for computer instructions to be completed. Additionally, the expense of computers could pose a problem in the future.

References :

1. Professor President of the Computer Studies Centre at Jawaharlal Nehru University's (JNU) Sanskrit Studies Centre. The cores of several research articles by Girishnath Jha were extracted.
2. Prof. Cooperation, a former president of the National Culture Commission, took action on a number of Shastri's suggested papers.
3. It was also decided to work with numerous Indian media and top-tier Sanskrit research publications.