

10. Because the converter is an object reference variable of interface type. Such variables can refer to any instance of any class that implements the interface. But it can call only those methods of such classes which are declared in the interface. In this case, the convert method is declared in the interface as well as defined in the classes that implemented it. That is why it is possible to call the convert method.

11. The object converter fails to call the isHot or isFast method because the converter object only has the knowledge of the methods that are declared in the interface. That is why converter doesn't fail while calling the convert method. But as methods like isHot and isFast are not declared in the interface, that's why it fails to call the same.

12. When we typecast the converter from an interface type to class type reference variable, it gains the knowledge about all the methods that are declared in that class. That is why, after typecasting converter doesn't fail while calling the isHot or isFast method.