 a computer program tends to access same set of memory locations for a particular time period.

Locality of reference is accessing a value or related storage frequently.

And the types are temporal, spatial and sequential.

Temporal: It tells us whether memory locations in a program are likely to be accessed again in the near future. A method has high temporal locality if it is called repeatedly in a short period of time.

spatial : If the storage has been accessed then likelihood of accessing the storage nearby that, is high.

sequential: storage is accessed sequentially in ascending or descending order.

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Static:when a member is declared static,it can be accessed before any of the object of the class being created and without referencing to that object.

Lets talk about a method, we know when we access data and something is not static is belongs to object

Static block run only once when the first object is created .

Run time polymorphism-overriding  
Parent object = new Child();

Here which method is to be called depends on right hand side(also known as upcasting)

The object type defines which one to run i.e. the right one

The reference type defines which one to access i.e. the left one

Parent says you can access the function  
object determines which version is to call

How java determines this?

It uses dynamic method dispatch.it is just a mechanism by which a call to overridden method is resolved at runtime rather than compile time.

We can use final keywords to prevent method overriding.

After compilation ,byte substitution and program is running then the overriding determines which one to run, this is also known as late binding

And the calls that can be resolved at compile time (eg). Calling the final method from child class which cannot be overridden called early binding.

You can also use final to prevent inheritance. Whenever you declare a class final ,it implicitly declares method as final as well.

Can we override static method?

No, we cannot

Default data members cannot be accessed outside the package.

Private cannot be accessed outside the file.

Protected members can be accessed in the outside package if it is accessed by subclass

Ex. Subclass obj = new Subclass();

Obj.num

A obj = new Subclass();, A obj = new A(); cannot be accesed

A is outside package class

Hash code of an object is the unique representation of object via a number.

We can override it with object class constructor

Hashcode is not the address . it is a random unique value.

System.out.println(obj instanceof Object)  
prints true or false;

System.out.println(obj.getClass());

Gives the class name