

Quiz 1 (Web API)

Outcome 1

* Indicates required question

1. **Name ***

2. **1- The Internet is often referred to as the "Information Superhighway."**

* 1 point

Mark only one oval.

☐ True

☐ False

3. **2- The Internet primarily operates on a centralized network architecture.**

* 1 point

Mark only one oval.

☐ True

☐ False

4. **3- The TCP/IP suite governs how data is transmitted, routed, and received across the Internet.**

* 1 point

Mark only one oval.

☐ True

☐ False

5. **4- Websites are primarily designed for machine-to-machine interaction.** * 1 point

Mark only one oval.

- ☐ True
☐ False

6. **5- Web services facilitate machine-to-machine communication.** * 1 point

Mark only one oval.

- ☐ True
☐ False

7. **6- Web services typically interact with other software applications or systems without direct human involvement.** * 1 point

Mark only one oval.

- ☐ True
☐ False

8. **7- Websites primarily use SOAP or REST for communication between web servers and web browsers.** * 1 point

Mark only one oval.

- ☐ True
☐ False

9. **8- SOAP relies on JSON for its message format.** * 1 point

Mark only one oval.

- ☐ True
☐ False

10. **9- REST is an architectural style that emphasizes stateless communication.**

* 1 point

Mark only one oval.

- ☐ True
☐ False

11. **10- REST is generally considered to be less scalable than SOAP due to its heavier messaging format**

* 1 point

Mark only one oval.

- ☐ True
☐ False

12. **11- HTTP defines methods like GET, POST, PUT, and DELETE. ***

1 point

Mark only one oval.

- ☐ True
☐ False

13. **12- In a website, submitting a login form typically involves the HTTP GET method. ***

1 point

Mark only one oval.

- ☐ True
☐ False

14. **13- HTTP headers are used to provide metadata along with HTTP requests or responses.** * 1 point

Mark only one oval.

- ☐ True
☐ False

15. **14- Setting the Content-Type header to "application/json" ensures the client understands the response format is XML.** * 1 point

Mark only one oval.

- ☐ True
☐ False

16. **15- JSON uses tags to define data elements and attributes.** * 1 point

Mark only one oval.

- ☐ True
☐ False

17. **16- JSON is generally more concise and easier to read than XML.** * 1 point

Mark only one oval.

- ☐ True
☐ False

18. **17- XML is often preferred for web APIs and modern data interchange.** * 1 point

Mark only one oval.

- ☐ True
☐ False

19. **18- ASP.NET is a web application framework developed by Google.** * 1 point

Mark only one oval.

☐ True

☐ False

20. **19- The HTTP GET method is commonly used for the "Create" operation in CRUD.** * 1 point

Mark only one oval.

☐ True

☐ False

21. **20- The HTTP PUT method replaces the entire resource on the server with a new representation.** * 1 point

Mark only one oval.

☐ True

☐ False

22. **21- Entity Framework Core (EF Core) is an object-relational mapping (ORM) framework** * 1 point

Mark only one oval.

☐ True

☐ False

23. **22- In EF Core, a data context represents a session with the database and acts as a bridge between the application and the database.** * 1 point

Mark only one oval.

☐ True

☐ False

24. **23- EF Core only supports one type of database provider, SQL Server.** * 1 point

Mark only one oval.

☐ True

☐ False

25. **24- Eager loading and explicit loading in EF Core can help reduce the number of database queries and improve performance** * 1 point

Mark only one oval.

☐ True

☐ False

26. **25-The EF Core "Code First Approach" means the database schema is generated based on the entity classes and their configurations** * 1 point

Mark only one oval.

☐ True

☐ False

27. **26- RESTful APIs require maintaining client sessions on the server. *** 1 point

Mark only one oval.

☐ True

☐ False

28. **27- Stateless APIs store user data across requests. *** 1 point

Mark only one oval.

☐ True

☐ False

29. **28- Lazy loading loads related data only when explicitly accessed. *** 1 point

Mark only one oval.

☐ True

☐ False

30. **29- HTTPS ensures both data encryption and integrity. *** 1 point

Mark only one oval.

☐ True

☐ False

31. **30- Explicit loading requires an additional call to load related data. *** 1 point

Mark only one oval.

☐ True

☐ False

32. **31- PUT method is used to partially update an existing resource. *** 1 point

Mark only one oval.

- ☐ True
☐ False

33. **32- HTTPS is optional for securing data in production environments. *** 1 point

Mark only one oval.

- ☐ True
☐ False

34. **33- Eager loading may reduce the number of database calls. *** 1 point

Mark only one oval.

