Linux Kernel Fundamentals: Chapter 5, Configuring and Building a Linux Kernel

1. In the top-level kernel source directory, copy the config file for your current kernel from /boot, and call it .config. You will start with that. The file name should be something like /boot/config-<kernel version>.

2. Use make menuconfig or make xconfig to configure the kernel.

Some parameters to make sure to select:

General setup
    Kernel .config support
General loadable module support
    Enable loadable module support.
        Module unloading
           Forced module unloading
Device drivers
    Network device support
       Your system's network driver (as a module, try ethtool -i eth0 # or maybe eno1. The command "ip addr show" will list your interfaces)

File systems
   DOS/FAT/NT filesystems
          MSDOS fs (as a module)
          VFAT (as a module)
Kernel hacking
    Kernel debugging
    Tracers
          Kernel function graph tracer

3. Compile the kernel to a bootable bzImage format with make. What files were added to your current directory? What files were added to arch/x86/boot?

4. Install the modules with make modules_install.

5. Copy the bzImage file to the /boot directory. You can accomplish these on most systems with just "make install".
   On Ubuntu, you may need to do some extra steps after make install. For example, create a new initramfs with the command mkinitramfs