Technical Round Questions

C/C++ Interview Questions:

1. When is a switch statement better than multiple if statements?

2. What is the return type of printf library function?

3. What is dangling pointer?

4. How can we achieve run time polymorphism in C++?

5. Library function which is used to convert string value into int value?

6. How the overriding is different than overloading?

7. Explain diamond problem of inheritance?

8. What is the significance of argc and argv in command line arguments ?

9. Can we call any class member function without using object of the class

10. Give uses of scope resolution operator (::) in C++

11. What is importance of this pointer?

12. Write the statements which are used to swap two variables without using 3rd variable and without using airthematic operators.

13. Explain the polymorphism?

14. How type conversion is different than type casting ?

15. List the operators which can't be overloaded ?

16. Which operator can replace the if statement in the program?

17. What is the role of abstract class in c++

18. What is the return type of malloc and calloc function and in which header file they are defined

19. What is the output of printf("%d")?

20. What is the difference between "calloc(...)" and "malloc(...)"?

21. What is the difference between "printf(...)" and "sprintf(...)"?

22. What is the difference between namespace and assembly?

23. What is the difference between early binding and late binding?

24. What is the difference between strings and character arrays?

25. What is the difference between const char* p and char const* p?

26. Can static variables be declared in a header file?

27. What is a null pointer?

28. What is the difference between text and binary modes of reading and writing files to disk?

29. What is static memory allocation and dynamic memory allocation?

30. How are pointer variables initialized?

31. What is the difference between arrays and pointers?

32. Is using exit() the same as using return?

33. What is indirection?

34. What is modular programming?

35. What is an lvalue?

36. Differentiate between an internal static and external static variable?

37. What is a void pointer?

38. When should a type cast not be used?

39. What is a static function?

40. Differentiate between a linker and linkage?

41. What is the difference between declaration and definition?

42. What are the advantages of inheritance?

43. What are inline functions and when they can prove beneficial?

44. What are templates in C++?

45. What keyword will you use when defining a function in base class to allow this function to be a polymorphic function?

46. Why are arrays usually processed with for loop?

47. What is the difference between macro and inline?

48. How can we access protected and private members of a class?

49. In the derived class, which data members of the base class are visible?

50. What is the need for a Virtual Destructor?

51. What is the Standard Template Library (STL)?

52. What is difference between Class and Structure in C++?

53. Why we create NULL pointers?

54. Why do we use file handling?

55. Which function is used to position back from the end of file object?

56. What is a stream?

57. What is the difference between realloc() and free()?

58. Can Constructor of class be private?

59. Can local and global variables be same names?

60. What type of functions are nonmember functions of a class but are granted the same privileges as methods of the class.

61. The constructor that performs an initialization using another object of the same class is called as?

62. In C++, Which keyword can you use with a variable so that when function is called by reference and still prevent the function from changing its value?