- ☐ True
☐ False

35. **34- The PATCH method is used to fully replace a resource. *** 1 point

Mark only one oval.

- ☐ True
☐ False

36. **35- SOAP follows a strict messaging structure with predefined standards, while REST is more flexible and relies on standard web protocols and formats. *** 1 point

Mark only one oval.

- ☐ True
☐ False

37. **36- SOAP messages are typically encoded using C#, while REST commonly uses formats like Python or XAML.** * 1 point

Mark only one oval.

- ☐ True
☐ False

38. **37- SOAP is a protocol for exchanging structured information in the implementation of web services. It relies on XML for message format and typically uses HTTP or SMTP as transport protocols.** * 1 point

Mark only one oval.

- ☐ True
☐ False

39. **38- REST is an architectural style for designing networked applications. It emphasizes stateless communication and resource-based interactions, typically using standard HTTP methods (GET, POST, PUT, and DELETE).** * 1 point

Mark only one oval.

- ☐ True
☐ False

40. **39-TCP/IP Stands For (Transmission Control Protocol/Internet Protocol)** * 1 point

Mark only one oval.

- ☐ True
☐ False

41. **40- XML is a lightweight data interchange format that is easy for humans to read and write and easy for machines to parse and generate. It is commonly used in web APIs for transmitting data between the server and client.** * 1 point

Mark only one oval.

- ☐ True
- ☐ False

42. **41- JSON L is a markup language used for encoding structured data in a human-readable format. It is widely used for data interchange and configuration purposes.** * 1 point

Mark only one oval.

- ☐ True
- ☐ False

43. **42- XML uses tags to define data elements and attributes, while JSON relies on key-value pairs and arrays.** * 1 point

Mark only one oval.

- ☐ True
- ☐ False

44. **43- XML is often used for configurations, data exchange in legacy systems, and document markup, while JSON is preferred for web APIs and modern data interchange.** * 1 point

Mark only one oval.

- ☐ True
- ☐ False

45. **44- ASP.NET is a web application framework developed by Microsoft for building dynamic web applications and web services.** * 1 point

Mark only one oval.

- ☐ True
☐ False

46. **45-Websites are primarily used for application-to-application communication.** * 1 point

Mark only one oval.

- ☐ True
☐ False

47. **46-SOAP web services use XML for data exchange.** * 1 point

Mark only one oval.

- ☐ True
☐ False

48. **47-The HTTP POST method is used to retrieve data from a server.** * 1 point

Mark only one oval.

- ☐ True
☐ False

49. **48-In a REST API, JSON and XML are commonly used data formats.** * 1 point

Mark only one oval.

- ☐ True
☐ False

50. **49-Entity Framework Core is used for database migrations and query execution in ASP.NET Core.** * 1 point

Mark only one oval.

☐ True

☐ False

51. **50- Visual Studio is not required for developing ASP.NET Core Web APIs.** * 1 point

Mark only one oval.

☐ True

☐ False

52. **51-The PUT HTTP method in web services is used for deleting resources.** * 1 point

Mark only one oval.

☐ True

☐ False

53. **52-CRUD operations map to HTTP verbs: Create (POST), Read (GET), Update (PUT), Delete (DELETE).** * 1 point

Mark only one oval.

☐ True

☐ False

54. **53-The SOAP protocol allows communication between different operating systems using standard protocols.** * 1 point

Mark only one oval.

- ☐ True
- ☐ False

55. **54-Entity Framework Core does not support relational databases.** * 1 point

Mark only one oval.

- ☐ True
- ☐ False

56. **55-Which of the following is a key difference between web services and websites?** * 1 point

Mark only one oval.

- ☐ (a) Web services provide interactive user interfaces, while websites focus on data exchange.
- ☐ (b) Websites are accessed through browsers, while applications primarily access web services.
- ☐ (c) Web services are server-side applications, while websites can only exist on the client-side.
- ☐ (d) Websites are only used for public APIs, while web services are private.

57. **56-What is the main difference between SOAP and REST web services?**

* 1 point

Mark only one oval.

- ☐ (a) SOAP is used for internal networks, while REST is only used on the internet.
- ☐ (b) REST is protocol-independent, while SOAP is based on XML and HTTP.
- ☐ (c) SOAP is a protocol, while REST is an architectural style.
- ☐ (d) REST supports more data formats, while SOAP only supports XML.

58. **57-Which HTTP method is used to retrieve data from a web service?** * 1 point

Mark only one oval.

