The University of Melbourne
School of Computing and Information Systems
SWEN20003 Object Oriented Software Development

ShadowFlap - Clarifications

Project 2, 2021
Released: Friday, 10/09/2021
Project 2A Due: Wednesday, 29/09/2021 at 8:59pm AEST
Project 2B Due: Friday, 15/10/2021 at 8:59pm AEST

Overview

This document addresses the unclear points from Project 2 Specifications and discrepancies between the spec / demo videos. Please check out this document, as well as Piazza threads (especially the **Project 2 FAQ thread** pinned at the top of SWEN20003 Piazza forum) relevant to your question(s), before posting duplicate questions on Piazza. Content from the **Project 2 FAQ thread** is **not** repeated here. Please continue to post on Piazza if you have any questions that is unanswered on the FAQ thread or in this document.

Weapon

1. The unit for shooting weapons is **frames** not **pixels**. That is, shooting rocks should last for **25 frames** and shooting bombs should last for **50 frames**, travelling horizontally from its shooting point.
2. Weapons are only active (able to destroy pipes) when they are shot ('S' is pressed). When the bird is holding the weapon but has yet to shoot it, it has no effect on pipes. That is, a bird holding a weapon colliding with pipe will cause the bird to lose a life but keep its weapon.
3. Collision between a shot weapon and flames does not cause the flame/pipes to disappear, nor does the bird earn a point in this case.

Flame

1. Flames spawn starting from the frame that **its own** pipe set spawns. That is, not all flames (across different pipe sets) need to be visible on-screen at the same time.
2. Flames shoot from steel pipes every 20 frames, not 'randomly' as described by an incorrect sentence from Project 2 Specifications.

Pipes

1. You can stop rendering the pipes once its centre-x OR right-side-x coordinate leaves the left side of the screen. Both will be accepted.

Timescale

1. You should implement timescale such that increasing the timescale once (to 2) decreasing the timescale once (to 1) would make the pipe/weapons spawning/travelling go back to its 'original' behaviour when the timescale started at 1. Think of 1 iteration of increase + decrease like an undo button.
2. Round all resulting decimals to the nearest integer. For example, if the pipe set should spawn every 66.67 frames at a specific timescale, round up to 67 frames.
3. You will be marked on whether the timescale's impact on pipe/weapons spawning/travelling from right to left is correct. If you allow timescale to impact Bird motion, to make the game more playable at high timescales, you will not be penalised nor receive bonus marks for this.
4. Inconsistent gaps between different pipe sets due to increase/decrease of timescale is **accepted**. This is inevitable when timescale is increased, for example, since the spawning interval between pipe sets is decreased (they spawn faster) at a higher timescale.

Messages

Both the format of messages from Project 2 Specifications, and format from the demo videos, will be accepted. For example, rendering the final score on the 'Level Up!' screen between Level 0 and Level 1 will not incur any penalties.

Constants

Both the constants written on Project 2 Specifications, as well as the list of constants under demo videos, will be accepted. You can adjust the constants to suit the FPS on your device too and make the game playable on your device. Please make a comment in your code if you do so for FPS reasons.