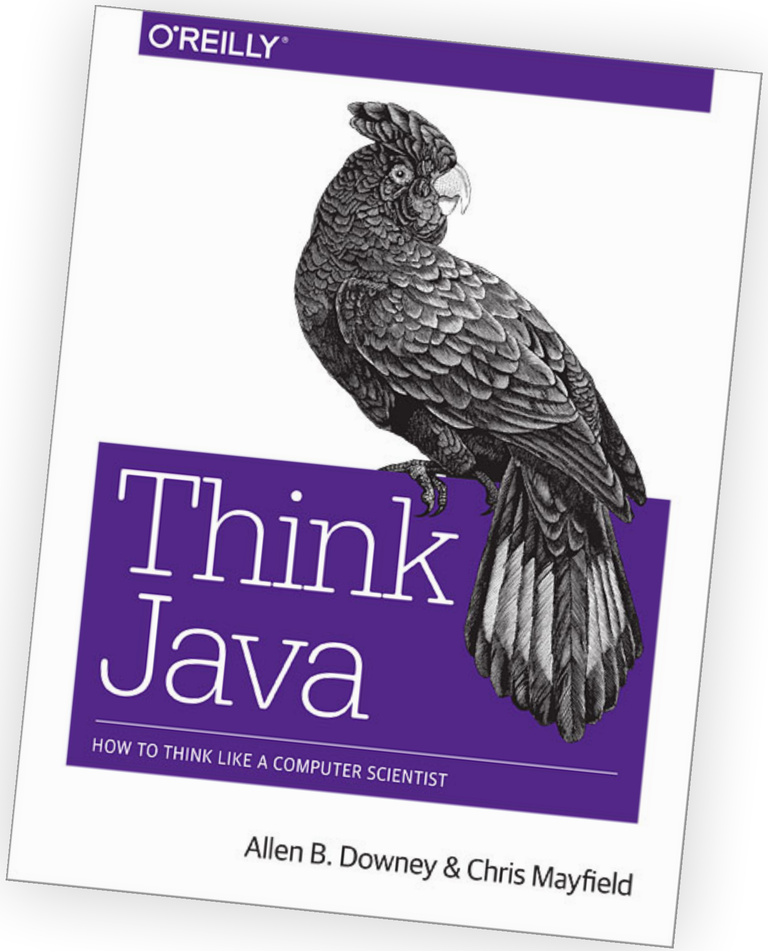
Essential Computing 1

Course Introduction

First encounter?

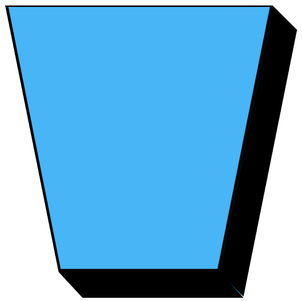
Objectives

Knowledge Fundamental programming concepts
Skills Programming and associated tools (Java)
Competencies Computational thinking

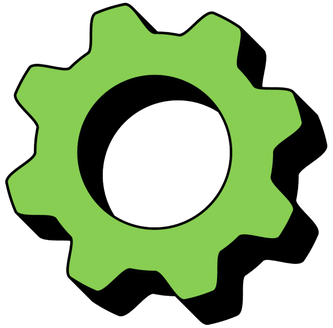

O'REILLY
Think Java
HOW TO THINK LIKE A COMPUTER SCIENTIST
Allen B. Downey & Chris Mayfield

Content

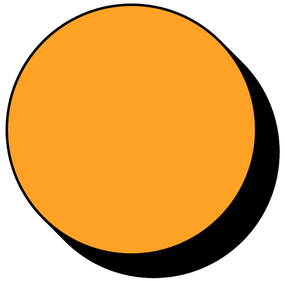
Lecturing Mainly repeating the book
Micro Assignments In class, hands-on.
Mini Assignments Homework
Mini Project In class & homework



