

IC210 and Ethics

Copyright, Collaboration and
Plagiarism

What is today all about?

- Expect this for every computing course
- Expect this on every final exam
- Why these topics, why now?
 - You understand now the basics of programming
 - Preparation for future courses

Copyright Basics

The Fundamentals

- **Foundation is Article I, Section 8, Clause 8 of U.S. Constitution:**

The Congress shall have power...To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writing and Discoveries.

- **Copyrights are granted to author and artists to protect intellectual property and retain due compensation (and promote creativity)**

COPYRIGHT BASICS

What is Protected?

- **Copyrights typically pertain to a written document (including all graphics, etc); compare patents and trademarks**
- **All published works (books, magazines, etc)**
- **All work on the Internet (because that is publishing), including emails**
- **Must be tangible (spoken words can not be copyrighted!)**

COPYRIGHT BASICS

What is Not Protected?

Public domain works:

- Includes all material with an expired copyright
- Includes any material (such as online work) that includes a specific statement such as “I grant this to the public domain”
- **Are copyright notices (i.e., © or “all rights reserved”) required for a work to be protected?**

No, not since April 1989 in the U.S.

Facts may not be copyrighted

COPYRIGHT BASICS

For How Long?

- **Copyrights lasted 14 years in 1792 (and could be renewed for an additional 14 years)**
- **In last 40 years, this period has been extended 11 times**
- **Sonny Bono Copyright Term Extension Act of 1998** extended it to life of author plus 70 years (95 years if copyright owned by corporation).
 - **Disney Corporation spearheaded this law as Mickey was scheduled to enter the public domain in 2004**

INTERNET

Personal Use

- **Given that online material is always copyrighted, in order to use this material, you must:**
 - **Get specific permission from the owner of the copyright; (or)**
 - **The webpage (or part thereof) must grant explicit permission for others to use**
- **Some websites (i.e., author) grant explicit permission for use provided no compensation is received**

COPYRIGHT

What Happens?

- Current law makes copyright violation a felony provided it involves more than ten copies with a value over \$2500**
- Almost all cases that go to court, however, end up in civil court (not criminal court)**
 - Frequently, the purpose is to remove the offensive material from the website**
 - Sometimes compensation and damages are assessed**
- Note: plagiarism is not illegal (except as it pertains to copyright)**

COPYRIGHT

The Compensation Issue

Is it OK to use another file (say for my own document or webpage) so long as I don't make money from it?

COPYRIGHT

The Compensation Issue

Is it OK to use another file (say for my own document or webpage) so long as I don't make money from it?

No. Legally, since it doesn't belong to you, you may not use it without permission. Why?

- You may deprive the real owner of profiting from it**
- The owner no longer maintains control**
 - Example: Napster**
- Compensation does become important in some civil suits (for damages, not guilt)**

COPYRIGHT

Fair Use Guidelines

- **Any copyrighted material can be used without permission under certain circumstances**
 - **To academically excerpt from the material**
 - **To criticize the material (thus movie critics do not need permission to add a film clip)**
 - **To parody the work**
- **These guidelines are not based on specific law, but on court interpretations (typically on free speech)**

COPYRIGHT

Fair Use Guidelines

- **Examples of Fair Use (other than criticism or parody):**
 - Recording a TV program on your VCR to watch later;
 - Copying a song to a cassette, CD, or MP3 player, provided you purchased the CD from which you are making a copy
 - Use of excerpted material in teaching a class

Collaboration

A Definition

- **Collaborate**

- “the act of working with another or others on a joint project”
(freedictionary.com)

- **Joint**

- “undertaken or produced by two or more
in conjunction or in common”
(dictionary.com)

Plagiarism

A Definition

- **Plagiarism**

- “the use of another's original words or ideas as though they were your own” (plagiarism.org)
- “to steal and pass off (the ideas or words of another) as one's own” (m-w.com)
- “to use (another's production) without crediting the source” (m-w.com)

Collaboration vs Plagiarism

What's the Difference?

- **Collaboration**

- Two (or more) parties contribute to the creation of something

- **Plagiarism**

- One person does the work; Other people benefit without giving credit

Collaboration vs. Plagiarism

Does Intent Matter?

