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DATA STRUCTURE & ALGORITHMS
ELECTRICAL AND COMPUTER ENGINEERING

Intro to
Data Structure
and
Algorithms

Course Details

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Introduction

This document talks about the following things:

- ◆ How to maintain the file & folder structure of your assignment before uploading them in Sakai
- ◆ How to write codes (basic format)
- ◆ The assignment submission policy
- ◆ The assignment grading policy
- ◆ Penalties

Kindly go through the document thoroughly and follow the rules as explained in details. If not followed as per the directions, there will be deduction in scores.

Outline

- Introduction

- Sakai

- Assignment Submissions

- Correction Policy

- Submission Policy

- Plagiarism

- Pseudocode

Sakai

◆ Home, Announcements, Resources, Chat room, Gradebook

◆ Assignments

Assignment Submissions

❑ Assignment Submissions (CODE)

◆ Language-independent. C, C++, python, Java are all accepted. All submissions will be tested on a native LINUX machine. Please test on a linux machine before submission.

◆ Need to provide compilation/ execution instructions. Example, C++ standard, arguments, etc. If there are no instructions, your assignment might not get evaluated. This should be in the Assignment text field on Sakai/Assignments. Do not add any code in this field.

Assignment Submissions

❑ Assignment Submissions (CODE)

 ◆ Highly recommend adding comments and indentation (!). Refer to the example in the next slide.

 ◆ Your code might be tested with an extra dataset (apart from the ones that you get as part of the assignment). You **need to provide instructions on how the input filename can be changed**, either in the text field or in the code as comments.

 ◆ Use standard libraries, e.g. C++ : http://en.cppreference.com/w/cpp/header

Assignment Submissions

Example of adding comments on code

```
int main()
{

    int height, breadth, area;
    cout <<" Enter height : "; // READ height from user
    cin >> height;
    cout <<" Enter breadth : "; // READ breadth from user
    cin >> breadth;


    area = 0.5 * height * breadth; // COMPUTE area as 0.5 times
    cout << " Area : " << area; // PRINT area

}
```

Assignment Submissions

❑ Assignment Submissions (ANALYSIS)

◆ The analysis (complexity discussion, plots etc.) of the algorithm implemented and coded should be documented in a PDF file along with supporting plots/figures (as per the question asked).

◆ The analysis documentation should NOT contain code or code snippets unless and until it has been asked specifically in the question.

Assignment Submissions

❑ Assignment Submissions (GENERAL)

◆ Hard copy (paper) of the analysis needs to be submitted at the beginning of the class on Tuesday.

◆ Do NOT add code in the paper submission.

◆ Submit all the necessary files to compile/execute INCLUDING input files. Do not submit any extra files that your editor might generate.

◆ Code should be submitted in their respective file formats. DO NOT submit the codes in doc, pdf files !

Assignment Submissions

❑ Submission structure

♦ One folder per question containing the source file and the input data.

♦ One super folder named as Assignment_x for the above folders

♦ Add the overall assignment report in the Assignment_x folder.

♦ Compress (zip, tar) the super folder and name it as Assignment_x.zip and submit. Where x is the assignment number

```
Assignment_1
├── Q1
│   ├── Source.cpp
│   └── Data
├── Q2
│   ├── Source.cpp
│   └── Data
└── Assignment Report pdf
```
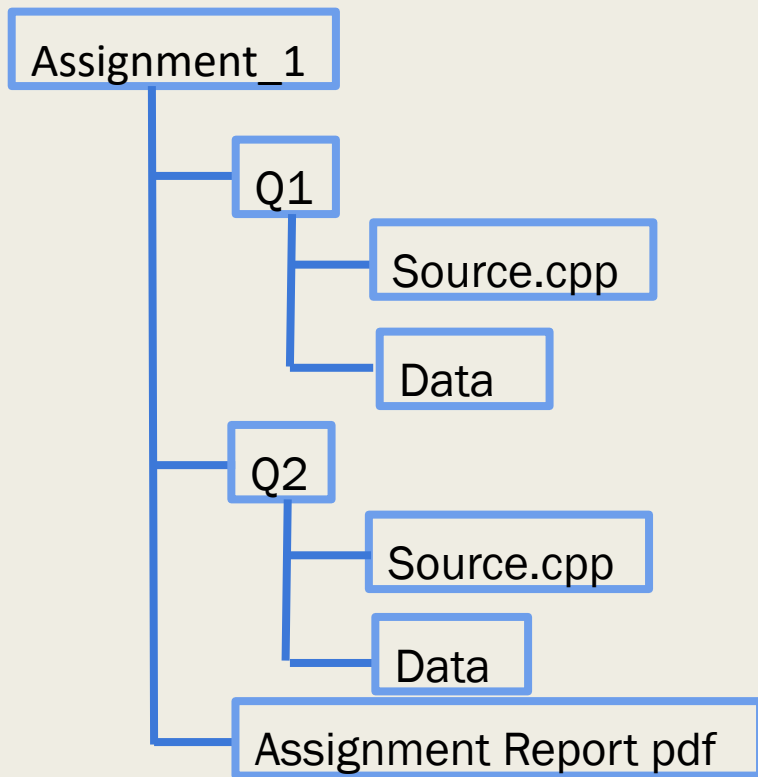
Correction Policy

◆ Compilation/ Execution - 50 %

◆ Analysis - 50% (if program executes)

Submission Policy

◆ Paper submissions before class starts on Tuesday (6.40pm)
◆ Sakai submissions before the deadline
◆ Late Submission penalty:
  ◆ 25% deduction after deadline from the next minute till the next 24hrs
  ◆ 50% deduction from 24hrs from deadline till 72hrs from deadline
  ◆ After 72hrs from the deadline, no more submissions will be accepted

◆ NOTE: Resubmission after the deadline is also considered as submission after deadline, resulting in the penalty.

Plagiarism

◆ Turnitin, Sherlock

◆ Each plagiarism app will check for similarity between submissions.

◆ Random spot checks will be done

◆ We understand some amount of similarity is unavoidable since you are all working on the same problem.

◆ MENTION SOURCES in the code/reference if taking snippets from books, wiki, stackoverflow, geeksforgeeks etc !

◆ NOTE: If code is copied from an external source and is not mentioned in the code/reference, it will result in deduction.

Pseudocode

❏ Example

```
void func()
{
        int iter;
        for(iter=0 ; iter<=99 ; iter++)
        {
                cout << iter;
                cout << endl;
        }
}
```

```
void function func
{
        FOR iter from 0 to 99
                PRINT iter
                PRINT newline
}
```

Helpful Links

- ❖ Examples : http://users.csc.calpoly.edu/~jdalbey/SWE/pdl_std.html

- ❖ Guidelines/Tips :
  http://www.cs.cornell.edu/Courses/cs482/2003su/handouts/pseudocode.pdf

- ❖ Pseudocode : http://www.coderookie.com/2006/tutorial/the-pseudocode-programming-process/Programming