1) What is the Rust programming language?

2) Briefly explain the features of the Rust language?

3) In which areas is the Rust language more widely used?

4) What is the difference between the Rust language and the C and C++ languages?

5) Explain about the Cargo tool?

6) Explain about the popular RustRover IDE?

7) Name a few programs written in the Rust language?

8) Briefly explain the capabilities of the Rust language in Concurrency and Parallelism with examples?

9) Explain about the possibility of programming the Rust language for Microcontrollers and Robots?

10) Explain about the concept of Ownership in the Rust language?

11) Explain the concept of Smart Poiter in the Rust language?

12) Explain about the use of the Rust programming language in the field of Smart Contracts?

13) Explain about the use of the Rust programming language in the field of Blockchain?

14) Explain about the use of the Rust programming language in the field of Artificial Intelligence?

15) Name the test writing tools in Rust and explain their differences?

16) Name the web programming tools in Rust and explain their differences?

17) Explain the error handling mechanism in Rust with an example?

18) Explain the capabilities of Rust in Functional Programming with an example?

19) Is Object Oriented Programming possible in Rust? Explain with an example?

20) Name the Machine Learning libraries in Rust? Write a simple example?

21) Explain Multi-Threading programming in Rust with a simple example?

22) Explain Parallel Programming in Rust with a simple example?

23) Explain the concept of Meta Programming (Profiling, Reflection) in Rust with a simple example?

24) What is Rust's solution to Memory Safety problems? Explain with a simple example?

A. Use after free

B. Double free

C. Memory leaks

D. Buffer overreads/overwrites

E. Null pointers

F. Data races

19) Explain the possibility of calling code from other languages ​​in Rust?

20) Explain the possibility of calling Rust code in languages ​​such as Java, C#, C and Python?

21) What is Lazy Loading? Explain with an example in Rust?

22) Explain Asynchronous Programming in Rust with an example?

23) Implement Binary Search Tree data structure in Rust?

24) Implement AVL Tree data structure in Rust?

25) Implement Max heap-Tree data structure in Rust?

26) Write a RESTful API service to process JSON requests?

27) Write a simple service to process requests based on the gRPC protocol?

28) Write a simple service to process requests based on Web Assembly?

29) Explain Socket Programming in Rust with an example?

30) Write a program in Rust that performs CRUD operations on a database?

31) Write a program using an ORM in Rust to perform CRUD operations on a database?

32) Name the Parsing libraries in Rust? And explain the function of a Parser in the form of an example?

33) What is the concept of Regular Expression? Explain in Rust with an example?

34) What is the function of the SysInfo library in Rust? Explain with a simple example?

35) What is the function of the native-windows-gui and Windwos libraries in Rust? Explain with a simple example?

36) Write a program to perform simple processing on an Image?

37) Write a program to perform a simple process on an Audio?

38) Write a program to perform a simple process on a Video?

39) Write a program to download a file from the Internet?

40) Write a program to read and write a simple CSV file?

41) Write a program to read and write a simple Excel file?

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