

COS 333 RESEARCH QUESTIONS

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Research Answers:

1) Turing complete way that you can run some algorithm regardless of the complexity, deep, recurrent, difficult or long evaluation opportunity. (AnoE, 2020). It is attainable to use the programming language to imitate a Turing machine. One benefit is that it can handle some computational task likely to it accompanying enough time and resource. One hurt of Turing Complete is that TeX programs are hard to analyse, have a low fault tolerance and have extreme demands on engines, that maybe troublesome for comprehensive-purpose computation.

2) Esoteric programming language is advocating exploratory purposes a suggestion of correction common sense. Anything namely not composed in the recognized types is deliberate as comments. The individualities are: `ı ĵ [] , . + -` The main goal search out establish a vocabulary that deviates from the normal programming language. (Elvis, 2024) They are planned expected Turning-complete; they can execute some computing doable by a standard programming language.

3) An esoteric programming language sound is skilled to challenge itself and the standards of language designs. It is mainly secondhand for research and investigation of new plans in arrangement and computational belief. Therefore, it has an excellent effect on instructional purposes and can also enhance an idea for a few. It admits programmers expect artistic and have a deeper understanding of language design principles. However, concerning researchers, the esoteric programming languages of computers are useless because it is questioning to use. This maybe an explicit objective of the creator. This is a language that admits individual to investigate and express their imaginative countenance and plans. Although it allows researchers to survey the fun of languages and as long allows them to contemplate creatively and develop answers, it is further questioning to use. (Tomassetti, n.d.)

4) Brainfuck is devised by Urban Müller in the period of 1993. The set up language is minimalistic and consists of eight figures: `‘+’, ‘-’, ‘ı’, ‘ĵ’, ‘[’, ‘]’, ‘.’ ‘;’`. To form an essential language the results were that the style is

difficult to handle, although it is Turing complete. The eight commands are used to manipulate a data pointer, and support loops and are inscribed as a series of commands accompanying no variable names or complex syntax. IT can perform computational tasks that turing machines can. Befunge is planned by Chris Pressey in the old age of 1993. It has commands that control the direction up, down, left, and right and so can also build a cycle established sure commands. Befunge programs are composed on a toroidal gridiron, and instruction is performed based on the shift of the instructions pointer. The new adaptation, Befunge-98 is Turing complete in spite of the different flow, it can act computational tasks that a turing machine can. (Tomassetti, n.d.)

5) Bash programming language is ideal for writing scripts, automating system admin tasks and working accompanying command-line utilities. It acts computational task to further natural command execution. On the other hand, Bash has a restricted data structure, datatypes, unit tests, real functions, etc. It does not specify a easy platform for consumers to code and lacks support for complex data types. So I grant permission to mention that it is possible not be deliberate as a programming language. (Jean-Michel, 2024)

6) -ALF supports the imperative and declarative paradigms.
-ALF incorporated functional and object-oriented paradigms (society, 2024)

7) Visual Logic is bestowed by way of building, understanding and accomplishing programs more surely and efficiently. Visual Logic prioritizes graphics used in programming languages to suggest the relational nature of logic programming and, so, help the users to catch a deep understanding of the semantics meaning of their programs. Visual Logic offers a visual, instinctive approach for learners to grasp and prioritize programming concepts outside the complicatedness of text-based languages, reducing barriers to education and enabling focus to fundamental ideas. The disadvantage is that it potentially forms a break between abilities captured and those wanted real-world programming tasks.

8) Dr. Memory is a memory monitoring tool that is able to recognize memory-related programming errors to degree access of uninitialized memory, access to unaddressable memory, accesses to free memory, double frees, memory leaks, and handle leaks, and access to un-reserved thread local storage slots. (Memory, 2024)

References

- [1] AnoE. *What Does Being Turing Complete Mean*. Computer Science. June 2020.

- [2] L. Community. *What are Some Examples of Programming Languages That Support Multiple Paradigms?* LinkedIn. 2024.
- [3] G. B. Elvis. *Esoteric Languages: What are They and Why You Should Be Concerned.* DEV Community. Feb. 2024.
- [4] Jean-Michel. *Bash is a Terrible as a Programming Language, But What's the Alternative?* DEV Community. Feb. 2024.
- [5] D. Memory. *Dr. Memory.* Mar. 2024.
- [6] G. Tomassetti. *The Fun (and Madness) of Esoteric Programming Languages.* Strumenta.