Miriam Cohen* (mia@cs.bgu.ac.il), Department of Mathematics, Ben Gurion University, Beer Sheva, Israel, and Sara Westreich (swestric@mail.biu.ac.il), Department of Managment, Bar Ilan University, Ramat Gan, Israel. Hopf algebras- a unifying theory. Preliminary report.

We shall start with group algebras kG, where G is a group and k is a field as the basic example of Hopf algebras. We shall discuss how Hopf algebras unify many other objects in mathematics and indicate its importance in Physics and even in computer science. (Received September 07, 2010)