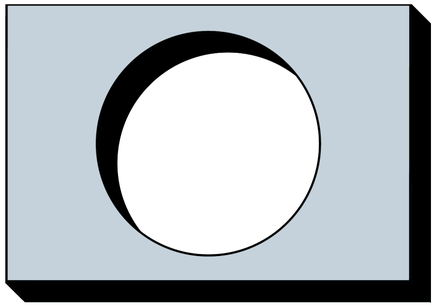
variable



function



object



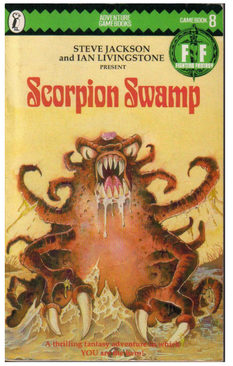
class

Requirements

Mini Assignments Do 50%
Mini Project Upload before Nov 21st
Oral exam Prove your knowledge

Mini Project

Mini Project: Text-Based Adventure Game



You are to write a program that takes the user on an adventure in a world where (s)he is the protagonist. Your program will produce a non-linear story, similarly to adventure game books popular in the 80s, where the reader is presented with critical choices that lead to different consequences (other pages).

You are free to define a theme for your adventure, be it pirates, sci-fi, D&D, RL at RUC, or something completely different.

Delivery Requirements

You must hand in your completed project and all source code required to compile and run the application. You are encouraged to hand in brief documentation (maximum of two pages including everything - e.g. illustrations) to explain your code and the ideas behind it.

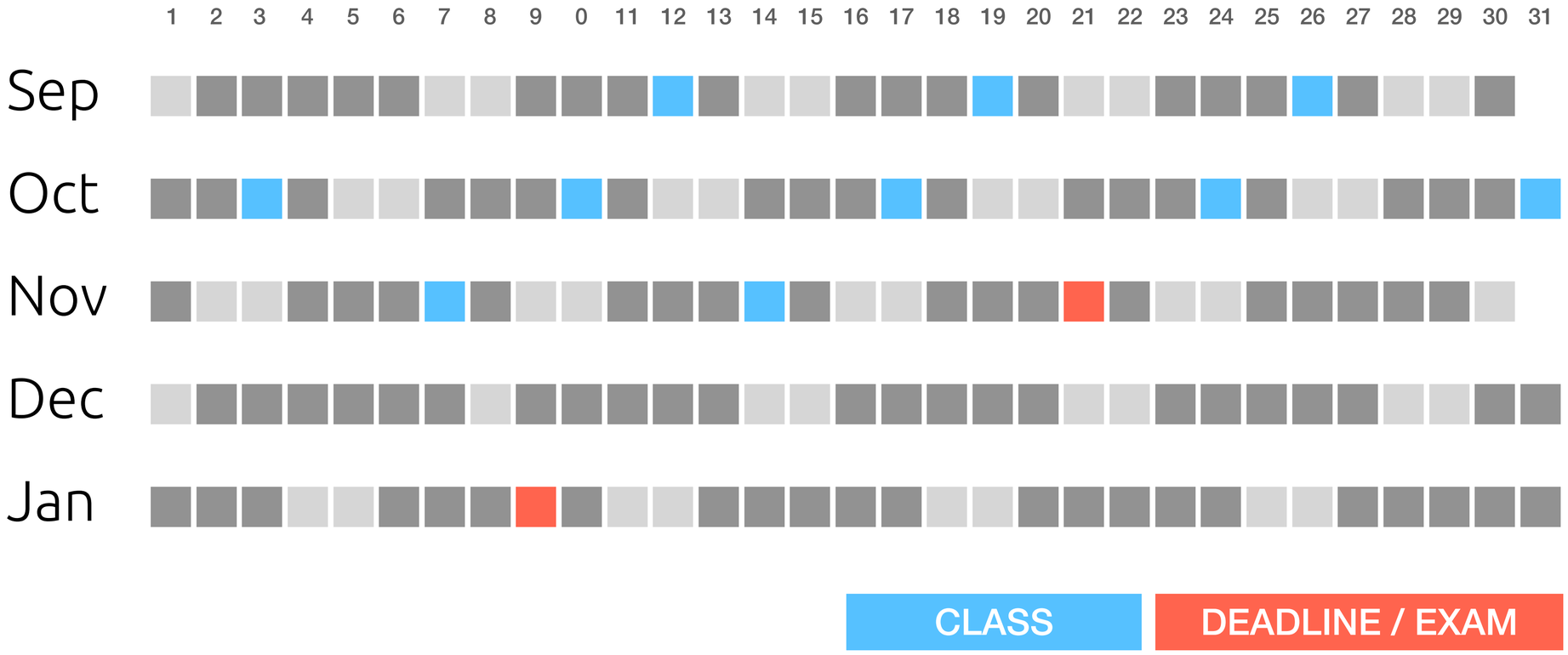
Your program must run in the terminal and produce an interaction flow like this:

