

# Game Engineering Principals

PROG 33921

## Group Project

**50 Marks (20%)**

**Team:** Alec Di Vito, Lawrence Young

**Project Type:** A new 2D game (maximum 50 marks (20%))

**Game Idea:** Mario Clone

### Minimum Requirements:

- A. A setting state for configuring keyboard, mouse and joystick. All GUI components should be responsive to mouse and joystick.
- B. At least 2 levels should be defined for the game.
  - a. Two levels: jungle level and secret in pipe

### Game Features and Design:

- A. Player: Can “jump”, “shrink”, “attack” + or use power up
- B. Enemies
  - a. Moving Enemies
    - i. Turtle: Moves side-to-side
    - ii. Goomba: Move up and down from identifiable entry point
  - b. Avoidable Obstruction:
    - i. Wall: Character can break with attack or projectile or jump
    - ii. Ditch: Has to jump or swim away from to dodge
- C. Power Ups
  - a. Mushroom: Extra life
  - b. Shell: Can be used to kill enemies or destroy obstructions
  - c. Star: Make character invincible (essentially collisions don't impact it) 8 seconds
- D. Breakable Block or Seaweed
  - a. Breakable Block: With no coin
  - b. Coin Block: With coin that Increments score or no coin
  - c. Mystery Block: With coin, or power up
- E. Game Management
  - a. Start Screen: Configurations
  - b. Pause Screen: Score and Timer
  - c. Game Over Screen: Score and Time