1.5 ETHICS

Ethicscan beexplainedas"moralprinciplesthatgovernsone ormanypeople’sbehaviors."Ethicalbehavioris notnecessarilyrelatedtothelaw. Forexample,justbecausesomethingisnotagainst thelaw doesn'tmeanitis okayto doit.

It’s an areaofstudythatdealswithideasaboutwhat isgood and bad behavior, a branchof philosophydealing withwhatis morallyrightorwrong.Furtherwecanputa wordthatEthicsis a beliefthatsomethingisveryimportant. TheTheme ofethicscomprisessystematizing,defending, and recommendingconcepts ofrightand wrongbehavior.Philosopherstodayusuallydivideethicaltheoriesintothreegeneral subjectareas:

1. Metethics
2. Normativeethics
3. Appliedethics

Metethicsinvestigateswhereourethicalprinciplescomefrom, and what theymean. Aretheymerelysocialinventions? Do they involvemore thanexpressions ofourindividualemotions?Metethicalanswers tothesequestionsfocus ontheissues ofuniversaltruths,thewillofGod,theroleofreason inethicaljudgments, andthemeaningof ethical termsthemselves.

Normativeethicstakes onamorepracticaltask,whichis toarriveatmoralstandardsthat regulaterightandwrongconduct.Thismay involvearticulatingthe goodhabitsthatweshouldacquire,thedutiesthatweshouldfollow, or theconsequences of ourbehavior onothers.

Finally,appliedethicsinvolvesexaminingspecificcontroversialissues,suchasabortion,infanticide,animalrights,environmentalconcerns,homosexuality,capitalpunishment,ornuclearwar.

ETHICSOFCOMPUTER

Computerethicsisconcernedwiththeprocedures,valuesandpracticesthat govern the processofconsumingcomputingtechnologyand itsrespectivedisciplineswithoutharmingor violatingthemoralvalues andbeliefsof anypersonal,organization or entity.

Computerethicsis a perceptioninethicsthataddressesthe ethicalissuesandconstraintsthatcropupfromtheuse ofcomputers,and howtheycan bemitigatedor barred
Computerethics canbe understoodas that branchofappliedethicswhichstudiesandanalyzessocialandethicalimpactofinformationtechnology.

Ten Commandmentsdealingwithcomputerethicstosteertoa responsiblecomputer use

Thoushallnotusea computerto harmotherpeople.
Thoushallnotinterferewithotherpeople'scomputerwork.Thoushall notsnooparound in
otherpeople'scomputerfiles.Thoushallnotusea computerto steal.
Thoushallnotusea computerto bearfalsewitness(akaLie).
Thoushallnotcopyor useproprietarysoftwarefor whichyouhavenotpaid.
Thoushallnotuse otherpeople'scomputerresourceswithoutauthorizationor propercompensation.Thoushallnotappropriateotherpeople'sintellectualoutput.
Thoushallthinkabout thesocialconsequencesoftheprogramyou are writingorthesystemyou aredesigning.
Thoushallalwaysuse acomputerin waysthatensureconsiderationand respectforyourfellowhumans.

Copyrightandplagiarism

Copyrightlaws(title17,U.S. Code)provideprotection tothe authorsof"original works ofauthorship,"includingliterary,dramatic,musical,artistic, andcertainotherintellectualworks.Thisprotectionisavailableto bothpublishedand unpublishedworks.
Forcompletecopyrightinformation,see the UnitedStatesCopyrightOffice's web page.
Undercopyrightlaw,ifyoudon'town thecopyrighttoa work,you cannotdo thefollowingwithoutpermissionfromthe copyrightholder:

Reproducecopiesofthework
Createderivativeworksbased on the work
Distributecopiesof the work
Performthe workpublicly
Displaythe workpublicly

However, under certaincircumstances,usingparts ofcopyrightedworksisconsidered“fairuse,” andisallowableunderthelaw. Courtsconsiderthesefourfactorsindeterminingwhetherornota particularuseisfair:

- Thepurposeand characterof theuse,includingwhethersuchuseis ofcommercialnature orisfornonprofiteducationalpurposes;
- Thenature ofthecopyrightedwork;
- Amountand substantialityof theportionusedin relation tothecopyrightedworkas a wholeandthe effectoftheuse uponthepotentialmarketforor valueofthecopyrightedwork.

ESSENTIALCOMPONENTSOF APERSONALCODE OF COMPUTERETHICS

HonestyRespect
ConfidentialityP
rofessionalismR
esponsibilityCo
mmunicationOb
eyingthe law

Plagiarism

Usingsomeoneelse'sthoughtsorideasas yourownwithoutproperlygivingcreditis plagiarism.Itis yourresponsibilityto understandwhatplagiarismis andknow howto avoidit.