- ☐ (a) POST
- ☐ (b) PUT
- ☐ (c) GET
- ☐ (d) DELETE

59. **58-Which of the following is a common HTTP header in web services?**

* 1 point

Mark only one oval.

- ☐ (a) Content-Type
- ☐ (b) Accept-Language
- ☐ (c) User-Agent
- ☐ (d) All of the above

60. **59-Which format is typically used in REST web services for data exchange?** * 1 point

Mark only one oval.

- ☐ (a) XML
- ☐ (b) JSON
- ☐ (c) CSV
- ☐ (d) Both XML and JSON

61. **60-Which of the following tools is required for developing ASP.NET Core Web APIs?** * 1 point

Mark only one oval.

- ☐ (a) Eclipse
- ☐ (b) Visual Studio
- ☐ (c) Sublime Text
- ☐ (d) NetBeans

62. **61-Which HTTP verb corresponds to CRUD's 'Update' operation?** * 1 point

Mark only one oval.

- ☐ (a) GET
- ☐ (b) POST
- ☐ (c) PUT
- ☐ (d) DELETE

63. **62-What is the purpose of Entity Framework Core in ASP.NET Core Web APIs?** * 1 point

Mark only one oval.

- ☐ (a) It is used to handle user authentication.
- ☐ (b) It is used to manage the connection with the database and perform CRUD operations.
- ☐ (c) It handles the configuration of IIS for the API.
- ☐ (d) It serves as the graphical user interface for APIs.

64. **63-Which database format is supported by Entity Framework Core?** * 1 point

Mark only one oval.

- ☐ (a) NoSQL only
- ☐ (b) Relational databases (SQL)
- ☐ (c) In-memory databases only
- ☐ (d) All of the above

65. **64-Which of the following is required for deploying an ASP.NET Core Web API on IIS?** * 1 point

Mark only one oval.

- ☐ (a) Installing the .NET Core hosting bundle.
- ☐ (b) Configuring SOAP and REST services in Visual Studio.
- ☐ (c) Installing Visual Studio extensions.
- ☐ (d) Installing a SQL Server plugin.

66. **65- What is the core protocol suite the Internet is built upon? ***

1 point

Mark only one oval.

- ☐ A. HTML/CSS
- ☐ B. TCP/IP
- ☐ C. SOAP/REST
- ☐ D. XML/JSON

67. **66-Which of the following activities is **NOT** listed as one the Internet facilitates?**

* 1 point

Mark only one oval.

- ☐ A. E-commerce
- ☐ B. Information retrieval
- ☐ C. Quantum computing
- ☐ D. Collaboration

68. **67-What is the primary function of web services? ***

1 point

Mark only one oval.

- ☐ A. To provide information to human users through a web browser.
- ☐ B. To serve as a platform for showcasing products.
- ☐ C. To facilitate interoperable machine-to-machine interaction over a network.
- ☐ D. To host collections of web pages.

69. **68-Web services commonly use which protocols for communication?**

* 1 point

Mark only one oval.

- ☐ A. HTTP and HTML
- ☐ B. SOAP or REST
- ☐ C. TCP/IP
- ☐ D. FTP

70. **69-Which architectural style for designing networked applications emphasizes stateless communication and resource-based interactions?**

* 1 point

Mark only one oval.

- ☐ A. SOAP
- ☐ B. REST
- ☐ C. XML
- ☐ D. JMS

71. **70-Which data format is **NOT** typically used by RESTful web services but is often used by SOAP?**

* 1 point

Mark only one oval.

- ☐ A. JSON
- ☐ B. XML
- ☐ C. Plain Text
- ☐ D. YAML

72. **71- What is the communication style of SOAP characterized as? *** 1 point

Mark only one oval.

- ☐ A. Simpler and more lightweight
- ☐ B. Stateless and flexible
- ☐ C. Formal and rigid
- ☐ D. Resource-based

73. **72-What does XML use to define data elements and attributes? *** 1 point

Mark only one oval.

- ☐ A. Key-value pairs
- ☐ B. Arrays and lists
- ☐ C. Tags
- ☐ D. Curly braces

74. **73- What is the primary use case for JSON? *** 1 point

Mark only one oval.

- ☐ A. Configurations
- ☐ B. Data exchange in legacy systems
- ☐ C. Document markup
- ☐ D. Web APIs and modern data interchange

75. **74-Which dedicated framework does ASP.NET offer for building RESTful web services and APIs? *** 1 point

Mark only one oval.

