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Pascal Interview Questions

In early 1970's-1980's, Pascal was greatly in use but the need to develop modern cross applications improve the demand for Pascal jobs. If you are a web developer and using Delphi IDE, then you must have the knowledge of good programming skills in Pascal. Pascal uses nested procedures to any depth which provides a great environment for learning programs. Thus, Pascal is widely used for teaching purposes. To help you with your interview, we made some interview questions. Here you can find questions that may **ask in the interviews**. Start it from today and get hired in good company!

Q1. What do you understand by Pascal?

This is the first question every interview may ask, so make a good definition in your mind. Pascal is a programming language which supports data structure and the structured programming. It is basically designed to encourage good programming skills. In fact, it is the first language that developers find easy to learn. It runs on various platforms and the list includes windows, MAC OS, and different versions of UNIX/LINUX. There are many commercial versions of Pascal available, but still, it doesn't get success in the industry because users find it too restrictive in rules and don't allow them to create a new rule (ex. datatypes). This doesn't mean Pascal is less usable, here we show some of the amazing applications where it is used:

- Skype
- Tex
- Apple Lisa
- Total Commander
- Various PC Games
- Embedded Systems

Q2. Why Pascal?

Pascal is a computer programming language which encourages you to enhance your programming skills. It is a language that you may easily learn and practices the programming techniques. It let you use functions and subroutines extensively, which makes your code understandable. The Pros of Pascal such as object-oriented programming, real assignment operators, well-structured and many more keep this language usable. Among all, the readability that means you can write as you speak is the utmost feature of Pascal. Even, developers start with Pascal to learn programming as they find out it is easier to write a program in Pascal as a comparison with others.

Q3. Why Pascal is named as Pascal?

Designed in 1968-1969 by Niklaus Wrath, it was first published in the year 1970. It is named after the Blaise Pascal who was French Mathematician and philosopher. He is famous for his invention of calculating machine (not a true computer).

Q4. Tell about the history of Pascal.

Pascal was one of the programming languages that existed before C and C++. After many years of research, several proposals for an evolutionary successor to Algol were developed and one of from them is Pascal. It is also titles as a youngest member of the Algol family. Its first version known as IAL "international Algebraic language", the first language developed by International Committee. Pascal received a big boost when ETH release Pascal compiler that shows intermediate code instead of true native code for a particular machine. After that, the company introduces USDC Pascal and Turbo Pascal which takes Pascal to a high level. Later, Borland introduced the rapid application development environment Delphi and revived the version of Pascal. Although, it is not quite famous in the present time, it was received lots of appreciation at its time.

Q5. What is the definition of Pascal Sets?

We know Pascal is a set of defined elements of same time that is allowed in Pascal to define set data type. The elements of a set are called as members. If we check in Mathematics, sets are denoted with the braces {} but in Pascal, sets are denoted with square brackets []. Both enclosed the elements in the braces or brackets. For Pascal, it is also referred as a set constructor.

Pascal set types are defined as-

type Set-identifier=set of base type;

Set type variables are defined as:

Var S1, s2, s3........: set-identifier;

Q6. What Pascal units meant?

A pascal program consists of the modules which are called as units. The unit is made up of code blocks like functions, subroutines, etc. And these code blocks are made up of data types, variables, statements, procedures, etc. There are two types of units present in Pascal. First one is a built-in unit such as crt. Another one is writing your own units. Pascal allows the programmer to create their own unit that can be used in the program later.

Q7. How the file is handled in the Pascal?

The file is a sequence of components which are of uniform type. The type of components defines the type of file. The data type of the file is defining as:

type
File-name=file of base-type;

where base type reflects the type of components.

The base type can be anything from the list that includes real, integer, Boolean, enumerated, record, subrange and so on. The variables of file type are declared as:

var
f1, f2, f3....: file-name;

Q8. Define some features of Pascal?

There are many features that make Pascal so reliable and usable. These are:

- Pascal supports object-oriented programming.
- It is a structured programming language that uses loops, if-else statements, nested loops, etc.
- It allows using several data types, variables, records, sets and files.
- It offers error checking.
- It is strongly typed language.
- Pascal offers functions and procedures in the programs.

Q9. Which data types are used in Pascal?