Readthefollowingverycarefully:**Plagiarismis aseriouscrime!**Now,repeatitto yourselfagain.Whyisthis soimportant?Plagiarismis somethingthatstudentseasilyfallinto,whethertheymean to ornot.Whenyouwritea reportand copyand pastefromthe Internet,you are committingplagiarism.So, whatexactlyisplagiarismand how canyouavoidit?

Whensomeonepublisheswork,includingbooks,music,photographs,movies,software,paintings,poetry,articles,etc.,theyare grantedcopyright.Copyrightisa setofrightsgiven to thecreatorofthe workallowingthemthe solerightto copyanddistributethework.Thismeansthatonlytheycancopy, use, orsellthework. For example,a commonmyth is thatwhen webuya CD,we own the music.Thatisnottrue!Wehavepurchasedtherighttoenjoythe music,butitisnotoursto copyandthen give to afriend.Thatis aviolationofcopyright.Thesamegoes forthatexample ofwritinga report.Ifyou copyand pasteor writewordforwordsomeoneelse'swork,you are violatingcopyrightlaws.

Let'sgetbackto plagiarism.In a nutshell, plagiarismis takingcreditforworkthat someoneelsedid.TheInternetmakesplagiarismveryeasyto do.However,theInternetalsomakes itveryeasyfor ateachertocheckyourworkfor plagiarism.Besmartand avoidplagiarismatallcosts.

opyrightV/s.Plagiarism

Copyright	Plagiarism
One who violetscopyrightbreakslawsthatprotecttherightofthe	One who plagiarizesbreaks a moralcode byclaimingcreditfortheworkof someoneelse.
Violation of copyrightlawmayresultsin fines,imprisonmentorboth.	Plagiarismmayresultinacademicdismissalorlossofjob.

PiracyandIllicitDownloading

Anotherlegalissuein computingis softwarepiracyandillegaldownloading.Piracyis theillegaluseand/orcopyingof software.Thisincludesnotonlysoftwareused onthecomputer,butvideogames,DVDs,CDs,and MP3files.Noticethattheterms“use”AND “copying” were used.Evenif youaren'tthe one whomakesthe copy,you are stillbreakingthelaw byusinga"bootlegged"copy.
Thinkaboutitthisway.Let's saythatyourfriendjustillegallydownloadedthehottestnew movie and makesa copyfora few of hisfriends.Yousayto yourself,“no bigdeal...theactorsin thesemovies isfilthyrichanyway”.However, thisiswrong wayof thinking.Itisn'treallythe actorsthatyouhurtwhenyou"steal"thisway.Thinkaboutthepeople who producethemovie.Thinkaboutthepeople who runthecameras.
Thinkabout thepeoplewhokeep thestudioclean.Whenyoustealmusic,movies, andsoftware,youaffectalotofdifferent people.

WhatisFREE SOFTWARE?

“Freesoftware”meanssoftwarethatrespectsusers'freedomand community.Roughly, itmeansthat**theusershave thefreedomto run,copy, distribute,study,change andimprovethe software**.Thus,“freesoftware”is a matterof liberty, notprice.Tounderstandtheconcept,youshouldthinkof “free”as in“freespeech,”notas in“freebeer”.

We campaignforthesefreedoms becauseeveryonedeservesthem. Withthesefreedoms, the users(bothindividuallyand collectively)controlthe programand what itdoesforthem.Whenusersdon'tcontroltheprogram,we callita “non-free”or“proprietary”program. The non-freeprogramcontrolstheusers,andthedevelopercontrolsthe program;thismakes the programan instrumentof unjustpower

A programis freesoftwareifthe program's users have thefouressentialfreedoms:

- Thefreedoms torunthe programas youwish foranypurpose(freedom0).
- Thefreedomto studyhow the programworks and change itsoit does yourcomputingas peryourrequirements (freedom1). *(Access tothesourcecodeis a preconditionforthis.)*
- Thefreedomto redistributecopies soyou can helpyourneighboror yourpeers(freedom2).
- Thefreedomto distributecopiesof yourmodifiedversionsto others(freedom3).Bydoingthisyou can give the wholecommunitya chanceto benefitfromyourchanges.

(Accessto thesourcecodeis a preconditionforthis.)

A programis freesoftwareifitgivesusersadequatelyallofthese freedoms.Otherwise,itis notfree.Whilewe can distinguishvariousnon-freedistributionschemes interms ofhow fartheyfallshortofbeingfree,weconsider themallequallyunethical.

The followingclarifiescertainpointsaboutwhatmakesspecificfreedomsadequate or not.