63. How many destructors can a class have?

64. Out of fgets() and gets() which function is safe to use and why?

65. Why doesn't this code: a[i] = i++; work?

66. Are the expressions *ptr ++ and ++ *ptr same?

67. What would be the equivalent pointer expression foe referring the same element as a[p][q][r][s]?

68. Are the variables argc and argv are always local to main?

69. Can main () be called recursively?

70. How is a file closed?

71. What is the purpose of ftell ?

72. Difference between an array of pointers and a pointer to an array?

73. Can a Structure contain a Pointer to itself?

74. How many ways are there to initialize an int with a constant?

75. Why shouldn't I start variable names with underscores?

76. Is a default case necessary in a switch statement?

77. Can the last case of a switch statement skip including the break?

78. Which bit wise operator is suitable for checking whether a particular bit is on or off?

79. Can the sizeof operator be used to tell the size of an array passed to a function?

80. When should the register modifier be used? Does it really help?

81. WAP to add two strings without utilizing "+" operator?

82. Difference between C & C++?

83. Difference between SQL & C++?

84. What are character constants in C++?

85. What are streams in C++? What are predefined streams in C++?

86. Explain tokens in C++.Also tells about their role and importance.

87. WAP to reverse a linklist?

88. WAP to print reverse of a given sequence?

89. WAP for Armstrong, palindrome, Fibonacci sequence.

90. WAP to swap two values without using third variable.

91. Describe Structure Vs Union Vs Class.

92. Write a pseudo code for uploading a photo on your facebook?

93. WAP to print "1,4,7,6,9,1"(Simple jst print as it is without any logic).

94. What are derived data types? Name the user defined data types in C++.

95. Whether higher normal forms better than lower forms as far redundancy is concerned?

96. How would you input data to your code?

97. What are the similarities and differences between a class and a structure?

98. Give me an example of data types? (but they use a different word for it so be ready).

99. Give real world examples of different types of data structures.

100. Describe database tuning.

101. What is the difference between undefined and NULL?

102. What is array?

103. Write down array declaration of 5 elements.

104. Write a program to check whether a given number is prime or not.

105. What is Inheritance?

106. Difference between overloading and overriding.

107. What is the use of Normalization?

DBMS QUESTIONS

1. Define Database.

2. What is DBMS?

3. What are the various kinds of interactions catered by DBMS?

4. Segregate database technology's development.

5. Who proposed the relational model?

6. What are the features of Database language?

7. What do database languages do?

8. Define Database Model.

9. What is SQL?

10. Enlist the various relationships of Database.

11. Define Normalization.

12. Advantages of Normalized Database.

13. Define DDL and DML.

14. Enlist some commands of DDL and DML.

15. Define UnionAllOperator and Union.

16. Define Cursor and its types.

17. Define Subquery.

18. Why is Group Clause Used?

19. Compare Cluster and Non-Cluster Index.

20. Define Aggregate Functions.

21. Define Scalar Functions.

22. What restrictions can you apply when you are creating views?

23. Define “Co-related Subqueries”.

24. Define Data Warehousing.

25. Define Join and its types.

26. What do you mean by index hunting?

27. How does Index hunting help in improving query performance?

28. Enlist the Disadvantage of Query.

29. Enlist ways to efficiently code transactions

30. What is Executive Plan?

31. What is B+ Tree?

32. Differentiate Table Scan from Index Scan.

33. What do you mean by Fill Factor concept with respect to indexes?

34. Define Fragmentation

35. Differentiate Nested Loop, Hash Join and Merge Join.

36. What is Database partitioning? And its Importance.

37. What do you mean by Query Evaluation Engine?

38. Define DDL Interpreter

39. Define Atomicity and Aggregation.

40. Enlist the various transaction phases.

41. Define Object-oriented model.

42. Define Entity.

43. What do you mean by Entity type extension?

44. What are two methods of retrieving SQL?

45. What cursor type do you use to retrieve multiple recordsets?

46. What is the difference between a "where" clause and a "having" clause?

47. What is the basic form of a SQL statement to read data out of a table?

48. What structure can you implement for the database to speed up table reads?

49. What are the tradeoffs with having indexes?

50. What is a Constraint?

51. What is Primary Key?

52. What is a "functional dependency"? How does it relate to database table design?

53. What is DBA?

54. Difference between Primary, Foreign, Candidate & Super key?

55. Different type of databases?

56. What is normalization?

57. Briefly explain the method you will use to execute an array linked list?

58. Give me a Query to find out the second largest compensation in an organization?

59. What is the implementation of merge?

60. Write the connection code to a database?

61. How did you create it in your project?

62. What is the significance of dijkastra algorithm

63. Can a database table exist without a primary key?

64. What is the reason behind using “Inner Join” and “Outer Join”?

OPERTING SYSTEM:

1. What is O.S.?

2. What is a semaphore?

3. Difference between semaphore & mutex?

4. What is a deadlock?

COMPUTER &PROGRAMMING BASICS:

1. What are the four division in Cobol.

2. What is the significance of 01,77,88,66 levels.

3. What is the Function of compiler.

4. Difference between object file & exe file?

5. Describe tags in HTML5.

EMBEDDED SYSTEMS:

1. What do you mean by frequency and clock rate?

2. What are the differences between processor and controller.

3. What is an embedded system? Relate it with real world example.

4. What is the functioning of Touchscreen?

5. What is Direct Memory Allocation?

6. What is Paging?

7. Difference between interrupt and polling.

8. Which O.S are you using?

9. Describe in brief about RAM and ROM?

10. What is Flash memory?

DIGITAL ELECTRONICS:

11. Explain the types of Finite state machines?

12. What are universal gates?

ANALOG ELECTRONICS:

1. Draw a complimentary symmetric push pull amplifier.

NETWORKING:

1. Define the terms OSI, TCP, and IP.

SIGNAL AND SYSTEMS:

2. Why we need Fourier transform?

3. What is difference between Fourier Series and Fourier Transform?

4. What is difference between Fourier Transform and Laplace Transform?

5. Difference between Laplace and Z- Transform?

6. Difference between DFT and FFT

7. Difference between DTFT and DFT

8. What pole and zero of transfer function signifies?

9. What is impulse function?

10. What is unit step function?

11. What is LTI system?

12. What is impulse response of system?

13. What is step response of system?

14. What is FIR filter?

15. What is IIR Filter?

16. when system is called a causal system?

17. What is Linear System?

18. What is Energy Signal?

19. What is Power Signal?

20. Difference between analog and digital signal.

RECENT TECHNOLOGY:

1. What is the recent technology used in the field of Big Data?

2. Facebook is implemented in which language?

3. Difference between Big data and Cloud Data.

4. Basics of Big data analysis. (To be asked)

5. What is cloud computing?

6. Describe in brief about i3,i5&i7 processors.

7. What is datamining and datawarehouse?

8. What is GPS?

9. What are the new things happening in the field of automation?

10. What is android?

GENERIC:

1. What is electronics all about?

2. Why gold is yellowish in color?

3. How to find efficiency of a system?

4. State Bernoulis principle.

5. State Archimedes principle.

6. State Netwon's Three laws.

7. State Faraday's law.

8. State Coulomb's law.

9. What is centre of gravity?

10. State Lenz law.

11. What is Potential & kinetic energy?

12. What is the difference between stress and strain?

13. What is SDLC(software development life cycle)?

14. What is the difference between innovation and creativity?