1. The program outputs a text to the user that describes a location/situation and a number of options to react.
2. The user inputs her reaction of choice to the program.
3. The program evaluates the choice and outputs a text to the user with a new location/situation and new choices. Repeat step 2.

Your program must run as a console application and:

- Use classes and objects to contain a location/situation that leads to other locations/situations.
- The user should be able to go through at least 10 different successive locations/situations before reaching a dead end.

Overview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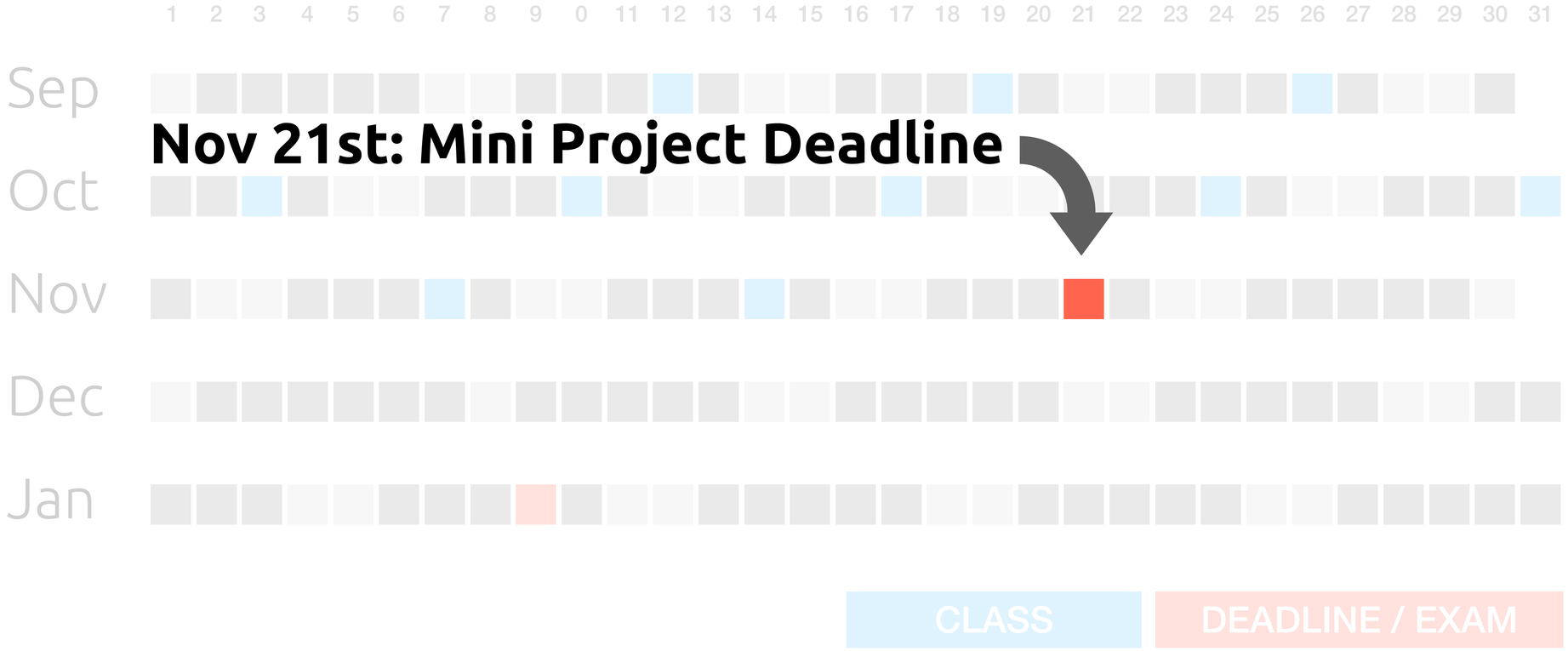
Sep
Oct
Nov
Dec
Jan
CLASS
DEADLINE / EXAM

