

# Homework 1

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CS 595

*Hot Topics in Distributed Systems: Data-Intensive Computing*

<http://www.cs.iit.edu/~iraicu/teaching/CS595-F10/index.html>

**Assigned:** 08-30-2010

**Due:** 1:45PM 09-08-2010

## Overview

A major component of your grade will be based on a project. The topic of the project will be chosen by the student(s), and will require possibly the implementation of a real/simulated system, a written report, and oral presentations.

Projects can fall in a number of different areas, which are loosely related to data-intensive distributed computing. Some of these areas are:

- Distributed file systems
- Data aware scheduling algorithms
- Distributed operating systems
- Distributed job management systems
- Parallel programming languages
- Distributed workflow systems
- Distributed monitoring systems
- Scientific computing with GPUs
- Scientific computing with MapReduce
- Distributed caching strategies
- Distributed cache eviction policies
- Distributed hash tables
- Applications porting/parallelization to clusters, grids, clouds, or supercomputers
- Virtualization impact for data-intensive computing

In the lecture on September 8th, I will take all your ideas, and use them to organize a brainstorming session for possible project ideas.

## Assignment

You are to come up with 3 project ideas that you find interesting and you believe are relevant to the course. Please give each idea a title, and describe each one in at least 300 words each. Please submit your proposal write-up via blackboard, by the deadline stated at the top of this assignment.