User Defined Classes and Methods

* MyAppClass: Creates all the necessary objects, scores and game over condition.
  + Anonymous Class - MyMouseKeyboardListener: Listens to Mouse Left Click and Space key.
  + Constructor - MyAppClass(int FrameWidth): Initialize Mouse and key listener, create stack object, push base BaseObjectBounds object into stack.
  + Method - calPerfectVisibleTime(): Calculate time to display Perfect message
  + Method - drawStack(Graphics g): Draws each Node of rectangles present in the stack
  + Method - drawPerfectDialog(Graphic g): prints the perfect message when the moving Rectangle and the top rectangle align perfectly on mouse click or space key event.
  + Method - drawGameOver(Graphic g): Draws Game Over string when the moving Rectangle is out range on mouse click or space key event.
  + Method – drewScore(Graphic g): Draws sore after each mouse click or space key event.
  + Method – paint():
    - It Calls drewScore(), drawStack(), drawPerfectDialog() and draws the moving rectangle when game is in progress else Calls drawGameOver()
    - on mouse click and space down trimShip() is Called and if the game is over then the paint() is called else the trimmed Rectangle is pushed into the stack.
  + Method trimShip(BaseObjectBounds shipBounds, BaseObjectBounds baseBounds ): If the moving rectangle is out of range it returns -1 else it returns positive x coordinate.
  + Method getRandomeColor(): Generates random color.

* JavaGraphicsTemplate:
  + Main Method – main(): Creates Frame and initialize the object of ny app class
* Node:
  + Constructor – Node(): Empty Constructor
  + Constructor – Node(int x, int width , Color color): Creates object of BaseObjectBounds and initializes x, with and color variables to it.
* Stack:
  + Constructor – Stack(): Top pointer is pointer to null
  + Method – push(BaseObjectBounds baseObject): pushes the baseObject to stack.
  + Method – push(int x, int y , int width ,int height, Color color): Creates baseObject and then pushes it to stack.
  + Method – pop(): Pops the top most element (not used).
  + Method – resetTempTraversal(): resets the top pointer.
  + Method – getTop(): returns the top most object of BaseObjectBounds class
  + Method – getNext():increments the top pointer and Returns object of BaseObjectBounds class which was previously pointed by the top pointer.
  + Method – isempty(): returns true if the stack is empty else returns false. (not used)
* BaseObjectBounds: Stores all the required parameters of each Rectangular block such as x,y Coordinates, height and width and the color of the block.

Important Variables:

* MyAppClass
  + defaultWidth: initial width of rectangle
  + defaultHeight: constant height of rectangle.
  + speed: moving speed of the Rectangular block- lesser the value faster the speed
  + perfectVisibleTimeSeconds: duration in second to display Perfect message
  + yc: distance between the top of the frame and the moving block
  + baseHeight: variable for height of the base Rectangle.