UST Global Technical Questions

1. What is C++?

C++ maintains almost all aspects of the C language, while simplifying memory management and adding several features - including a new data type known as a class (you will learn more about these later) - to allow object-oriented programming. C++ maintains the features of C which allowed for low-level memory access but also gives the programmer new tools to simplify memory management. C++ is a powerful general-purpose programming language. It can be used to create small programs or large applications.

2. Can you Mention some Application of C/C++?

3. What is the difference between C and C++?

4. What is the advantage of OOP?
   - Simplicity
   - modularity:
   - modifiability
   - extensibility
   - maintainability
   - re-usability

4. Can you Explain- What is modularity?

5. How do you do dynamic memory allocation in C applications?

In C, malloc, calloc and realloc are used to allocate memory dynamically. In C++, new(), is usually used to allocate objects.

6. List advantages and disadvantages of dynamic memory allocation vs. static memory allocation?

7. What is Java?

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Java is an object-oriented programming language developed initially by James Gosling and colleagues at Sun Microsystems. The language, initially called Oak (named after the oak trees outside Gosling's office), was intended to replace C++, although the feature set better resembles that of Objective C. Java should not be confused with JavaScript, which shares only the name and a similar C-like syntax. Sun Microsystems currently maintains and updates Java regularly.

8. Can you have virtual functions in Java?

9. What is a transient variable in Java?

10. What is thread?
    A thread is an independent path of execution in a system.

11. What is multi-threading?
    Multi-threading means various threads that run in a system.

12. What is a dangling pointer?

13. What are the advantages and disadvantages of B-star trees over Binary trees?