- ☐ A. [ASP.NET](#) Forms
- ☐ B. [ASP.NET](#) MVC
- ☐ C. [ASP.NET](#) Web API and [ASP.NET](#) Core
- ☐ D. [ASP.NET](#) Azure

76. **75-In the context of EF Core, what is responsible for managing entities, tracking changes, and executing queries?** * 1 point

Mark only one oval.

- ☐ A. Database Provider
- ☐ B. Entity Classes
- ☐ C. Data Context (DbContext)
- ☐ D. LINQ Queries

77. **76-What is the term for the EF Core feature that loads related entities when they are accessed for the first time?** * 1 point

Mark only one oval.

- ☐ A. Eager Loading
- ☐ B. Lazy Loading
- ☐ C. Explicit Loading
- ☐ D. Query Optimization

78. **77-EF Core allows querying the database using the syntax of which technology?** * 1 point

Mark only one oval.

- ☐ A. SQL (Structured Query Language)
- ☐ B. XML (Extensible Markup Language)
- ☐ C. LINQ (Language Integrated Query)
- ☐ D. T-SQL

79. **78-In the EF Core code-first approach, how is the database schema generated?** * 1 point

Mark only one oval.

- ☐ A. By writing raw SQL scripts.
- ☐ B. By importing an existing database file.
- ☐ C. Based on the entity classes and their configurations.
- ☐ D. Using a graphical database design tool.

80. **79-What allows you to evolve the database schema over time while preserving existing data when using the EF Core code-first approach?** * 1 point

Mark only one oval.

- ☐ A. Query Optimization
- ☐ B. Eager Loading
- ☐ C. Migrations
- ☐ D. Connection Pooling

81. **80-Which technique is used in EF Core to efficiently perform multiple database operations in a single round trip?** * 1 point

Mark only one oval.

- ☐ A. Lazy Loading
- ☐ B. Compiled Queries
- ☐ C. Batching and Bulk Operations
- ☐ D. Database Indexing

82. **81--..... is an object-relational mapping (ORM) framework that enables developers to access and manipulate data from a database using object-oriented programming.** * 1 point

Mark only one oval.

- ☐ a) Migration
- ☐ b) Api.net
- ☐ c) Entity framework core
- ☐ d) Connection string

83. **82--..... is a web application framework developed by Microsoft for building dynamic web applications and web services.** * 1 point

Mark only one oval.

- ☐ a) Web service
- ☐ b) Asp.net
- ☐ c) A and b
- ☐ d) PHP

84. **83- Which data loading strategy loads related data when requested?** * 1 point

Mark only one oval.

- ☐ a) Eager
- ☐ b) Lazy
- ☐ c) Explicit
- ☐ d) None

85. **84- Which status code indicates "Unauthorized" access? ***

1 point

Mark only one oval.

- ☐ 200
- ☐ 500
- ☐ 401
- ☐ 404

86. **85- Which is NOT a valid data loading strategy? ***

1 point

Mark only one oval.

- ☐ Eager
- ☐ Lazy
- ☐ Implicit
- ☐ Explicit

87. **86- Which HTTP status code represents resource creation? ***

1 point

Mark only one oval.

- ☐ 200
- ☐ 201
- ☐ 400
- ☐ 500

88. **87- Which HTTP status code indicates a server error? ***

1 point

Mark only one oval.

- ☐ 404
- ☐ 200
- ☐ 500
- ☐ 201

89. **88- What is one of the advantages of using ASP.NET for Web Services development?**

* 1 point

Mark only one oval.

- ☐ A. It only supports the SOAP protocol for communication.
- ☐ B. It exclusively uses JSON for message formatting.
- ☐ C. It is a lightweight data interchange format.
- ☐ D. It provides an integrated development environment, security features, and scalability options for building reliable and scalable web services.

90. **89- In the context of Entity Framework Core (EF Core), what is the primary purpose of LINQ Queries?**

* 1 point

Mark only one oval.

- ☐ A. To define relationships between entity classes.
- ☐ B. To manage the history of applied database migrations.
- ☐ C. To allow developers to write queries against entity classes, which EF Core then translates into SQL queries to retrieve data.
- ☐ D. To replace the entire resource with a new representation on the server.

91. **90- According to the comparison, what is a key difference in Scalability between SOAP and REST web services?**

* 1 point

Mark only one oval.

- ☐ A. They are equally scalable across all platforms.
- ☐ B. SOAP is typically more scalable due to its reliance on HTTP status codes.
- ☐ C. REST is typically more scalable due to its lightweight nature and stateless architecture.
- ☐ D. SOAP is generally considered less scalable due to its ability to use various transport protocols.