1. Write what is meant by operator overloading and method overriding with examples.

**Answer:** operator overloading and method overriding with examples:

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| Operator Overloading | Method Overriding |
| Operators overloading redefine operators for custom types | Method overloading allows us to redefine inherited method behavior |
| Operator overloading allows us to define custom behavior for operators (like +, -, \*, /)  For user-defined classes. | Method overloading allows us to inheritance parent behavior and custom the method |
| Use in usually in the same class | Use in between parent and child class |
| Can return different return types | Must have return same return type that has in parent |
| Example:   def \_\_mul\_\_(self,other): # overloading          return self.weight \* other.weight  shahin = Programmer('Shahin',21,16,68)  meherun=Programmer('Meherun',16,30,50)  print (shahin \* meherun) | class Person:      def eat(self):          print ('eating rice and chicken')  class Programmer (Person): **child class**      def eat(self):          print ('eating healthy food') |
| It resolved compile time | It resolved runtime |