- **According to plagiarism.com:**
 - “Ignorance of the law is never an excuse...However, [in legal courts] there are different punishments for ... deliberate plagiarism, and ... accidental plagiarism.”
- **If you find yourself pleading accidental plagiarism, you have probably committed plagiarism**

Plagiarism

How to Avoid It

- **Be honest with yourself**
 - Did you come up with an idea yourself or did someone else come up with the idea and you are just using it?
 - Don't claim collaboration, when you did little to no work

Plagiarism

How to Avoid It

- **Cite all sources of information and assistance**
 - If you worked with someone on an assignment, let your instructor know
 - If you could not figure out the assignment on your own, let your instructor know
 - If you used a reference other than the course materials/text, let your instructor know

Work at USNA: Three Levels of Collaboration

1. No collaboration

Example: IC210 Programming projects

2. Collaboration where “end result must be your own work”

Example: IC210 labs and homework

3. Collaboration where final result is shared

Example: homework where instructor says this is okay, or team assignments

Collaboration (where end result is yours)

How to Do It Safely

- **Do not work on media you plan to turn in**
 - If your deliverable is a program, work on paper or whiteboard
- **Do not discuss the solution directly**
 - Gear your discussion toward what topics are relevant from the course and how they might be used

Collaboration (where end result is yours)

How to Do It Safely

- **Do not copy directly from any joint work**
 - Understand the work you did jointly, then do your own work
- **Declare any collaboration at the time of submission**
 - Not doing this starts to move you closer toward plagiarism

Collaboration

What it isn't

- **Collaboration is not:**
 - Cutting and pasting from any source and changing it slightly
 - Just changing the variable names in code
 - Watching someone else solve the problem and then reproducing it (even from memory)
 - Claiming that someone “helped” you when you contributed little to no work

Citing Sources

What Information Is Necessary

- **Another MIDN**
 - MIDN #/C Lastname, Firstname
- **Book/Article**
 - Title, Author, and page number(s)
- **Internet**
 - A link that can be cut and pasted into a browser, allowing your instructor to scroll up/down to your source
- **Always include a brief explanatory note**

Discussion Questions

Copyright/Fair Use

- As a MIDN you write a paper about the superiority of Open Source Software compared to Microsoft products
- You use sources from the Nimitz Library and the Internet
- How do you properly credit others for their work?
- Have you committed a violation of copyright law?

Discussion Questions

Copyright/Fair Use

- As a graduate student, you now decided to sell a set of notes to your cohort members based on your paper
- Your notes include quotations from copyright protect material
- Have you committed an violation of copyright?
- If so, how could you remedy the situation/avoid it in the first place?

Discussion Questions

Copyright/Fair Use

- It depends on the quotations
- Not that NOT selling does not necessarily make it okay

Discussion Questions

Collaboration

- These two MIDN said they collaborated:

MIDN 1

```
void quicksort(vector<int> &A, int i, int j){
    if(i>=j)
        return;

    int part=A[i];
    int temp=partition(A,i,j,part);
    //check empty partition
    if(temp<=i)
        quicksort(A,i+1,j);
    else if(temp>=j){
        swap(A[i],A[j]); //A[i] is greatest value
of the list
        quicksort(A,i,j-1);
    }
    else{
        swap(A[i],A[temp]);
        quicksort(A,i,temp);
        quicksort(A,temp+1,j);
    }
}
```

MIDN 2

```
void quicksort(vector<int> &A, int i, int j){
    if(i < j){
        int q = partition(A, i, j, A[j]);
        //empty partition is all the way to the left
        if(q < i){
            quicksort(A,i+1,j);
        }
        //empty partition is all the way to the right
        else if(q>j){
            quicksort(A,i,j-1);
        }
        else{
            quicksort(A,i,q-1);
            quicksort(A,q+1,j);
        }
    }
}
```

Discussion Questions

Collaboration

- MIDN 3 said MIDN 2 helped him/her:

MIDN 2

```
void quicksort(vector<int> &A, int i, int j){
    if(i < j){
        int q = partition(A, i, j, A[j]);
        //empty partition is all the way to the left
        if(q < i){
            quicksort(A,i+1,j);
        }
        //empty partition is all the way to the right
        else if(q>j){
            quicksort(A,i,j-1);
        }
        else{
            quicksort(A,i,q-1);
            quicksort(A,q+1,j);
        }
    }
}
```