Freedomto distribute(freedoms 2 and 3) meansyouarefreetoredistributecopies,eitherwithorwithoutmodifications,eithergratis or charginga feefordistribution, toanyoneanywhere.Beingfree todo thesethingsmeans(amongotherthings)thatyou do nothave to askor payforpermission to do so.

Youshouldalsohave thefreedomto makemodifications and usethemprivatelyinyourownworkor play,withoutevenmentioningthattheyexist.Ifyoudo publishyourchanges,youshould notberequiredto notifyanyone in particular,or inanyparticularway.

Thefreedomto runtheprogram means the freedomfor anykind of person ororganization touseiton anykind of computersystem,for anykind ofoveralljob andpurpose,withoutbeingrequiredto communicateaboutitwiththedeveloperor anyotherspecificentity.In this freedom, itisthe*user's*purposethatmatters,notthe*developer’s*purpose;you as a userarefreetorun the programfor yourpurposes,andif youdistributeitto someoneelse,thenhe/sheisthenfree torunitforhis/herpurposes,butyouare notentitledtoimposeyourpurposesonher.

Thefreedomto runtheprogramas youwishmeans thatyouarenotforbiddenorstopped fromdoingso. Ithasnothingto do withwhat functionalitythe programhas, or whether itisusefulforwhatyouwant to do.

Thefreedomto redistributecopiesmustincludebinaryor executableforms oftheprogram, as wellassourcecode,for bothmodified andunmodifiedversions.(Distributingprograms inexecutableformis necessaryforconvenientlyrunningonoperatingsystems.)Itis OKifthereis no waytoproducea binaryor executableformfor acertainprogram(sincesomelanguagesdon'tsupportthatfeature),butyoumusthave thefreedomtoredistributesuchforms should youfindordevelopa way to makethem.

In orderforfreedoms 1 and3 (thefreedomto makechanges andthefreedomto publishthechangedversions)to be meaningful,youmusthaveaccessto thesourcecode oftheprogram.Therefore,accessibilityof sourcecodeis anecessarycondition forfreesoftware.Ambiguous“sourcecode”is notrealsourcecodeanddoesnotcountas sourcecode.

Freedom1 includesthefreedomto use yourchangedversionin placeofthe original.If the programisdeliveredin a productdesigned torunsomeoneelse'smodifiedversions but refuse torun yours— a practiceknown as “tivoization”or“lockdown”,or(initspractitioners'perverseterminology) as “secure boot”—freedom1 becomes a theoreticalfictionratherthan apracticalfreedom.Thisis notsufficient.In otherwords,thesebinariesarenotfreesoftwareevenifthesourcecodetheyare compiledfromis free.

Oneimportantwayto modifya programis bymergingwithavailablefreesubroutinesandmodules.If theprogram'slicensesaysthatyou cannotmerge in asuitablylicensedexistingmodule— forinstance,ifitrequiresyou to bethecopyrightholder ofanycode you add—thenthelicenseistoo restrictive to qualifyas“free”.

Freedom3 includesthefreedomto releaseyourmodifiedversionsasfreesoftware. A freelicensemay alsopermitother ways ofreleasingthem;in otherwords,itdoes nothaveto bea copyleftlicense.However,alicensethatrequiresmodifiedversionsto benon-freedoesnotqualifyas afreelicense.

In orderforthesefreedoms to bereal,theymustbe permanentandirrevocable aslongas you do nothingwrong;ifthedeveloperofthesoftwarehasthepowertorevoke thelicense, orretroactivelyadd restrictionstoitsterms,withoutyourwrongdoings, thenthesoftware is notfree.

However,certainkindsofrulesaboutthemannerofdistributingfreesoftwareareacceptable,whentheydon'tconflictwiththecentralfreedoms. Forexample,copyleft(verysimplystated)istherulethatwhenredistributingthe program,you cannotadd restrictionsto denyotherpeoplethe centralfreedoms.Thisruledoes notconflictwiththecentralfreedoms;ratheritprotectsthem.

FreewareSoftware:

Freewareis copyrightedsoftwarethatislicensed tobecopied anddistributedwithoutcharges.

Freewareis freebecausethelicensesays itis, butit’sstillunder theowner’scontrol.

Example:

NetscapeInternet
Explorer

SharewareSoftware:

Thesoftwareis licensedforcopyingand sharingfor atrialperiod,butpaymentmustbe madeto theownerforpermanentuse.

ETHICALISSSUESOFELECTRONICCOMMUNICATION

Thereislittledoubtthatelectroniccommunications,and in particulare-mail,haveintroduced aparadigmshiftin management,organizationalandworkingmethods,aswellasin businessperformance, as theyhave in theeconomyin general.WhileICTshavedramaticallyimprovedbusiness-to-business orbusiness-to-consumerscommunications,theyhave alsosignificantlyimpactedour day-to-daypersonalandprofessionallives.Inparticular,manyorganizations andtheiremployeesseemto have been overwhelmed bya numberof issuesarisingfromthe usageofelectroniccommunicationsinthe professionalenvironment.

