Project Milestone #1 – Preliminary Design

Due Date: Monday, April 18, before noon (12:00pm)

Deliverables:
We expect to see the following documents from each team:

1. A revised specification document. This should be based on (but not limited to) the original MIT Gizmoball specification (http://6170.lcs.mit.edu/www-archive/Old-2004-Spring/psets/gb/gizmoball.html), as described in the 'Gizmoball Overview' section of that document. You do not have to make your GUI look anything like theirs (we know that you can do much better), and you can safely ignore the other sections of the MIT document.

The basic functionality described in the 'Gizmoball Overview' section is all required, but we estimate that achieving that will be quite trivial for a team of 6-8 over a period of several weeks. Therefore, we ask that you explore features beyond what the MIT spec asks for. Some examples to consider (though feel free to explore others, if you wish) are:

- adding a demo mode, where the game can be shown to an audience without the active play of a person. (This feature can also be used for testing your product, so it'll be high on the wish list of any customer.)
- making the graphics more appealing;
- turning this into a networked game where multiple players can join in and play together, each controlling a flipper (or set of flippers).

Hint: You might find it useful to explicitly identify who your potential customers are. Teenagers, old ladies, families with small kids, and working professionals are all very different target audiences, so choosing to satisfy one of them may lead you to a significantly different product and design than what you would develop for another target audience. The differences will be especially pronounced in the areas of functionality and GUI design.

Your revised specification document should clearly reflect your team's vision of the product you are proposing to build, including how it will differ from the original MIT specification. In describing your specification, we expect you to use (at least some of) the techniques discussed in class (e.g., use cases, commonality and variability analysis).

2. Architecture document. This includes a definition of the system and software components. Here you should clearly identify the modules and interfaces between modules required to implement the product, described in the specification.

Be sure to explicitly address why you believe this project is realistic to build with the given resources (technical and human). Difficult or high-risk areas of the design should be clearly identified along with an analysis showing why they will not be "show stoppers" for your project. This section should include both the design of the system that is seen by the end user, as well as that of any necessary backend / administrative modules.

Hint: Strive for a flexible and extensible design that could accommodate the addition of unforeseen features later on. Clear interface definitions are very helpful in shedding light on the entire design.

In the description of your design we expect you to use (at least some of) the notations discussed in class (e.g., dataflow / state diagrams, class diagrams, and sequence diagrams).

3. Schedule and task assignments. This includes milestones (external and internal for the team), task descriptions, and the specific team member responsible for each task. The schedule should reflect your team's actual plan of work, possibly including items that your team has already finished (e.g., while preparing for the current milestone). Be sure to state how you are going to organize the team in order to complete on time what you're proposing.

4. Overview presentation. This should contain a set of PowerPoint presentation slides that summarize the content of your team's specification, design, and latest schedule. We will ask two of the teams to present before the full class on Monday, April 18, during lecture time. The names of those teams will be announced on the class mailing list shortly. (Note: The other three teams will have a chance to present in front of the class at the next milestone.)

Formatting[1]:

- Use diagrams and snapshots, not just words, to illustrate key points.
- Use at most 10 pages for your document(s).
- Format your document(s) to be single-spaced, using font size 11 or larger.
- Write your team's name in the header portion of all pages.
- The name(s) of the file(s) you submit should include your team name. Example: a good filename is "TeamX-milestone1-design.rtf".
- Save your work preferably in rich text format (RTF or DOC). We cannot edit (and add comments to) PS or PDF without copying the contents over.

Submission: via UW Catalyst's eSubmit tool:
https://catalyst.washington.edu/webtools/secure/esubmit/turnin.cgi?owner=vrazmov&id=3015
Note: Only one submission per team, please.
Hint: The Catalyst submission system only accepts documents up to 2MB each, so plan accordingly. You might consider splitting some of the images, if they are many and large, into a separate piece.

[1] This refers to the document containing your specification, design, and schedule, not to the PowerPoint presentation. The latter is, naturally, a separate entity.