The project is to design a digital system or circuit. You can decide on what you will implement for the project and write a 2-3 page proposal which we will reviewed before you start the implementation phase. You are allowed to get design ideas from the web, lab manuals or textbooks. However, the final project should be an original design. You will have to get your own parts. You can use function generators, power supplies and oscilloscopes in the lab to do the project. Two people groups will be allowed if there is considerable work involved in a particular project (which will be judged by me after looking at the proposal). Just for safety, have backup projects ready for the two members or talk to me beforehand about the suitability of the project.

The project will be broken up into three phases. You will submit a final project report before phase III. The project phases, the grade distribution and deadlines are described below.

**Phase I: Project Proposal**
Give a 2-3 page proposal, two weeks from the date of assignment. The proposal should contain the circuit description, the basic building blocks, a design strategy, partial part list etc. You don’t have to give the final design in this phase, only details about what will it contain. Make a list of major parts or their description.

**Phase II: Implementation**
After your project proposal has been approved, you will start implementing the project. Make it as self contained as possible i.e. all you might use is power supplies in the lab. Use your own breadboards, parts, LEDs etc. You might get some class time to work on the project if time permits. The deadline for this phase will be decided later but you will have at least 2 or 3 weeks for this phase.

**Phase III: Demonstration and presentation**
You will be given 15 minutes to do a presentation and demo for you project in the final two weeks of class. Prepare slides explaining the project, the design, parts used, salient features etc. Limit your presentation to 8 minutes. Use the rest of the time for a demo. Everyone is required to attend each of the presentations. Attendance will be taken and you will lose grade if not present.

**Grading:**
- **Project Proposal:** 10%
- **Correctness, Completeness, complexity, design strategy, implementation:** 70%
- **Final project report:** 10%
- **Presentation, demonstration and attendance:** 10%

**Instances of cheating will result in you failing the course.**