Snake Game

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Classes we are trying to implement
-We are planning to do one class with these as our functions:

- Setup,
- Input
- Draw
- Logic

-The variables and the functions we are planning to have are the following

- Functions
  - Draw
  - Setup
  - Input
  - Logic
- Variables
  - int Height
  - int Width
  - int SnakeX and SnakeY coordinate
  - int Snake
  - int FruitX and FruitY
  - int Fruit
  - bool state of the game
  - int score
  - 2d array
  - int tail
  - int bomb(trap) variable

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```
Class snake {

        public:
                int height
                int width
                int fruitX
                int fruitY
                int fruit
                bool state
                int score
                Draw();            // function for the draw and movement of snake
                Setup();           // function for game setup
                Input();           // function for the input of game
                Logic();           // function to write down logic of game
                int snakeX;        // x coordinate for snake
                int snake;
```

```
        int snakeY;            // y coordinate for snake
        vector<vector<int>> tiles;   // drawing board
        int tailX;
        int tailY;
        int bombX;                    // X and y coordinates for the bomb
        int bombY;

        };
```

-An explanation for each class
- **Logic:**
  - Where the snake moves in the plane, the tail is behind it. If the snake eats the apple, it adds 10 points to the score. If the snake hits the boundaries or its tail = Game Over. Extra, If you reach 100 points, another apple gets added, but you can't hit the boundaries or your tail as the snake.
- **Input:**
  - We are going to be using enum in order to control our snake, this is going to have w,s,d, and a as controls, and they are going to control if the user wants to go to the left, right, forward, and back.
- **Draw:**
  - We are going to create a random variable with x and y to randomize the locations of the fruit. We are also going to create a random spot for the snake to start, it can be wherever on the plane. Extra, we are going to create a random bomb, and if the snake eats the bomb, the snake will lose some points or a life.
- **Setup:**
  - We are going to create a 2D array variable for the fruit with an x and a y variable. Also, we are going to create another variable with an x and y coordinate for the snake.

-Part division:
  Geary: Draw and logic
  Nicolas: Setup and input