

# Magneto Version 0.2

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## Introduction

**Magneto** is an **Object Oriented 32 Bit Protected Mode Operating System**. It's written in C++ and Assembly Language. It's written for **Intel x86 Architecture**. At present it supports only Command Line with very limited support for anything. Development of **Magneto** is steady but is slow. Reason for this is that I am a very busy person. Right now I am in my final semester of Engineering. Therefore, I can't devote much time to programming.

## **Preface**

I fell into OS Development way back in 2004 when I was in 12th Grade. I started with **nOS** as my first Operating System. It was 16 Bit Real Mode Operating System. It was a derivative of Groovy OS. After that I released another version of **nOS** with some more command line options. Then I changed the name of my OS to **koolOS** and released two more versions of it. Though none of them had any support for Memory Management or File System Handling but still it was a great achievement for me.

I still remember those days when I used to sit on my PC for hours mangling with the source code available on the Internet and still achieved nothing. At times I even thought of quitting OS Development but, I think there was something that kept me bound to it. And now I am again back into it.

Now I have again changed the name of my OS to '**Magneto**'. I chose this name because of the character in X-Men. I'll stick to this name now and will develop it. As I have always said 'I'll never quit developing OS'.

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# **Requirements**

Right now there is no specific requirement for **Magneto**. But still the checklist is given below:

## **For Running:**

- A PC with at least i386 Intel Processor.
- At least 4 MB of RAM.
- A 1.44 MB Floppy Disk Drive.
- A 1.44 MB Floppy Disk.
- BOCHS (If you don't want to test it on Real PC)
- VFD (if you don't have a FDD. You will need BOCHS if you don't have FDD)

## **For Compiling:**

- DJGPP for Windows
- Nasm

## **Features**

Right now **Magneto** supports nothing. It only gets loaded up and displays a command prompt. Though it does sets up an environment for OS. It loads up GDT, IDT, keyboard Drivers etc.

Following is a list of what have been completed:

- GDT
- IDT
- Keyboard Driver
- Console Driver
- PIT Driver
- FDC Driver

## What's New

Following are the major features that have been added to **Magneto version 0.2**

- FDC Driver
- Added Shell Commands
- Added Kernel Messaging
- Implemented conio.h
- CPUID

Following are the major changes that have been made to **Magneto version 0.2**

- Cleaned Source Code Hierarchy
- Changed the way status of drivers is displayed during boot process
- Added Screen Shots directory

## **To Do**

As FDC has been implemented, for the next version FAT FS driver has been set as a next milestone to be achieved. Right now a Buggy Floppy Disk Driver has been written. This has to be fixed before implementing FS. Also Memory Management and Removal of Bugs are also going to be a big concern.

So in next version you'll probably see:

- A Memory Manager
- FS Implementation



# **Compilation and Running**

## **To Compile:**

Just run compile.bat. After running it you will get kernel.bin file in Bin folder.

## **To Run in BOCHS:**

Load the Floppy Image from Image folder to a Virtual Floppy Drive using VFD. Copy kernel.bin file to 'magneto' folder in Floppy disk. Run bochsrc.bxrc. Voila here you go!

## **To run on a real PC:**

Format a 1.44mb floppy disk with the magneto.img image file from 'image' folder and copy kernel.bin file to 'magneto' folder on a GRUB formatted floppy disk and reboot your PC from Floppy Disk.

## **Contact information**

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