Data types are basically used as a term which defines the type of data that stored in the variable. In Pascal, five types of data types are used. Here we showed a table of data types with examples to simplify for you:

Name	Type of Data	Example
Real	Have decimal numbers	4.12.0.52,1.0004
String	Includes Text	"Welcome", "name"
Character	Holds a single character	'd', 'L', 'S'
Integer	Have whole numbers	5,1487,240
Boolean	Holds true or false	TRUE, FALSE

Q10. What is the pointer and explain different pointer concepts in Pascal?

A pointer is a dynamic variable and its value it the address of some other variable. This means it shows the address of memory location of another variable. You need to learn the pointer because some tasks are easily performed with the use of it. Sometimes, the tasks like dynamic memory location can't be performed without

the use of a pointer. You must declare the pointer like other variables or constants, to use in the program later. There are different pointer concepts in Pascal:

1. **Arithmetic Pointer:** The operations such as +, -, increment and decrement can be performed on pointers.
2. **Pointer to Pointer:** pascal allows to have pointer on another pointer and so on.
3. **Array of Pointers:** Array is used to define the number of pointers in it.
4. **passing Pointer to Subprogram:** Pascal allows to pass the pointer as an argument to a subroutine or subprogram. It can be passed by reference or by address.
5. **Return subprogram from subprogram:** Pascals allow the subprogram to return a pointer.

Q11. How can you declare the string in Pascal?

The string is defined as the sequence of characters having an optimal size prerequisite. The characters consist of numbers, letters, whitespaces or a combination of all. Pascal allows many methods to declare or define a string in the program. These are:

- As a Character Array
- As a string variable
- As a short string
- As a null terminated string
- As an AnsiString

Q12. What is the difference between the standard Pascal and Modern Pascal?

- Modern Pascal provides more securities and fewer ambiguities during programming and coding. Whereas Standard Pascal provides more ambiguities, errors and fewer securities while coding or programming.
- Modern Pascal offers the removal of the limit of any string length if the size is defined. Whereas, standard Pascal doesn't allow the removal of limit of length.
- Modern Pascal makes advancement over the standard Pascal by providing the var parameters that are used in functions and procedures.
- Modern Pascal provides backward compatibility with the use of parameters in functions and procedures. But standard Pascal doesn't provide backward compatibility.
- Modern Pascal provides definitive compatibility with the use of symbols, whereas Standard Pascal doesn't provide any compatibility related to symbols.

Q13. What is Turbo Pascal and how it is different from standard Pascal?

Turbo Pascal is a comprehensive software development system released in the year 1983. It is developed for the Pascal Programming. Developed by Borland, it runs on a variety of Operating systems such as CP/M, PC-DOS, and MS-DOS. It is the first software development system which has editor, linker and compiler all in one application. The difference between Turbo Pascal and Standard Pascal is given below:

- Turbo Pascal is more efficient, faster and doesn't require any support code for compatibility factor

whereas Standard Pascal doesn't, acknowledge the record descriptions for the standard methodology.

- Turbo Pascal uses the dynamic variables and pointers whereas Standard Pascal doesn't use it. Turbo pascal is used it to show the standard procedures like new, mark and release.
- Turbo Pascal uses Read and Write procedures in place of Get and Put methods. Read and Write procedures help in extending the functionality of the I/O methods.
- Turbo Pascal uses local variables that are handled in the recursion phase. It is also used to pass the recursive calls to others. But standard Pascal doesn't use recursion in its programs.

Q14. Which types of loops are used in Pascal?

When you write a program, there may be situation generates which requires a number of times to execute the same block of code. This time you use the loops that can be used in many ways. In general, the loop runs with a sequence order. The different types of loops used are shown below:

- While-do: It first tests the condition then execute the statement. It repeats the statement or a group of statements when the condition holds true and halts when condition becomes false.
- For-do loop: It abbreviates the code for the variable and repeats the multiple statements until the testing variable become false.
- Repeat-until loop: This is the same as while statement but it checks the condition at the end of the loop body. This means that the statements will execute at least once.
- Nested-loops: in this, you can use any loop inside any other loop.

Q15. Is pascal designed to be teaching language?

We often heard from some developers who say Pascal is a toy language. Pascal is made only to teach you but not used for real programming applications. This is how much truth you can check by the words said by Niklaus himself "At times, it has been asserted that Pascal was planned as a language used for teaching. This is not wrong but you can't ignore that its purpose is not only teaching. In fact, I don't believe the use of tools and formalisms in teaching that is too inadequate for any tasks". In short, we can say that it is easy to learn but can't title it that it is designed only for teaching.

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