Recap Day 3 and Day4

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1. How many types of loops are there in C#

for ,while dowhile, eachfor

1. What are loops –

to repete set of statements many times

1. difference between for and while-

in for loops the initialization, condition and increments are written during declaration of loop,

in while loop, initialization is done before while loop and condition is mentioned with loop

Ans:  
done in single line for loop

Done is diiffrent value

1. difference between while and do while

in while first it check the condition and then execute the code and in dowhile first time it the loops is directly executed and then after check the condition

1. foreach(var a in arr) what is a here index or value

value

6. Predict the output

int i=1;

while(i<=10)

{

Console.WriteLine($"{i}");

}

Infinte loop- i is always 1 and 1 < =10

7. Predict the output

int i=1;

do

{

Console.WriteLine($"{i}");

i++;

}

while(i<=10)

error after while there is no ;

8. Predict the output

for(int i=0;i<=10;i++);

{

Console.WriteLine($"{i}");

}

Compilation Error (;)

9. What is a static method

Method declare with a keyword static static

Static method is used to access static var

It can be executed without an object

10. what is a static variable

Variable is declared with static keyword

And all objects will share same memory allocation and same value

11. what is a static class

In static class all the member - functions, variable are statics

12. where do you initialize static variable

Inside the static constructor

13. Types of Dattypes

Value types- values are stored in memory

reference types – address of values are stored in memeory

14. What is boxing and unboxing

Converting the value type to reference type **is boxing/implicit typecasting**

int num=10;

Object obj1 = num

converting the value type to reference type is **unboxing/explicit**

Object obj1 = 10;

Int num = (int) obj1;

15. What is an array and how to create an array

Array is collection of homogeneous data

Int[] array = new int[5]

Array[0] =4 … array[4] =8

Int[] array = new int[5]{1,2,3,4,5}

Int[] array = new int[]{1,2,34,5}

Int[] array = {1,,2,3}

16. int arr = new int[5]{1,2,3,4,5,6};

What does the above code do - Compilation error

17. What is stack and heap

Stack – values are stroed in stack LIFO

Heap- reference type are stored in heap

18.what is call by value

Call a function by passing values

Muliple memory location are created

Changes tomparameter will not reflected back to caller

19. what is call by reference

Call a functiomn by passing

Parameter is passed by reference…

It will not create copy of memory.  
Changes in parameters will reflect in the calling variable.  
It is faster as it does not have to create copies of memory.  
ref is a keyword for reference.

20. difference between call by value and call reference

In Call by value it create the copies of memory and it wasting the memories

21. What are out parameters and why and when do you use them

Function to return many values we use out parameters

Out parameter is used to return the many data of diff datatpes outside the fun

22. what are named parameters

with named parameter we can call functions with parameter name, in any sequence and order

23. What is object oriented programming and why

Programming based on objects.  
  
to Create real world applications.

24. Two important components of OOP

Class object

25. what is a class

Class is just a blueprint or a design.

A class is a real world entity.

Class is a common name given to a group of things with same features and same functionality.  
Student, Employee, Organization,Vehicle, Product, Car, Bird, Book  
Class does not exist in real world.

26. what is an object

Instance of a class(copy of a class)  
Each object/instance has it's own memory, own value, own copy of member data.  
class obj =new class() this is the way to create an object.

27. syntax to create an object - class obj =new class()

28. features of an object

1. Each object has a unique id.  
2. Each object exists in particular state.  
3. Object can interact with other object(Messages/ Function calls)

29. features of oopl

1. Abstraction.  
2. Encapsulation  
3. Inheritance.  
4. Polymorphism.

30. what is abstraction

Gathering the required details.

31. What is encapsulation and how is it implemented

:Hiding the details(private access specifier is used to implement encapsulation).

Wrapping data and function

32. What is inheritance

Resuing an existing program into a new program

33. Does dotnet supports multiple inheritance

no

34. Types of polymorphism give examples

Compile/static – constucrot overloading fun overloading operator overloading

and runtime/dyanamic

abstract class

virtual fun

35. what is a constructor and why

( Constructor **– bydefault private have to make it public)**

Special method

Used for assign (initialization ) member data

Does not have create type or void

36, what is auto implemented object

Classname obj = new Classname(){ id =1};

Classname obj = new Classname(){ id =1, name= “ken”};

Constructor auto implemented the constructor

37. What is property and why

are used to access private members outside the class

38. parts of a property

Get – return the data

Set – assign the value

39. Types of property

Read write

Only read

Only write

40. auto implemented property

Prop tab

Public int id{get;set;}

If class is non static but fun is static so for calling the fun we don’t need to object.