

## **CSCI 498 Elements of Games and Game Development Course Project 1 – GameMaker Development Project**

### **Assignment Overview**

Upon completion of this project, you will have created a fully functional game. The game should be created in GameMaker: Standard. The final game may be 2D or 3D and must be fully tested and functional. The game needs to include at least 3 scenes/levels/play fields. Note, this must be an original game, not a mod of an existing game or example.

Components you will be creating with the game include:

- Project Proposal
- Design Document
- Project Plan
- Milestone Deliveries
- Game Executable with Install Instructions
- User Manual
- Post Mortem (individual assignment)

In addition, through the term the team will be creating delivery letters that include team progress, and individual students will be creating progress reports.

### **Teams**

The project will be done by teams, typically of 2-4 individual students. Note that means the individual students need to insure strong leadership and communication lines. The team is also encourage to research and use outside free and low cost tools such as Google Docs, Google Drive and/or the various Wiki tools to assist in the project.

### **Deliverables**

Each team will be going through all the steps of the game development process from creating a concept document till final product delivery. In this process, your instructor will assume the role of the publisher that has contracted to a development team to create a game. This means any team project deliveries must be approached as a professional delivery. At minimum, with the team deliveries, you want a cover letter to the publisher describing what you are delivering and any other general information the publisher may wish to know about the delivery.

The team will deliver various products to the 'publisher' on a scheduled basis. These products are partially defined by the following schedule BUT the team will also be responsible for establishing a bi-weekly milestone schedule defining their own deliveries for

a majority of the project. In addition, each individual team member will be responsible for a progress report starting with Phase 3.

### **Phase 1 – The Team**

#### **Team Deliveries**

- Delivery letter with three game ideas (short paragraph ideas are sufficient).

#### **Individual Deliveries**

- Team Charter

### **Phase 2 – Project Pitch Proposal**

#### **Team Deliveries**

- Team will present a pitch to the class. Pitch will be discussed and approved/disapproved.

### **Phase 3 – Project Plan and Draft GDD**

#### **Team Deliveries**

- Delivery letter
- Draft Design Document
- Project Plan

#### **Individual Deliveries**

- Individual Progress Report

### **Phase 4 – Design Document**

#### **Team Deliveries**

- Delivery letter
- Final Design Document
- Deliveries per Project Plan – The project plan from Phase 3 should define these deliveries.
- Any updated development documents

#### **Individual Deliveries**

- Individual Progress Report

### **Phase 5 and 6 – Milestone Deliveries**

#### **Team Deliveries**

- Delivery letter
- Deliveries per Project Plan
- Any updated development documents

#### **Individual Deliveries**

- Individual Progress Report

### **Phase 7 – Alpha Delivery**

#### **Team Deliveries**

- Delivery letter

- Deliveries per Project Plan, Alpha Delivery
- Any updated development documents

#### **Individual Deliveries**

- Individual Progress Report

### **Phase 8 – Beta Delivery**

#### **Team Deliveries**

- Delivery letter
- Deliveries per Project Plan, Beta Delivery
- Testing results per the test plan in the project plan, and bug report list
- Any updated development documents

#### **Individual Deliveries**

- Individual Progress Report

### **Phase 9 – Final Delivery**

#### **Team Deliveries – IMPORTANT, this is due by Wednesday of Week 9**

- Final Delivery letter
- Final product including all user documentation

#### **Individual Deliveries**

- Individual Progress Report
- Project Post-mortem

### **Calendar (tentative)**

Phase 1 - Teams	Jan 20
Phase 2 - Proposal	Jan 27
Phase 3 – Project Plan	Feb 3
Phase 4 – Design Document	Feb 10
Phases 5,6 - Milestone Deliveries	Feb 27, Mar 13
Phase 7 – Alpha Delivery	Mar 24
Phase 8 – Beta Delivery	April 14
Phase 9 – Final Delivery	April 26

### **Delivery Descriptions**

The following documents will be delivered during the project. Note, the instructor may require additional updates on these documents throughout the project and integrate the updates and grades into specific future deliveries.

