Design Phase Description

During this phase, your team will design the game. The focus is on planning your project, not on implementing the game.

DELIVERABLES

The deliverables for this phase are:

- A project document jointly written by the team.
- A report on how the team worked during this phase and how the team members contributed to the project.

Templates for your reports are provide on Moodle in the "Document Templates" folder in the "Course Project" section.

PROJECT DOCUMENT

The project document will contain the following:

1. **Title Page** showing:
   a. the name of the game,
   b. team name and logo,
   c. the team letter on Moodle
   d. names of team members (only list those that contributed to the design of the project and the report)
   e. due date
2. **Table of Contents.** It should be on its own page.

3. **Introduction**. The introduction provides an overview of the entire document. A person should be able to get a clear idea of what the project is about from this section. At minimum, give an overview of the basic plot of the game (without spoilers!). The introduction should end with a preview of the major sections that follow.

4. **Project Management.** Provide a description of, and address any foreseeable problems. The section must start with an introductory paragraph summarizing the contents of the section and previewing any subsections. This section will have two subsections:
   a. *Team Organization:* Describe how the team will organize themselves (including team structure) to create and support the game. Suggested team roles are:
      i. *Team Lead* (keeps everyone on track)
      ii. *Design Lead* (makes sure application follows good OOAD principles)
      iii. *Quality Assurance Lead* (makes sure that testing plan is being followed)
      iv. *Documentation Lead* (oversees the creation and maintenance of the project report/user manual.)

All team members are expected to fill the roles of *Software Developer* and *Software Tester,* and to contribute to the project documentation.

   b. ***Risk Management:*** Describe how the team will address foreseeable risks that could prevent the team from completing the project. Examples of risks include, but are not limited to:

   i. Requirements/Design/Estimation
   1. The team planned a project that is too large (i.e. "eyes bigger than stomach").
   2. The team underestimated how long parts of the project would take.
   3. Major changes to design are needed during implementation.

   ii. People
   1. Addition or loss of team member (i.e. someone dropped the course, a new person joins the team)
   2. Unproductive team member(s)
   3. Team member(s) lacking expected background
   4. Illness or unanticipated life events (e.g. death of family member)

   iii. Learning & Tools
   1. Inexperience with new tools
   2. Learning curve for tools steeper than expected
   3. Tools don't work together in an integrated way

5. **Development Process.** Describe the process that the team will follow in developing the software. Such items should include:
   a. Coding conventions (give small examples).
   b. Procedures for configuration management and code review (e.g. how are pull requests handled?).
   c. Communication tools/channels (e.g. **Slack (recommended)?** Email? Text? Issue tracking? Skype?).
   d. Change management (how will the team deal with bug reports? Does the team lead triage reports, or does everyone?)

6. **Software Design**. Provide the design of the game. The section must start with an introductory paragraph summarizing the contents of the section and previewing any subsections.
   a. **Design.** This section must include the details of your design presented as one (or more) UML class diagrams, and one (or more) sequence diagrams for basic use cases.
   b. **Design Rationale.** This section provides details about the rationale for your design. Specifically, this section describes how your design follows applicable SOLID principles.

7. **Appendices.** Any figures or tables that are more than half of a page should be put in the appendices and reference in the report text. Omit this section if there is no content.

SUBMISSION

Submit the URL of your team's public repository. The project will be graded from there. Place the reports in the following locations:

REPORT	LOCATION
DESIGN DOCUMENT	`docs/design`
TEAM REPORT	`docs/team/design`