HACKING

Hackinghas alwaysbeen acontroversial issue.Whetherpeopleseeitas avigilanteattemptatjustice, anattemptto keepauthorityincheckor simplya wayto cause mischief and potentiallyseriousharm,ithasalways haditsprosandcons.

Hackinghas beenaroundforlongerthanthe worditself.Theoriginaluseofthe word"hack"came fromtheMassachusettsInstituteofTechnology, and itdescribed a creative orwittywayof doingalmostanything.Thissoon grew toincludecreativepracticaljokesthatinvolvedsomedegree of stealthwhetherliteralorsimplyinitsimplementation.Soontheword began toimplysome degreeofharmdone tothe"victim."Manywhocallthemselveshackersinsist thatiftheiractionsareinflictingharm, then itisnothacking, but"cracking."

CRACKING

Theterm"hacking"wasoriginallyusedto describeways to create,alterorimprovesoftware andhardware.-A "hacker"is anextremelyproficientprogrammerthatcoulddo tasks in 5linesofcode whatotherswouldtakeseveralmodules.

"Cracking"istheillegalversionofhacking,whereexistingsoftwareisreverse-engineeredtoremoverestrictionsliketrialperiods.

Thesedays,mostpeopledon'tknow the differenceanymore, as theterm"hacking"hasalsobeenusedtodescribetheaction of"breakinginto someone'ssystem"

PRODUCTION OF MALWARE

Malware(shortfor“malicioussoftware”)is anysoftwaredesigned to harmyourcomputer,such as viruses, worms,Trojanhorses,androotkits.

- A**computervirus**isa programthatattachesitselftoan applicationor"hostfile" and thenspreads bymakingcopies ofit.Sometype ofhumanaction(e.g. openingan attachment)isalwaysrequiredforavirus totakeeffect.Once avirusgetsontoyourcomputerit mightmodify,delete,or stealyourfiles,makeyoursystemcrash, ortakeoveryourmachine.

  A**computerworm** islikea virus,butitinfectsothercomputersallbyitself,withouthumanactionand withouta host file.Itusuallyinfectsother computers bysendingemailsto allthe names in youremailaddressbook.

  A**Trojan horse** is aprogramthattricksyouintorunningitbyappearingusefulorharmless.However, onceitisrun,it damagesyourcomputer,usuallybyproviding"backdoor"accesstothecomputer.Thisallowshackersto controlor useyourcomputer,destroyor stealfiles,installvirusesorspyware, orrunarbitraryprograms.

  A**rootkit** is aprogramthatallows anintruderto gainaccess to yoursystemwithoutyourknowledgebyhidingwhatitis doingon thesystem. Theintrudercantheninstalldifficult-to-detectbackdoorsinto yoursystemto seizecontrol.

ProtectiveMeasures

Practices

Only performfiletransfers fromtrustedsources: Thisreducesyourriskof downloadingfilesinfectedwithmalwareandintroducesaccountability,sothatyouhave a betterchanceofgettingaresponseif you dohave a problem.

Scan allfilesthatyou receivethroughfiletransfer: Itisa goodideato scanthefilesthatyoureceivefromP2P networkswithyouranti-virussoftwaretodetectmalware.Thismayslow downthetransfer,butitwillhelpkeepyourcomputersafe.

- **Check a corporatewirelessnetwork'ssecuritylevelbeforeconnecting:**Manycorporatenetworksallow usersto connecttheirwirelessdevicestothenetwork.However, notallof thesenetworks aresecured.Infact,itisquiteeasyfor ausertoconnecthis/her wirelessdeviceto acorporatenetworkwithoutgettingpermissionfirst.Whenthishappens,theusermay intentionallyorunintentionallytransfervirusesontothecompanynetwork,puttingeverybodyon the networkatrisk.Youshouldmake sure yourcorporatenetworkissecurebeforeconnectingyourowndevice.Ifuserscanconnect to yourcompany’snetworkwithoutgettingpermissionor a password,it’sprobablynota goodidea to connectto thatnetworkatall.

- **Make surethe publicnetworkyou connecttois secure:**Manypublicnetworks are notsecureanddo notevenrequireyou toidentifyyourselfwitha password.Notonlydo you runtheriskofbeinginfected bymalwarefromother usersonsuch a network,youmayunintentionallytransmitmalwareto themas well.Makesureyou onlyconnecttosecurednetworks thataskusersfor a password.