MIDN 3

```
void quicksort(vector<int> &A, int i, int j){
    if(i < j){
        int q = partition(A, i, j, A[j]);
        //empty partition is all the way to the left
        if(q < i){
            quicksort(A,i+1,j);
        }
        //empty partition is all the way to the right
        else if(q>j){
            quicksort(A,i,j-1);
        }
        else{
            quicksort(A,i,q-1);
            quicksort(A,q+1,j);
        }
    }
}
```

Discussion Questions

Collaboration

- Did MIDN 1 and 2 collaborate?
- Did MIDN 2 and 3 collaborate?
- What did each of them need to do in order to properly document their interaction?
- Is documentation alone enough?

Discussion Questions

Collaboration

- **MIDN 3 was found to have committed a dishonorable act by an honor board**

MIDN 2

```
void quicksort(vector<int> &A, int i, int j){
    if(i < j){
        int q = partition(A, i, j, A[j]);
        //empty partition is all the way to the left
        if(q < i){
            quicksort(A,i+1,j);
        }
        //empty partition is all the way to the right
        else if(q>j){
            quicksort(A,i,j-1);
        }
        else{
            quicksort(A,i,q-1);
            quicksort(A,q+1,j);
        }
    }
}
```

MIDN 3

```
void quicksort(vector<int> &A, int i, int j){
    if(i < j){
        int q = partition(A, i, j, A[j]);
        //empty partition is all the way to the left
        if(q < i){
            quicksort(A,i+1,j);
        }
        //empty partition is all the way to the right
        else if(q>j){
            quicksort(A,i,j-1);
        }
        else{
            quicksort(A,i,q-1);
            quicksort(A,q+1,j);
        }
    }
}
```

Discussion Questions

- These two MIDN said they did not collaborate on a programming project:

MIDN 4

```
.  
:  
:  
else if(let=="nl"){  
    let="\n";  
    lettercount=(num*-1);  
}  
else if(let=="tb"){  
    num=lettercount%tabsize;  
    let=" ";  
    num=tabsize-num;  
}  
  
cout<<let;  
count=count+1;  
lettercount=lettercount+1;  
}  
count=0;  
fin>>num;  
if(num<0){  
    tabsize = -1*num;  
    fin>>num;  
}
```

MIDN 5

```
.  
:  
:  
else if(letter == "nl"){  
    letter = "\n";  
    lettercount = (number * -1);  
}  
else if(letter == "tb"){  
    number = lettercount % tab;  
    letter = " ";  
    number = tab - number;  
}  
  
cout<<letter;  
count=count+1;  
lettercount=lettercount+1;  
}  
count=0;  
fin >> number;  
if(number < 0){  
    tab = -1 * num;  
    fin >> num;  
}
```

Discussion Questions

Collaboration

- Did MIDN 4 and 5 collaborate or did one plagiarize from the other?
- If they did collaborate, were they allowed to?

Discussion Questions

- **MIDN 5 was found to have committed a dishonorable act by an honor board**

MIDN 4

```
.  
:  
:  
else if(let=="nl"){  
    let="\n";  
    lettercount=(num*-1);  
}  
else if(let=="tb"){  
    num=lettercount%tabsize;  
    let=" ";  
    num=tabsize-num;  
}  
  
cout<<let;  
count=count+1;  
lettercount=lettercount+1;  
}  
count=0;  
fin>>num;  
if(num<0){  
    tabsize = -1*num;  
    fin>>num;  
}
```

MIDN 5

```
.  
:  
:  
else if(letter == "nl"){  
    letter = "\n";  
    lettercount = (number * -1);  
}  
else if(letter == "tb"){  
    number = lettercount % tab;  
    letter = " ";  
    number = tab - number;  
}  
  
cout<<letter;  
count=count+1;  
lettercount=lettercount+1;  
}  
count=0;  
fin >> number;  
if(number < 0){  
    tab = -1 * num;  
    fin >> num;  
}
```

Final Words

- **Make sure you understand the guidelines for each assignment you are working on**
- **Violating the guidelines on collaboration is never helpful to you or your collaborator**
- **Automated techniques can and are used to detect violations, including across sections**
- **Bottom line**
 - Full disclosure is the best policy
 - Honor is the foundation of being a good officer