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| Image result for angry snake cartoon | **BATTLE SNAKE: *EAT APPLES. GET LONGER. DON’T DIE.***  *It’s the classic game of snake, but 4 snakes going head to head, and your code will navigate the snake.*  Hit another snake: Die. Hit a wall: Die. Hit your own tail: Die. Navigate in the opposite direction: Die. |

**Use the following interface to build a** SnakeNavigator. ***(Don’t research. Design your own solution.)***

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| interface SnakeNavigator {  Direction CheckForDirections(GameParameters GameParameters);  } |

**Below is for your reference. *(Do not include it in your solution.)***

Direction is an enum:

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| public enum Direction { Up, Down, Left, Right } |

GameParameters is a class with properties about the current game state:

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| public class GameParameters {  public Rectangle Boundary { get; } // Boundary of the game (i.e. the “walls”)  public Point Apple { get; } // X,Y coordinates of the Apple (eating makes you grow)  public Point[] Obstacles { get; } // X,Y coordinates of \*every\* Snake’s \*body\*  public Snake Self { get; } // X,Y coordinates and direction of the Snake’s \*head\*  public Snake[] Opponents { get; } // X,Y coordinates and direction of the \*opposing Snake heads\*  public Mode Mode { get; } // The game mode  public int InitialSize { get; } // The size your snake will start off  public int GrowthFactor { get; } // The amount a snake will grow after eating an Apple  } |

Point is a class that handles coordinates:

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| public class Point {  public int X { get; }  public int Y { get; }  } |

Vector is a class that handles coordinates and direction:

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| public class Vector {  public Point Position { get; }  public Direction Direction { get; }  } |

Rectangle is a class that provides the boundaries:

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| public class Rectangle {  public int Left { get; }  public int Top { get; }  public int Right { get; }  public int Bottom { get; }  } |

Snake is a class that provides details about the snake:

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| public class Snake {  public Vector Head { get; }  public Point[] Body { get; }  public int Length { get; }  } |

Mode is an enum:

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| public enum Mode {  Simultaneous, // Directions are obtained before any snake is moved  StepWise // Directions are obtained and snakes are moved, one at a time  } |