System Analysis and design: Lecture 1 : An Introduction

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Based on notes from Mark Overmars ,

Pearson education slides &
the

gamedesigninitiative
at Cornell university

Module Aims:

• It is a purely ***project based module***, where you will execute all activities associated with the development of a 2D game.

A detailed module specifications is posted on the e-learning page

Methods of Learning, Teaching and Assessment

Total student effort for the module: 100 hours on average.

1. 6, 2h lectures/ workshops;

2. 12, 3h labs,

3. This in addition to self study hours

Assessment

1.Group project (3-4 students) to develop a 2D game using Unity. This project carries 70% of the total mark.

2. In class assignment during **week 8**, which carries 30% of the total mark.

What are you going to use?

- Unity IDE

- Programming (in C#).
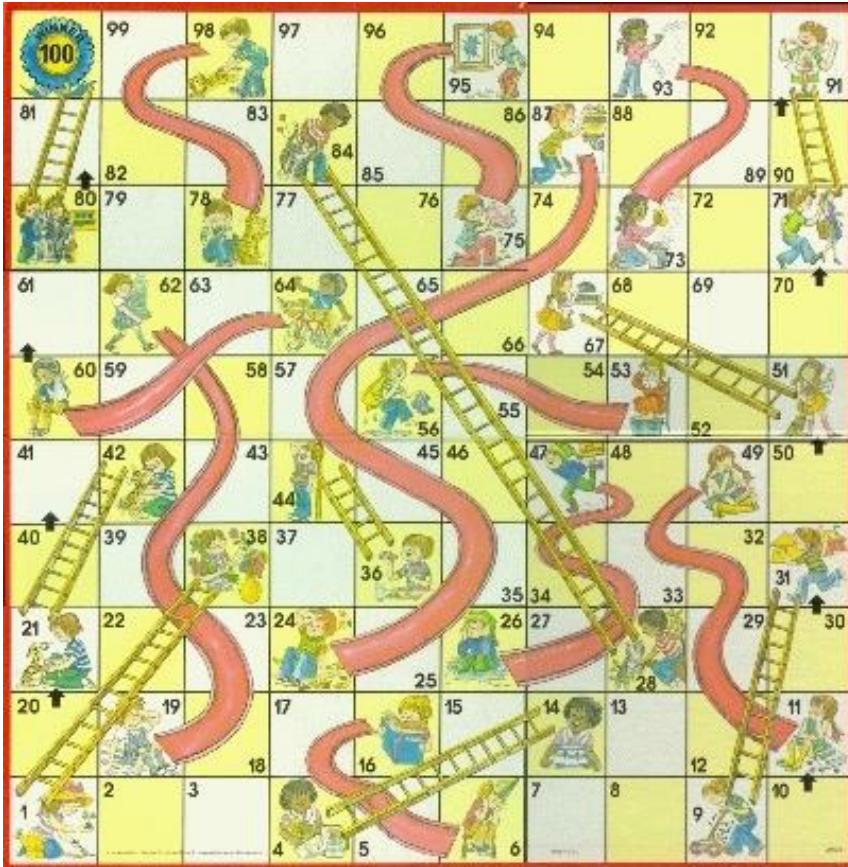
Nature of Games

Courtesy: slides are adapted from:

What Is a Game?

- Games have rules and goals

- Toys do not have rules or goals

- Puzzles have goals

What is a Game?

Rules

- Players take turns
  - Spin the number wheel
  - Move that many spaces
- When land on space…
  - Ladders take you up
  - Chutes take you down
- First one to 100 wins!

What is a Game?

Definitions of Games

Ƴ Adams: *Fundamentals of Game Design*
A **game** is a form of *interactive entertainment* where *players* must overcome *challenges*, by taking *actions* that are governed by *rules*, in order to meet a *victory condition*.

Ƴ Salen& Zimmerman: *Rules of Play*

A **game** is a *system* in which *players* engage in *artificial conflict*, defined by *rules*, that results in a *quantifiable outcome*.

Design Decisions

- Players

- Challenges

- Rules

- Goals

Design Decisions

- **Players**
  - How many players are there at a time?
- **Goals**
  - What is the player trying to achieve?
  - Specifies the player *focus*

Design Decisions

Rules

- How does the player affect the game world?
- How does the player learn the rules?
- Specifies the *boundaries* of the game

Challenges

- What obstacles must the player overcome?
- Is there more than one way to overcome them?
- Specifies the fundamental *gameplay*

(Other) Design Decisions

Game Modes

- How are the challenges put together?
- What is the interaction *context*?

Story

- What *narrative* will the player experience?
- How is it connected to gameplay?

Questions?