CSE303 MINIX-LAB
Assignment #1- Minix Login page
Due: 05/12/2022

Installing MINIX Under Ubuntu

Stage 1- Download and create boot image file

- Download the Minix 2 distribution from http://www.minix3.org/previous-versions/gzipped/Intel-2.0.4.tar.gz
  - untar it.
- Make an empty 1440kB floppy disk image with
  - dd if=/dev/zero of=boot.img bs=1k count=1440
- Concatenate the root and usr images from the Minix distribution and write them to the floppy image with
  - cat Intel-2.0.4/i386/ROOT.MNX Intel-2.0.4/i386/USR.MNX | dd of=boot.img conv=notrunc

Stage 2- Create a virtual machine on VirtualBox and configure it

- Name=Minix, Operating System=Other, Version=Other/Unknown
- Base Memory Size=64MB
- Create new hard disk, VDI, Dynamically allocated, 200MB
- Choose Settings/Storage for the new machine
  - Delete the CD drive
  - Add a second hard disk to the IDE controller:
    - Create new disk, VDI, Fixed size, Location=MinixDist.vdi, Size=20MB (it is not 200)
    - Put the image in the same directory as boot.img
  - Add a floppy controller and a floppy drive containing your image boot.img

Stage 3- Prepare the installation disk

- Type = to boot, fill in the /usr device as /dev/fd0p2, login as root.
- Partition (using part command) and format (using mkfs) the 20MB drive that appears as /dev/c0d1 with a single Minix partition (81) that fills the disk. Use the complete 20MB space shown in the column name «size». You should followthe commoand at the bottomm of the screen to change values (+-) and write them (w), quit (q) etc...
- Make a minix file system, and mount it to check.
  - #mkfs /dev/c0d1p0
  - #mount /dev/c0d1p0 /mnt
  - #df
- Type shutdown and close the window to power off the virtual machine.
- Now mount the disk image under Linux, copy the Minix files, and unmount it
  - sudo mount -o loop,offset=2129408 MinixDist.vdi /mnt
  - sudo cp Intel-2.0.4/i386/* Intel-2.0.4/src/* /mnt
  - sudo cp Intel-2.0.4/src/SYS.TAZ /mnt
  - sudo cp Intel-2.0.4/src/CMD.TAZ /mnt
  - sudo umount /mnt

Stage 4- Install MINIX

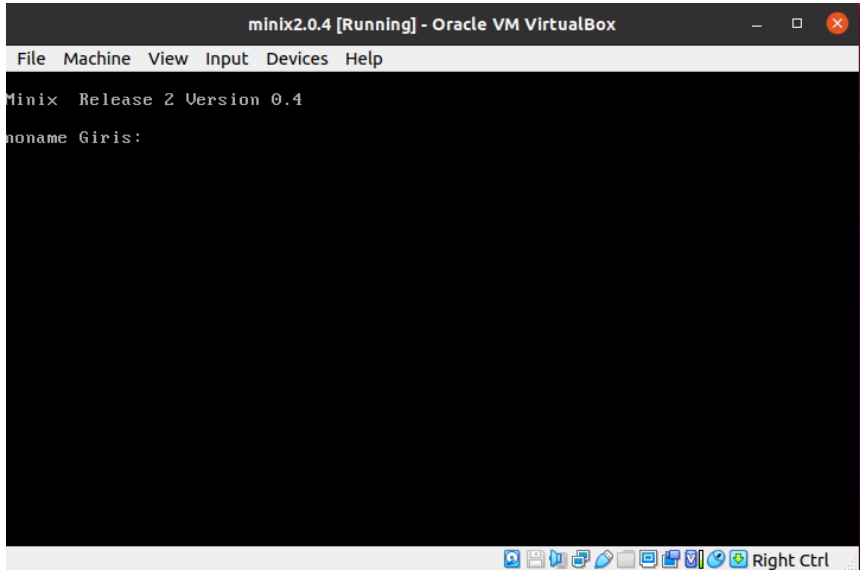
- Boot the virtual machine again.
- Use the command «setup» at / folder
- There's no need to create a swap partition, because 64MB RAM is plenty to run Minix. So it will be 0 size.
- When you get to the stage of installing the rest of /usr and the system source, mount the 20MB disk on /dist, and all the files you need will be there.
  - mkdir /dist
  - mount /dev/c0d1p0 /dist
  - setup /usr </dist/USR.TAZ
  - setup /usr </dist/SYS.TAZ
  - setup /usr </dist/CMD.TAZ
- Don't forget to remove the floppy disk image from the virtual drive when you've finished.

Stage 5- Run

- You can mount the 20MB disk under Linux again or under Minix to transfer files back and forth.
  - Just don't try to mount it in both places at once.

Assignment #1

- Change the Minix 2.0.4 source code so that the «login:» text is replaced by «Giris:»as follows:



- Submit the list of operations and changes you made
- And submit the files that you updated.