**------------------------------------- DART ------------------------------------------------------**

**1.** dart is an open-source programming language developed by google.

2. the SDK for dart has the **dart virtual machine** compilar and a utility called **dart2js**.

3. **Dart run as an interpreted language which is supported by Dart Virtual Machine.**

**4.** the syntax of dart programming language follows simple C-style syntax.

5. dart is considered as an open source object-oriented programming language that supports an extensive range of programming utilities such as classes , interfaces, abstraction and collections.

6. **Dart syntax is quite similar to c# , java and javascript**.

7. Dart supports all modern browsers such as chrome, mozilla firefox , internet explorer.

**8. Ahead of time compiler is utilized when an application is ready for deployment either on the server, App store or the play store.**

9. **ahead of times compiles the dart code into javascript code before the browser downloads and runs the code.**

10. Dart can also be installed using **chocolatey.**

11. comments is a code that is not readable by computer.

12. identifiers is a generic name for elements such as variables , functions , arrays ,lists

|  |  |
| --- | --- |
| **Valid identifiers** | **Invalid identifiers** |
| lastName | Last Name |
| Last\_name | Last-name |
| Sum1 | Var |
| \_name | 1name |

13. **the main( ) function is an entry point to dart application.**

15. list can only hold an ordered group of items.

16. **values separated from one another using commas**

17. types of maps:

* Hashmap
* Linkedhashmap
* Splaytreemap

18.**dynamic keywords do not have any predefined datatype.**

19.**the final keyword is utilized for the creation of immutable objects in dart.**

20. **operator is a symbol which is used to perform specific operations on operands.**

21 . if statement allow a block of code to be executed only when a specified condition is true.

22 .if else if checks multiple conditions.

23. looping statements are used to execute a block of code multiple times.

24. an entity can be any real world object.

25. dart doesnot have interface keyword

26. types of constructors in dart:

* Default Constructor
* Parameterized constructor
* Name constructor

27. **dart:core library enables support for collections in dart and can be added to a dart script using import keyword.**

28.HashSet : hash table that has an unordered set implementation.

Hashmap: hash-table map implementation that is unordered.

29: **LinkedHashMap can store only one null key and multiple null values.**

30. **LinkedHashSet can store only one null value.**

31. **the elements or the collection of objects can be obtained using for and foreach loops by which all the elements in a list or map can be iterated.**

32. **exception class occur in dart must be handled with the exception handlers, thus preventing the program from stopping or terminating abruptly.**

33. **synchronous** process waits for an event or operation to be completed before it starts to execute another event or process

34. readLineSync( ) is a synchronous method.

35. stdin.readLineSync( ) is used to take the user input by importing the dart:io library.

36.**asynchronous programming fixes the chain of events in a programming cycle.**

37. **future** class in dart:async library is used to get the result of computation after the asynchronous task has been done or executed.

38. **the asynchronous function returns future, which contains the result.**

39. Future function has three states:

* Uncompleted : output is closed
* Completed with value: output is open and data is ready
* Completed with an error : the output is open and something went wrong.

40. **future delayed creates a future which runs its computation after a delay,**

**41. await keyword holds the currently running function until the result is ready.**

**42. the call-back functions help to execute the next line of code if any error occurs while executing an asynchronous program.**

**43. synchronous process waits for an event to be completed before it starts to execute another event.**

**44. the directly and structure for a package is automatically created in dart when the create command is utilized.**

**45. all dart applications have a pubspec.yaml file and this file includes the metadata.**

**46.**parsing json to model class :- **the values in the json data should be studied and a dart class with all the values in the json object should be created.**

47.key-value pairs :- ({})

48. lists :- ([])

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-------------code snippets---------------

1.Shows a simple example of defining variables for a number and a string respectively:

|  |
| --- |
| Void main( ) {  Int x = 5;  string y = “daniel”;  } |

2. example of a comment:

|  |
| --- |
| void main () { // this line is commented  int a = 10;  } |

3. how to declare a variable while utilizing keyword and show how to assign a value to the same variable.

|  |
| --- |
| Syntax:  final variable\_name = variable\_value ;  void main( ) {  final name = ‘david’;  print (name);  } |

4.example of a conditional operator:

|  |
| --- |
| void main () {  var n1 = null ;  var n2 = 15;  var result = n1 ?? n2 ;  print (result) ;  }  Output :  15 |

5. keywords applying oop concepts:

Class,implements,extends, @override,

6. creating a package in dart at the terminal.

Dart create –template=package-simple mypackage