

DigiPen Institute of Technology

CS230

Game Implementation Techniques

Project 1 – Part 1

Game Flow - Game State Manager

Due date

Friday, May 29th, 2020 at 1:30pm

Topics

The assignment will cover the following topics:

- Writing the game flow in pseudo-code

Goal

The goal of this assignment is, by referring to the provided flowchart, to understand the game flow and be able to write the algorithm in pseudo-code. Once you have the pseudo-code written you will need to implement it in C for the second part of the project.

Submission

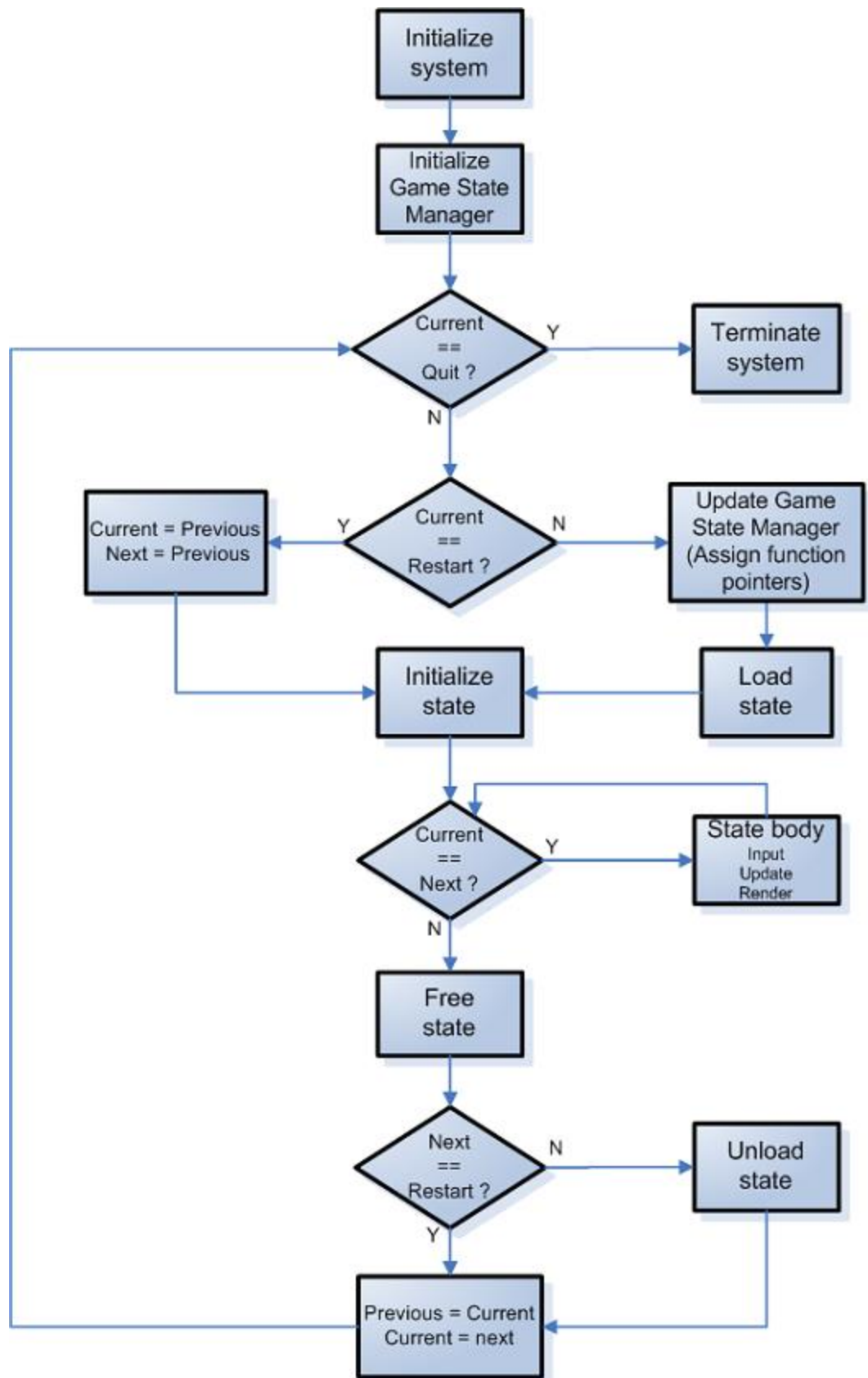
- The assignment must be submitted in a .pdf format
- Name the submitted file as follow:
 - o <class>_<section>_<student login name>_<assignment#>_<part#>. For example, if your login is foo.boo and you are submitting assignment 1 part 1, and you belong to section A, your file should be named **cs230_A_foo.boo_1_1.pdf**
- Next, upload your file to your course moodle website, <https://distance.sg.digipen.edu>
- Finally, perform a sanity check to determine if your programming submission follows the guidelines by downloading the previously uploaded .pdf file, then checking the content.

Grade

- The grade of this assignment, part 1, is **5%** of the total course grade.

Description

- This assignment is graded and is part of the first project which you need to implement the game state manager using the C programming language.
- In this part of the project you need to write the pseudo-code of the following given flowchart:



Pseudo Code Example

- Here is an example of a simple program that reads characters from a file and converts all the upper case characters into lower case and vice versa:

OPEN the file

WHILE not end of file

READ a single character from the file

GET the ASCII value of that character

IF ascii value is greater or equal than 65 and less or equal than 91 THEN

ADD 32 to the ascii value

PRINT the character with the new ascii value

ELSE IF ascii value is greater or equal than 97 and less or equal than 123

SUBTRACT 32 from the ascii value

PRINT the character with the new ascii value

END IF

END WHILE

CLOSE opened file

- To invoke procedures (functions) in pseudo-code you need to use one of two ways:
 - o Using the "CALL" keyword or by naming the specific procedure (function) "ACTION".
For example calling a Swap function that takes two parameters is written as:
 - **CALL "Swap()" between currentItem and targetItem**
 - Or**
 - **SWAP between currentItem and targetItem**

Extra – Additional 2 Steps

- You have to include in the pseudo-code, the call of the following functions that are not shown in the flowchart:
 - o CALL "FrameRateStart()"
 - o CALL "FrameRateEnd()"

Notes

- All the starting actions of each line in the pseudo-code are, and must be, all in capital letters.
- Do not add any extra step, unless it is required.
- When you see a statement in the flowchart, like "Update", then your pseudo-code must specify the owner.
 - o For example: CALL "Update" of the game state

Grading Criteria

- Not following submission guidelines (-10 points)
- Line not starting with capital lettered word (-3 points each)
- A missing step from pseudo-code (-5 points)
- A miss-placed step (-5 points)
- Messy and not clean presentation of the pseudo-code (up to -10 points)
- Any programming statement used (like a C language statement) (-5 points each)
- The “Extra” section is not added (-7 points)