# Omondi jeff

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# Assignment 3

1.Differentiate between method overriding and method overloading

Overloading occurs when two or more methods in one class have the same method name but different parameters.

Overriding occurs when two methods have the same methods name and parameters

# Example of overloading

Class Dog {

Public void bark () {

System .out. print ln(“woof”);

}

//overloading method

Public void bark ( int num ) {

For ( int i =0; i<num; i++

System .out. print ln(“woof”);

}

}

# Example of overriding

Class Dog {

Public void bark () {

System .out. print ln(“woof”);

}

}

Class Hound extends Dog {

Public void sniff () {

System .out .print ln (“sniff”);

}

Public void bark () {

System .out. print ln (‘bowl’);

}

}

## 2.Difference between instantiation and initialization

Instantiation: This is when the memory is allocated for an object. This is what the new keyword is doing. A reference to the object that was created is returned from the new keyword.

Initialization: This is when we put into the memory that was allocated. This is what the Constructor of the class does when using the new keyword.