DEDICATION

To those whom were very caring, helping and encourage me for advancement and success.

My Parents and Family

To those who enlighten our way with knowledge since our first steps of education.

My Teachers

To those whom we know, spent with them all the moments, happy times and been touch with all meaning of friendship.

My friends and Colleagues
ACKNOWLEDGMENT

Thanks to God the most merciful creature, without him this work would've not be achieved successfully.

Some people I must have to extend my sincere thanks and appreciation for their participation and cooperation to accomplish this research:

Special thanks to my supervisor Dr. Yahia Abdalla Mohamed; Who had afforded and guided me with all the needed instructions and information to complete the aim of this research and it was really great honor for me to work under his supervision.

I am very thankful to all the teachers of the college of computer science and information technology for their encouragement and cooperation for helping me to complete this research.

Special thanks to all the computer centers of the Sudanese universities and to the managers of these centers through their initiative and willingness to participate in this research such as (Al Neelain University, Al Zaim Al Azhari University, AlGadarf University, Blue Nile University, College of Garden City, Omdurman Islamic University, Red Sea University, Sudan University of Science and Technology, University of Juba, Zalnji university), also for their cooperation and participation to create the small FOSS community on this research; also Special thanks to all the volunteers from these universities who had devoted their leisure time to participate and join as (developers, testers and active users) for developing and releasing FOSS softwares and applications.