Overview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Sep
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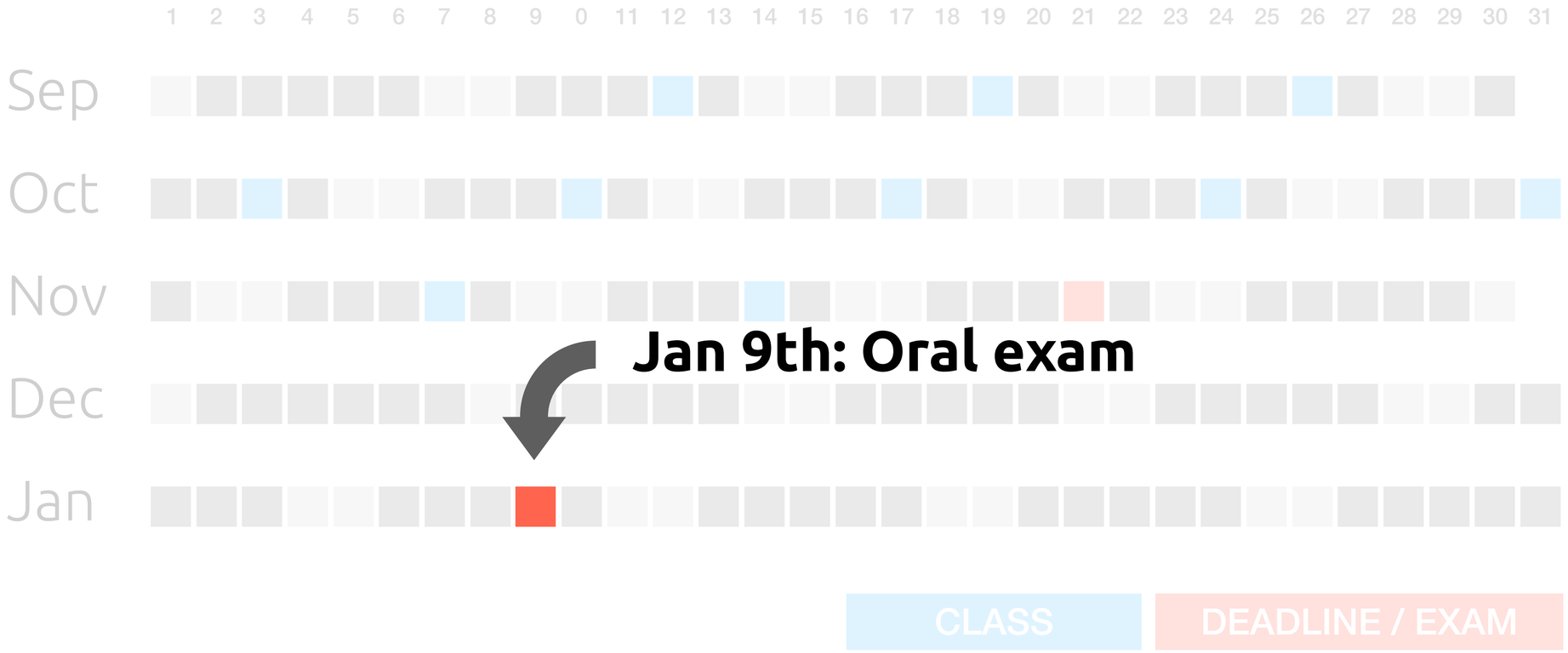
Nov 21st: Mini Project Deadline
CLASS
DEADLINE / EXAM

Overview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Sep
Oct
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Jan 9th: Oral exam
CLASS
DEADLINE / EXAM