#### **Delivery Letter**

This is a professional letter from the team to the publisher describing the deliveries and also the team's progress for the week. So what will the instructor be looking for in the team delivery letter? The team should think of itself as a commercial development team that has been contracted to create a game for a publisher (i.e. the instructor and Westwood). Like in the real world, the developer will have specific deliveries scheduled for each week. Those deliveries need to be professionally made to the publisher. This requires a clear and professional cover letter/document along with the specific deliveries you promised in the Project Plan.

Generally, such a cover letter should include the following (this might vary due to circumstances):

- Introduction
- Description of work done since last delivery (i.e. progress report).
- List of items in current delivery.
- Any information needed for the publisher to evaluate the deliveries (like game engines, installation, configuring, walkthrough, instructions, etc.)
- Problems or issues that might affect current or future deliveries.
- Anything else you think the publisher should know.

Later weeks once you have a schedule:

- Description of each delivery item with comparison to what was scheduled.
- Any revisions to the Project plan and schedule that will change future deliveries (unless minor, you should include an updated project plan).

### **Individual Progress Report**

This is a professional report designed to give the instructor a feel for the students work, problems and successes over the report period. The document should meet the class writing standards. It should use Aristotle's three step formula - 1. Tell them what you're going to tell them. 2. Tell them. 3. Tell them what you told them.

What should be in the content of the report?

- Name, Week, Team
- Goals for the Week - What were your goals and task for the week. These should include both those assigned to you by the team along with any individual goals you assign yourself.
- Journal and log - What did you do, when did you do it, hours spent
- Accomplishments - Goals completed
- Problems - What problems did you encounter and how did you overcome them.

### **Team Charter**

The team charter is a contract between the members of the development team addressing both each member's responsibilities and methods.

## **Pitch Proposal**

The pitch proposal, sometimes known as a concept document, is typically a short document or PowerPoint designed to communicate the game concept and sell it to the publisher or investors. In the real world this may run from 10-20 pages but for this project and the given short time frame, the team need not prepare a full blown proposal. However, it should include basic technical details as well like how the team will build the game (languages, libraries, game engines, etc. and team responsibilities). The pitch should run 5-6 minutes.

## **Design Document**

The design document is a detailed blueprint on every aspect of the game. Please review previous coursework on the details that are required for a design document. This document should be a living document that grows and changes as the project progresses, so the updates should probably be delivered to all team members and the publisher on a weekly basis. Note, this may be done as a wiki instead of a Word document.

## **Project Plan**

The project plan is how the team is going to create the game (as opposed to what the team is going to create in a design document). Here are some things the team needs to address in the document.

- Introduction
- Define sequence of tasks to be performed
- Identify all deliverables (Milestone Deliveries)
- Define the dependency relationship between each task
- Estimate resources required to perform each task
- Schedule all tasks to be performed
- Define the organization executing the project
- Identify the known project risks (Risk Analysis)
- Define the process to ensure quality (Test Plan)
- Define the process for configuration management
- Define the process specifying and controlling the design requirements

IMPORTANT: You will be required to make milestone deliveries on a weekly basis. What these deliveries are to include are not defined by the instructor, but instead by the team in the Project Plan. These deliveries need to be specific and demonstrate the progress of the project. Note that the milestone schedule will probably change as the class progresses. When this happens, just update the Project Plan.

## **Alpha Delivery**

This should be reflected in the Project Plan. The alpha delivery is a playable game (although rough) with all of the major components included.

### **Beta Delivery**

This should be reflected in the Project Plan. The beta delivery is the complete game with all of its components. It only requires final testing and polishing to be a final product.

### **Final Product**

This is the total project in final polished form including documentation and instructions. It should be in a form that a typical user can install and play the game easily on their own machine. It should not require any external software.

### **Post-Mortem**

A post-mortem is a project review in which both what went right and what went wrong in a project is evaluated. It's an analysis so members of the team (and even other developers) can learn from the successes and failures of a project. The web site <http://gamasutra.com> publishes numerous examples of post-mortems for examples.

The post-mortem should be written with a target audience of professional game developers as a Word document. It is expected that this analysis should be a minimum of 1500 words.